

23rd International Symposium on **Mathematical Programming**





https://ismp2018.sciencesconf.org

23rd International Symposium on Mathematical Programming (ISMP)

The World Congress of the Mathematical Optimization Society (MOS)

Bordeaux, July 1-6, 2018

Contents

Welcome Address	5
Organization Conference Chair Program Committee Scientific Committee Local Committee	6 6 7 8
Our Sponsors	9
Useful Information Conference Sites Campus Zones Registration ISMP App The Scheduler Lunch breaks Coffee breaks Coffee breaks Mifi connection Instructions to Speakers Instructions to Chairpersons Video Retransmission Welcome Event Conference Dinner Farewell Party	12 12 14 21 21 21 21 21 21 21 21 22 22 22 22 22
Global Schedule Overview	24
Special Events	26
Plenary Sessions, Semi-Plenaries and Keynotes	27
Mini-Symposia	39
Parallel Sessions Per Day	49
Program per Time Slot	69
Sessions with Abstracts	101
Index	199



Welcome Address

It is a great pleasure to welcome all of you to Bordeaux for this triennial international congress of mathematical optimization. ISMP is the symposium of the Mathematical Optimization Society (MOS). It gathers scientists from all over the world as well as industrial practitioners of mathematical optimization. Attendees present their most recent developments and results and discuss new challenges from theory and practice.

This 23rd edition of the symposium is organized by the mathematical optimization group of the University of Bordeaux with the contributions of other mathematical optimization researchers of the French community. The core of the local organizers is structured around the Inria project team Realopt which is a joint venture between the University, Inria and two CNRS research labs of the University: the Mathematics Institute (IMB - team OPTIMAL - in Mathematical Optimization, Stochastic Models and Statistics) and the Computer Science Lab (LaBRI - team Combinatorics and Algorithms). The practical organization is taken care of by the congress office of the University of Bordeaux, the communication office of Inria-Bordeaux, and the ADERA congress service, with the support of the University of Bordeaux Initiative of Excellence (Idex) and the Regional authorities of Nouvelle-Aquitaine.

This edition is the outcome of a collaborative venture involving the participation of many members of the international community. The program committee has done a great job in reaching out to invited speakers. It was headed by Michael Jünger who has also been so active in driving the special issue of Math Programming B. Through the scientific committee, we have put many people to work for co-opting invited sessions and performing the immense editorial task of gathering talks into sessions. The support services of our institutions and the local team have been largely put to contribution on all aspects of the organization. We want to highlight the tremendous job done by our engineers, Philippe Depouilly and Laurent Facq, to setup the editorial platform, and by our colleagues to optimize the schedule, in particular Pierre Pesneau who implemented the scheduler, while our students have contributed to deliver automation tools. Last but not least, we are deeply grateful to the cohort of volunteer students and staff who are key elements of the logistical organization during the ISMP week.

The happening is yours. Your scientific contributions are feeding the interesting program which we shall all benefit from. So thank you for your participation and let us enjoy this congress, learn from it, and build the network of your future collaborations.

François Vanderbeck University of Bordeaux & Inria Bordeaux



The Organization Committees

Conference Chair

General Chair: François Vanderbeck, Prof., U. Bordeaux & Inria team Realopt

Co-Chair:

François Clautiaux, Prof., U. Bordeaux & Inria team Realopt

Program Committee

The program committee is in charge of inviting plenary, semi-plenary, and keynote speakers. The program committee chair acts as guest editor for this special MPB issue. The members are:

Chair:

Michael Jünger, Prof., University of Cologne, Germany

For Cluster 1: Discrete Optimization and Integer Programming Dan Bienstock, Prof., Columbia University, USA Gerard Cornuéjols, Prof., Carnegie Mellon University, USA Michel Goemans, Prof., Massachusetts Institute of Technology, USA

For Cluster 2: Optimization under Uncertainty Laurent El Ghaoui, Prof., UC Berkeley, USA Simge Küçükyavuz, Prof., University of Washington, USA Daniel Kuhn, Prof., Ecole Polytechnique Fédérale de Lausanne, Switzerland

For Cluster 3: Continuous Optimization

Frank Curtis, Asoc. Prof., Lehigh University, USA Claudia Sagastizabal, Researcher, IMPA (Mathematical sciences research institute), Brasil Stephen Wright, Prof., University of Wisconsin-Madison, USA

For Cluster 4: Problem Specific Models, Algorithm Implementations, and Software Michael Ferris, Prof., University of Wisconsin-Madison, USA Martine Labbé, Prof., Université Libre de Bruxelles, Belgium Stefan Wild, Researcher, Argonne, USA

Representing the Organization Committee:

François Clautiaux, Prof., U. Bordeaux & Inria team Realopt François Vanderbeck, Prof., U. Bordeaux & Inria team Realopt (Vice Chair)

Scientific Committee

The scientific committee is in charge of the scientific content of the parallel sessions, co-opting scientific personnalities to propose a whole session, and gathering contributed talks into coherent sessions. The members are:

1. Cluster on Discrete Optimization and Integer Programming

- (a) IPtheory: Integer Programming Theory (Polyhedral Study, Lattices, Extented Formulations...): Michele Conforti, Fritz Eisenbrand, Volker Kaibel, Ridha Majhoub
- (b) IPpractice: Integer Programming Algorithms (Branch-and-cut, Reformulations and Decomposition, ...) Sanjeeb Dash, Adam Letchford, Ivana Ljubic, Marc Pfetsch
- (c) MINLP: Mixed Integer Non-linear Programming Jeff Linderoth, Andrea Lodi, Jean-Philippe Richard, Frédéric Roupin
- (d) APPROX: Complexity, Approximation and Online Algorithms Lionel Eyraud-Dubois, David P. Williamson, Rico Zenklusen
- (e) COMB: Combinatorial Optimization and Graph Theory Laura Sanità, Gianpaolo Oriolo, Arnaud Pêcher, Nicolas Trotignon
- (f) CP: Constraint Programming Louis-Martin Rousseau, Ruslan Sadykov, Pascal Van Hentenryck

2. Cluster on Optimization under Uncertainty

- (a) Stoch: Stochastic Optimization Boris Detienne, James Luedtke, Alexander Shapiro
- (b) Robust: Robust Optimization Dimitris Bertsimas, Christoph Buchheim, Michael Poss
- (c) Markov: Dynamic Programming, Markov Decision Processes, and Simulation *François Dufour, Stéphane Gaubert, Huseyin Topaloglu*
- (d) Game: Game theory, Bi-level and Multi-Objective Optimization Luce Brotecorne, Roberto Cominetti, Kathrin Klamroth

3. Cluster on Continuous Optimization

- (a) NLP:Linear and Nonlinear Optimization, Sparse Optimization and applications *Immanuel Bomze, Jean-Charles Gilbert, Jérôme Malick*
- (b) Global: Global Optimization Mirjam Dür, Jean-Baptiste Hiriart-Urruty, Yaroslav Sergeyev
- (c) NonSmooth: Nonsmooth Optimization Jean-François Aujol, Amir Beck, Antonio Frangioni, Yurii Nesterov
- (d) SDP: Conic Programming, Quadratic Programming and Semi-Definite Programming *Sourour Elloumi, Franz Rendl, Angelika Wiegele*
- (e) Variat : Variational Analysis, Variational Inequalities and Complementarity. Samir Adly, Xiaojun Chen, Boris Mordukhovich
- (f) RandomM: Random Methods for Continuous Optimization (Stochastic Gradient, ...) *Guanghui (George) Lan, Artur Pessoa, Lin Xiao*
- (g) DerFree: Derivative-free and Simulation-based Optimization Charles Audet, Serge Gratton, Katya Scheinberg
- (h) Control: Optimal Control, PDE Constrained Optimization, and Multi-level Methods Jean-Bernard Lasserre, Stefan Ulbrich, Emmanuel Trelat

4. Cluster on Problem Specific Models, Algorithm

- (a) Learning: Machine Learning, Big Data, Cloud Computing, and Huge-Scale Optimization Alexandre d'Aspremont, Olivier Beaumont, Peter Richtarik, Suvrit Sra
- (b) Network: Network Flow, Network Design, and Applications in Telecom and Traffic Management Bernard Fortz, Bernard Gendron, Luis Gouveia
- (c) Logistics: Packing, Logistics, Location, and Routing Jean-François Cordeau, Frédéric Semet, Eduardo Uchoa, Daniele Vigo

- (d) Scheduling: Scheduling, Planning and Applications in Manufacturing Systems and Healthcare Tom McCornick, Gautier Stauffer, François Soumis, Matthieu VanVyve
- (e) Energy: Optimization for Environmental, Energy, and Engineering Systems *Miguel Anjos, Claudia d'Ambrosio, Christine Shoemaker, Golbon Zakeri*
- (f) Sciences: Optimization in Sciences, Computational Biology, Societal Issues, Finance, and Economics *Sonia Cafieri, Leo Liberti, Britta Peis*
- (g) Algo: Math Programming Algorithm Implementations, Parallel Computing, and Software *Tobias Achterberg, Giacomo Nannicini, Pierre Pesneau, Andrea Tramontani*

Local Committee

The organization committee is in charge of the logistic of the conference. The members are:

- Séverine Valerius and Flavie Attigui, Inria Bordeaux (Communication)
- Marie Henault and Sabine Raposo, University congress support team (Location)
- Joelle Lacoste-Rodrigues and Solène Audoux, Inria Bordeaux (Accomodation and administrative issues)
- Isabelle Voirin, Magalie Garcia, and Jean Rivenc, Adera support (PCO, Registration, and accounts)
- Philippe Depouilly and Laurent Facq, CNRS (Information technology)
- Pierre Pesneau, Assoc Prof., University of Bordeaux (Conference Program)
- François Vanderbeck, Prof., University of Bordeaux (Chair)

Presenting our Sponsors



AMPL'sTM developing



AMPL'sTM modeling language and system give you an exceptionally powerful and natural tool for developing and deploying the complex optimization models that arise in diverse applications. AMPL lets you formulate problems the way you think of them, while providing access to the advanced algorithmic alternatives that you need to find good solutions fast. It features an integrated scripting language for automating analyses and building iterative optimization schemes; access to spreadsheet and database files; and application programming interfaces for embedding within larger systems. AMPL works with over 30 powerful optimization engines including all of the most widely used large-scale solvers. For more information, visit https://www.ampl.com

Amazon employs researchers around the globe who are committed to innovation across the company. Amazon has four guiding principles: customer obsession, passion for invention, commitment to operational excellence, and long-term thinking. Customer reviews, 1-Click shopping, personal-

ized recommendations, Prime, Fulfillment by Amazon, AWS, Kindle Direct Publishing, Kindle, Fire tablets, Fire TV, Amazon Echo, and Alexa are some of the products and services pioneered by Amazon. For more information about research at Amazon, visit https://www.amazon.jobs/ISMP.





search solutions by combining state-of-the-art content with the highest standards of scholarship, writing and production. Visit their stand to browse new titles, available at 20% discount, and pick up free journal sample copies. For more information, visit http://www.cambridge.org/us/academic

Cambridge University Press is a not-for-profit organization that dates from 1534 and is part of the University of Cambridge. Their mission is to unlock people's potential with the best learning and re-

Cardinal Operations uses big data to provide solutions for firms under complex decision scenarios. The company aims to close the loop in the decision chain - from data collection, pattern analysis, all the way to the final decision. Solutions include supply chain management, pricing and revenue management, optimization and machine learning algorithm suite, and fintech. For more information, visit https://www.shanshu.ai/



EUROCONTROL is an intergovernmental organisation with 41 Members and 2 Comprehensive Agreement States. They are committed to building, together with their partners, a Single European Sky that will deliver the air traffic management (ATM) performance required for the twenty-first century and beyond. Over 1,900 highly qualified professionals spread over four European countries work at EUROCONTROL, deploying their expertise to address ATM challenges. Their expertise is unrivalled: covering both operational and technical elements ; advising on both civil and military aspects of ATM ; having experience at bringing States with different needs together for a common goal. For more information, visit https://www.eurocontrol.int/



GAMS is one of the leading tool providers for the optimization industry. With customers in more than 120 countries, GAMS is used by multinational companies in many different industries, universities, research institutions, and governments. GAMS combines the language of mathematics (algebra) with concepts from programming and introduces a model-based approach in order to efficiently describe and solve optimization problems. This concept is the most productive way to implement large-scale optimization models. Their mission is to make modelers from all areas more productive by providing them with the best possible tool for their optimization purposes. For more information, visit https://www.gams.com

Google



Google tackles the most challenging problems in computer science and related fields. Being bold and taking risks is essential to what they do, and research teams are embedded throughout Google allowing their discoveries to affect billions of users each day. In doing so, they actively collaborate with, and learn from, the broader scientific community, and publish their research in traditional scientific venues, open source software releases, industry standards, data releases and patents. Ever since Google was born in Stanford's Computer Science department, the company has valued and maintained strong relations with universities and research institutes. In order to foster these relationships, they run a variety of programs that provide funding and resources to the academic and external research community, and make publicly available datasets aimed at furthering research across a range of computer science disciplines. For details about these programs and more, and to stay up-to-date on all the latest publications and news from Google AI, visit http://www.ai.google.

Gurobi is in the business of helping companies make better decisions through the use of prescriptive analytics. Gurobi provides the fastest math programming solver, tools for distributed optimization, optimization in the cloud, and outstanding support. They don't have competing priorities and they don't market applications that may compete with your own. Their goal is to make you successful with optimization. Founded by arguably the most experienced and respected team in optimization today, Gurobi is rapidly growing as more and more companies see the benefits of working with a partner focused on providing the best solver and support possible. For more information, visit http://www.gurobi.com.



IBM Research is one of the world's largest and most influential corporate research labs, with more than 3,000 researchers in 12 labs located across six continents. We invest now in tomorrow's break-throughs. Watson, the world's first cognitive system, is the fruit of over 50 years of IBM research in artificial intelligence. Today, it forms a core part of IBM's business. Our scientists are charting the future of artificial intelligence, breakthroughs like quantum computing, how blockchain will reshape the enterprise and much more. We are dedicated to applying AI and science to industry challenges. IBM Research has made numerous contributions to the areas of Operations Research and Mathematical Programming, starting more than half a century ago. For more information, visit https://www.ibm.com/analytics/decision-optimization

Exceptional ease of use and flexibility have made LINDO software the tool of choice for thousands. LINDO offers solvers for all your optimization needs – including solvers for Linear Programming, Quadratic, SOCP, Global solver for nonconvex models, and Stochastic Programming for planning under uncertainty. There are a range of versatile intuitive interfaces to suit your modeling preference. What's Best is an add-in to Excel that you can use to quickly build models that managers can use and understand. LINGO has a full featured modeling language for expressing complex models clearly and concisely, and it has links to Excel and databases. LINDO API is a callable library that allows you to seamlessly embed the solvers into your own applications. Technical and modeling support at LINDO is responsive and thorough. Visit www.lindo.com or contact us at info@lindo.com to discuss your application or request a full featured trial version. For more information, visit https://www.lindo.com/

LocalSolver

LINDO SYSTEMS INC.

LocalSolver is the first all-terrain and all-in-one optimization solver. Having modeled your problem using natural mathematical constructs, LocalSolver provides you with high-quality solutions in short running times. Based on an innovative resolution technology, LocalSolver scales up to millions of variables running on basic computers. LocalSolver includes a high-level math modeling language for fast prototyping and lightweight object-oriented APIs for tight integration, which makes it easy to use and deploy on any platform. Among several breaking-new differentiators, LocalSolver offers setbased modeling features allowing to compactly model and efficiently solve routing and scheduling problems, or the capability to transparently deal with (possibly time-consuming) black-box functions. For more information, visit http://www.localsolver.com



MOSEK ApS provides optimization software which help their clients make better decisions. Their customer base consists of financial institutions and companies, engineering and software vendors, among others. MOSEK ApS was established in 1997 by Erling D. Andersen and Knud D. Andersen and it specializes in creating advanced software for solution of mathematical optimization problems. In particular, the company focuses on solution of large-scale linear, quadratic, and conic optimization problems. For more information, visit https://mosek.com



The Optimization Firm is an innovation company founded on breakthrough software engineering. Its software products are used by researchers, consultants, and academics in over 50 countries around the world. A university spin-off, the company works to address some of the most complex industrial problems. It is the maker of BARON, the world-leader in global optimization technology. In just seconds, BARON provides the top solutions to the hardest optimization problems. A 2017 academic study found that BARON is 3-10X faster than competing MINLP solvers, while solving 20-30% more problems. The company recently launched ALAMO, a groundbreaking machine learning software that utilizes data and first principles to build simple algebraic models of simulations, experiments and other black-box systems. For more information, visit https://www.minlp.com/home



Orange is one of the largest operators of mobile and internet services in Europe and Africa and a global leader in corporate telecommunication services. For more information, visit https://www.orange.com/en/home



Optimization never happens in isolation, but is always intertwined with data considerations, other forms of analytics, and the ability to explore and explain models and solutions. That's why SAS provides optimization as just one of a set of integrated capabilities spanning from data integration, through descriptive, predictive, and prescriptive analytics, to visualization, exploration, and reporting. OPTMODEL from SAS enables you to build and solve optimization models using linear, network, mixed integer, quadratic, nonlinear, and constraint programming techniques. Local search optimization is also provided. Algorithms, including a decomposition algorithm for LP and MILP, focus on scalability and use parallel processing extensively. For more information, visit http://www.sas.com

Siam. Society for Industrial and Applied Mathematics The Society for Industrial and Applied Mathematics (SIAM) mission is to bring together researchers, professors, students and working professionals in the areas of applied mathematics, computational science, statistics, network and data science and engineering. SIAM textbooks and monographs are a leading source of knowledge for the applied mathematics and computational science communities. For more than 50 years, titles by renowned authors have made SIAM books indispensable to researchers, faculty, and students around the world. Please stop by the SIAM books booth to browse their newest bestsellers and gold standard textbooks, including the well-regarded MOS-SIAM book series. They're happy to offer conference discounts for all attendees, including special discounts for SIAM and MOS members. For more information, visit http://www.siam.org



Looking to publish your research? Discover Springer'sTM print and electronic publication services, including open access! Get high-quality review, maximum readership and rapid distribution. Visit their booth or springer.com/authors. You can also browse key titles in your field and buy (e)books at discount prices. With Springer you are in good company. For more information, visit http://www.springer.com/

Useful Information

Conference Sites

The conference takes place in the center of the city of Bordeaux over two sites:

- "Victoire" is the main site where all parallel sessions and keynote talks take place. It is located on Place de la Victoire, 33000 Bordeaux (the lower red dot on the map). The buildings are identified by a letter as presented below. This building reference is reported in the schedule along the name of the room.
- "Auditorium" is the secondary site where all parallel plenary and semi-plenary sessions take place, as well as the opening ceremony. It is located on 9-11-13 cours Georges Clemenceau 33000 Bordeaux (the upper red dot on the map).

The two sites are within a 15 minutes walk or a two-stop ride per tramway (with one tramway every 3 to 5 minutes). The registration desk has 1500 tramway/bus pass to distribute to those of you who prefer to take the tramway rather then walking. Note that the tramway will be overcrowded if all of us attempt to transfer between the two sites via this line. Hence, please consider walking. Tramway/bus pass may be useful to attendees having their accommodation far away for the conference site. They will be distributed on the first come first served basis, but their number should be largely sufficient to cover all requests.





13/12/2017

PLACE DE LA VICTOIRE

37 salles 7 amphis

Campus Zones

A partition of Victoire campus per zone rather than per building is described below. A **zone is associated to a floor** that spans over several builings of a given area of the campus. Zones are numbered in sequential order of their cummunitation link (stairway or corridor path).

Zone 1 across buildings ABCDE, 3^d floor

Bâtiment A - B - C - D - E

Niveau R+3



Zone 2 across buildings ABCDE, 2^d floor



Zone 3 across buildings ABCDE, 1th floor

Bâtiment A - B - C - D - E

Niveau R+1



Zone 4 across buildings ABCDE, 1th intermediate floor



Zone 5 across buildings ABCDE, ground floor



Zone 6 building G, all floors



Zone 7 building I, all floors



1th floor



2d floor

Zone 8 buildings JKLNOQ, ground floor



Zone 9 buildings JKLNOQ, 1th intermediate floor



Zone 10 buildings JKLNOQ, 2^d intermediate floor



Zone 11 buildings JKLNOQ, 1th floor



Zone 12 buildings JKLNOQ, 4th floor

no picture

Registration

- The registration desk is at the entrance of the main Victoire site.
- Registration is open on Sunday July 1 from 2pm to 8pm. You are invited to collect your badge and goodies on your arrival.
- The registration desk will remain open all week for late arrival, on-site registration, and information queries from Monday to Friday from 8:30 am to 6:30pm.
- Note that no registration is possible at the secondary site of the Auditorium.
- We did send you by email a pdf file with your badge. So, if you cannot make it in time to the registration desk (or wish to avoid the queue) before attending your first session, you may get access to the conference by presenting your own print of your badge. It needs not be in color, a basic black and white copy will do as the access code printed on the badge can be read in B&W. In any case, a color copy is waiting for you at the registration desk.

ISMP App

The ISMP2018 App is available on https://ismp2018.u-bordeaux.fr/program. It allows you to consult the conference program, the authors list, and the room map.

- Talks are sorted by day and session. Select a day on the top bar. Click on a session to see the talk details.
- Swipe left on a talk to add it to your favorites. Swipe left on a favorite to remove it.
- For quicker navigation, you can use the filter menu to select only streams that are if interest to you. To unselect streams that you don't want usie the top right filter button.
- For offline mobile consultation: you can easily download the website app as an autonomous application (PWA). Under Android or iOS, go into your browser menu, and select "Add to Home screen".
- To refresh data on the schedule view, swipe down at the top of the page.

The Scheduler

You might be curious to know how the program has been established. From your talk submissions, the scientific committee of each stream has build sessions, indicating the expected attendance and the potential conflicts with other sessions of their own stream or with other streams. They also implemented time restrictions and precedence constraints. The scheduler had this information along side the expected attendance in each stream thanks to your input on the fraction of your time that you plan to spend in each stream. The scheduler went through a sequence of optimization stages to build a program with the following goals: first to minimize the number of parallel tracks in each thematic area; second to spread evenly the high profile sessions, while reducing the spread of the mini-symposia; third to avoid to schedule in parallel sessions that are destined to a same public (including the co-authors whishing to avoid having their talks in parallel); fourth to cluster streams geographically trying to keep their room assignment stable.

Lunch breaks

Lunches are on your own. The late morning and early afternoon sessions are purposely on different sites so as to spread the crowd in town for lunch. There are two food trucks on the Victoire site as well as a sandwich bar (the latter runs only from Tuesday onwards).

Coffee breaks

Coffee breaks are served in the morning from 10:30am to 11am on the ground floor at both end of the Victoire campus (Buildings C and P). French pastries are offered. There are no coffee breaks at the Auditorium. At the afternoon break, no coffee is served. However self-service expresso machines are disseminated on the Victoire campus along with water bottle for your comfort at any time of the day.

Wifi connection

At the Victoire site, you can connect using either your "eduroam" account, or on the REAUMUR network using the ISMP account:

Login: ISMP-n-1 Password: q3#bjkG

Instructions to Speakers

Each lecture room is equipped with a video projector requiring a **VGA connection**. Speakers are expected to bring their own laptop for their presentation. However, for easy transition between talks, we ask that all the speakers of a session collect their talks on a single computer (typically the laptop of the last speaker). Please introduce yourself to the chairman of the session before hand by getting to the lecture room at least 5 minutes prior to the session start time. We strongly advice speakers to have their slides in a **PDF format**. Please avoid powerpoint or any other specific software.

Instructions to Chairpersons

Please get to your lecture room at least 10 minutes prior to the session start time. Collect all the presentations, preferably in a pdf format, on a single computer and check that the video retransmission is working OK for each talk. It is absolutely necessary to keep to the exact time slots that are assigned in the conference program. Sessions do come in two formats, either 30 minute talks or 20 minute talks. Please do not take the liberty to change the length of time that is assigned to a speaker, as it is essential to allow the attendees to synchronize their selection as announced in the program. In the same line, if a talk is canceled, do not move other talks forward but leave the slot empty.

Video Retransmission

The opening ceremony, as well as the plenary and semi-plenary sessions, that take place at the Auditorium, are retransmitted on the Victoire site in the following rooms: **Amphi Broca** (external building, top floor), **Amphi Gintrac** (Building Q, ground floor) and **Amphi Pitres** (Building O, ground floor).

Welcome Event on Sunday

Alongside registration on Sunday afternoon from 2pm to 8pm, we have a wine tasting event at the Victoire site to welcome you in Bordeaux. Attendees who have not registered for this event can do it on site.

Conference Dinner on Wednesday

The conference dinner will take place on the Garonne river bank, at Hangar 14 (see the map below) from 7:30pm to 11:30pm. This casual banquet is organized to induce encountering between the 1000 participants. You will enjoy the wine of Chateau Couhins, a Pessac-Leognan, property of the research institute in agronomy (INRA). The finest catering is delivered by Lacoste.

Farewell Party on Friday

On Friday evening, we hold an informal banquet at the modern art museum, named CAPC (musée d'art contemporain de Bordeaux, Rue Ferrère, Entrepôt Lainé). Finger food and more, wine and draft beer, ... to enjoy the company of your friends before leaving.



University buildings for Parallel Sessions

Train station

		<u>Sun.01</u>	<u>Mon.02</u>	<u>Tue.03</u>	Wed.04	<u>Thu.05</u>	<u>Fri.06</u>
8AM							
9AM	Α		Opening Cerenomy	Parallel Sessions 4x30 min	Parallel Sessions 4x30 min	Parallel Sessions 4x30 min	Parallel Sessions 4x30 min
10AM							
			Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
IIAM	В		Plenary Taik	Keynote speakers	Keynote speakers	Keynote speakers	Keynote speak- ers
12AM	С		Meeting of the MPC editorial board	Meeting of the MPA/B editorial boards	Meeting of MOS and Springer delegations	SIOPT board meeting	
1PM							
2PM	D	Registration and wine testing	Semi-Plenary + Keynote speakers	Plenary Talk	Plenary Talk	Plenary Talk	Plenary Talk
3PM			Break	Break	Break	Break	Break
3PM 4PM	E		Break Parallel Sessions 3x30 min	Break Parallel Sessions 3x30 min	Break Parallel Sessions 3x30 min	Break Parallel Sessions 3x30 min	Break Parallel Sessions 3x30 min
3PM 4PM 5PM	F		Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min	Break Parallel Sessions 3x30 min MOS Business Meeting	Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min	Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min	Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min
3PM 4PM 5PM 6PM	E		Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min	Break Parallel Sessions 3x30 min MOS Business Meeting	Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min	Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min	Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min
3PM 4PM 5PM 6PM 7PM	F		Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min MOS council meeting	Break Parallel Sessions 3x30 min MOS Business Meeting Optimization discussion group	Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min	Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min	Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min
3PM 4PM 5PM 6PM 7PM 8PM	F		Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min MOS council meeting	Break Parallel Sessions 3x30 min MOS Business Meeting Optimization discussion group	Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min Conference Dinner	Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min	Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min Farewell Party
3PM 4PM 5PM 6PM 7PM 8PM 9PM	F		Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min MOS council meeting	Break Parallel Sessions 3x30 min MOS Business Meeting Optimization discussion group	Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min Conference Dinner	Break Parallel Sessions Ax20/3x30 min	Break Parallel Sessions 3x30 min Parallel Sessions 4x20/3x30 min Farewell Party

Special Events

Business Meetings

- Meeting of the MPC editorial board: Monday July 2 at lunch time, salle Arnozan, building Q on the ground floor.
- MOS council meeting: Monday, July 2 at 6:30 pm, salle Arnozan, building Q on the ground floor.
- Meeting of the MPA/B editorial boards: Tuesday July 3 at lunch time, salle Arnozan, building Q on the ground floor.
- MOS business meeting: Tuesday, July 3 at 5:00 pm, Amphi Broca, external building, top floor.
- **Optimization discussion group** (sponsor: INFORMS Optimization Society): Tuesday, July at 6:30 pm, Amphi Deniges, building C, on the ground floor.
- Meeting of MOS with Springer: Wednesday at lunch time, salle Arnozan, building Q on the ground floor.
- SIOPT board meeting: Thursday at lunch time, salle Arnozan, building Q on the ground floor.

Opening Ceremony

The Opening Ceremony takes place Monday July 2 from 9am to 11am at the Auditorium (place Cambetta). It features the Prize Awards:

- 1. The **Paul Y. Tseng Memorial Lectureship in Continuous Optimization**, for outstanding contributions in continuous optimization.
- 2. The A.W. Tucker Prize, for an outstanding thesis in mathematical programming.
- 3. The Lagrange Prize in Continuous Optimization, for outstanding work in continuous optimization.
- 4. The Beale Orchard Hays Prize, for outstanding work in computational mathematical programming.
- 5. The **Delbert Ray Fulkerson Prize**, for outstanding papers in discrete mathematics. Sponsored jointly by MOS and the American Mathematical Society.
- 6. The George B. Dantzig Prize, for original research having a major impact on mathematical optimization.

The Ceremony will conclude with a show given by the University Chorale, singing a canticorum jubilo by Haendel, a piece of Passereau, and Conquest Paradise by Vangelis.

Plenary Sessions

On the relationship between machine learning and optimization

by **Francis Bach**, INRIA - ENS, FR PLENARY - Mo 11:00am-12:00am INVITED SESSION 552 Room: Auditorium Building: Symphony Hall, Zone: 0 **Chair:** Michel Goemans, MIT, US

Many machine learning frameworks are naturally formulated as optimization problems. Over the last few decades, this has led to fruitful exchanges between the two fields: optimization provides new learning algorithms, while machine learning requires solving new types of optimization problems with a specific structure. In this talk, I will present recent work at the interface between the two fields, highlighting the specificity of learning problems and some open problems.

Francis Bach is a researcher at Inria, leading since 2011 the machine learning team which is part of the Computer Science Department at Ecole Normale Supérieure. He graduated from Ecole Polytechnique in 1997 and completed his Ph.D. in Computer Science at U.C. Berkeley in 2005, working with Professor Michael Jordan. He spent two years in the Mathematical Morphology group at Ecole des Mines de Paris, then he joined the computer vision project-team at Inria/Ecole Normale Supérieure from 2007 to 2010. Francis Bach is primarily interested in machine learning, and especially in graphical models, sparse methods, kernel-based learning, large-scale convex optimization, computer vision and signal processing. He obtained in 2009 a Starting Grant and in 2016 a Consolidator Grant from the European Research Council, and received in 2012 the Inria young researcher prize. In 2015, he was program co-chair of the International Conference in Machine learning (ICML), and he will be general chair in 2018.

The Resurgence of Proximal Methods in Optimization

by **Marc Teboulle**, Tel Aviv University, IL PLENARY - Tu 1:30pm-2:30pm INVITED SESSION 555 Room: Auditorium Building: Symphony Hall, Zone: 0 **Chair:** Claudia Sagastizabal, Unicamp, BR

Proximal based methods are nowadays starring in modern optimization algorithms based on first order information, e.g., function values and gradient/subgradients. This renewed interest is motivated by the current high demand in solving large scale problems arising in a wide spectrum of disparate modern applications. This talk will describe the fundamentals of a fairly general proximal framework, and its impact on some iconic first order optimization algorithms, including recent extensions. Convergence properties and applications in both the convex and nonconvex settings will be described.

Marc Teboulle is a Professor at the School of Mathematical Sciences of Tel Aviv University. He received his D.Sc. from the Technion, Israel Institute of Technology in 1985. He has held a position of Applied Mathematician at Israel Aircraft Industries, and academic appointments at Dalhousie University and the University of Maryland. He serves on the editorial board of several leading journals, and is the Area Editor of Continuous Optimization for Mathematics of Operations Research. His research interests are in the area of continuous optimization, including theory, algorithms, and its applications to many areas of science and engineering.

Relaxations and Approximations of Chance Constraints

by **Shabbir Ahmed**, Georgia Tech, US PLENARY - We 1:30pm-2:30pm INVITED SESSION 525 Room: Auditorium Building: Symphony Hall, Zone: 0 **Chair:** Simge Kucukyavuz, University of Washington, US A chance constrained optimization problem involves random constraints that are required to be satisfied with a prespecified probability. Such constraints are used to model reliability requirements in a variety of application areas such as finance, energy, service and manufacturing. Except under very special conditions, chance constraints impart severe nonconvexities making the optimization problem extremely difficult. In this talk we will review results on constructing tractable relaxations and approximate solutions for this hard class of problems. Extensions to distributionally robust chance constrained problems will also be discussed.

Shabbir Ahmed is the Anderson-Interface Chair and Professor in the H. Milton Stewart School of Industrial and Systems Engineering at the Georgia Institute of Technology. His research interests are in stochastic and discrete optimization. Dr. Ahmed is a past Chair of the Stochastic Programming Society. He serves on the editorial board of several journals including Operations Research, Mathematical Programming and the INFORMS Journal on Optimization. Dr. Ahmed's honors include the INFORMS Computing Society Prize, the National Science Foundation CAREER award, two IBM Faculty Awards, and the INFORMS Dantzig Dissertation award. He is a Senior Member of IEEE and a Fellow of INFORMS.

Randomness, risk and electricity prices

by **Andy Philpott**, University of Auckland, NZ PLENARY - Th 1:30pm-2:30pm INVITED SESSION 554 Room: Auditorium Building: Symphony Hall, Zone: 0 **Chair:** Michael Ferris, University of Wisconsin, US Co-Authors: *Michael Ferris*,

Competitive markets for electricity supply have been around for over twenty years. They were introduced to support commercial investment in conventional generation plants with known costs and capacities, under predictable operating conditions. The design of these markets was therefore based primarily on deterministic optimization paradigms. Improvements in stochastic programming models and algorithms allied with the growth of intermittent and distributed generation and energy storage prompts a re-examination of these market designs. We examine the formation of electricity prices and incentives through a stochastic programming lens, where optimization models are used to yield efficient solutions and stochastic equilibrium models are used to study incentives. Differences between solutions to these models occur when agents are risk averse and markets for risk are incomplete. We illustrate using two case studies: stochastic optimization of ramping generation in markets with wind power and hydroelectric reservoir optimization with uncertain inflows.

Andy Philpott is Professor of Operations Research and co-director of the Electric Power Optimization Centre at the University of Auckland. His research interests are in stochastic optimization and game theory and their application to electricity markets. Dr Philpott currently serves on the editorial board of Operations Research, and has previously served on the editorial boards of Mathematical Programming and Operations Research Letters. Dr Philpott is an INFORMS Edelman Laureate and a Fellow of INFORMS.

Bounds for quantum graph parameters by conic and polynomial optimization

by **Monique Laurent**, CWI and Tilburg University, NL PLENARY - Fr 1:30pm-2:30pm INVITED SESSION 553 Room: Auditorium Building: Symphony Hall, Zone: 0 **Chair:** Frank Vallentin, University of Cologne, DE Co-Authors: *Sander Gribling, David de Laat, Sabine Burgdorf, Teresa Piovesan*,

Quantum information is a rich source of challenging optimization problems. In particular, the study of quantum correlations, which are used to model the effect of quantum entanglement, leads to hard optimization problems where the variables may be instantiated to positive semidefinite matrices of arbitrary size (instead of nonnegative scalars in the classical case). This also leads to natural quantum analogues of classical graph parameters like minimum graph coloring and maximum stable sets. We will introduce the relevant concepts and discuss how to model and bound these quantum graph parameters, and other problems over quantum correlations, using tools from conic, semidefinite and noncommutative polynomial optimization.

Monique Laurent is researcher at Centrum Wiskunde and Informatica (CWI) in Amsterdam and she has a part-time appointment as full professor at Tilburg University. She received her Ph.D. in Mathematics at the University Paris Diderot in 1986 and was a researcher at CNRS in Paris before joining CWI in 1997. Her research focuses on algebraic and geometric methods for optimization problems in operations research, discrete and polynomial optimization, and quantum information. She coauthored the book Geometry of Cuts and Metrics (Springer) and she is a SIAM Fellow. Presently she serves on the editorial boards of Mathematical Programming, SIAM Journal on Discrete Mathematics and SIAM Journal on Mathematics of Data Science.

Semi-Plenary and Keynote Sessions

What's happening in nonconvex optimization? A couple of stories

by **Emmanuel Candes**, Stanford University, US KEYNOTE - Mo 1:30pm-2:30pm INVITED SESSION 536 Room: SIGALAS Building: C, 2nd floor, Zone: 2 **Chair:** Jean-Baptist Hiriart-Urruty, Paul Sabatier University, FR Co-Authors: *Yuxin Chen*,

In recent years, there has been astounding progress in the theory and practice (algorithms, professional-grade software development, applications) of convex optimization to the point that it has become a real pillar of modern engineering. On the other hand, the field of non-convex optimization is far less mature and may draw comparisons with 17th century medicine (ad-hoc methods, no performance guarantees, unreliable results, and so on). This is unfortunate because most problems of interest to information scientists are non-convex in nature; e.g. many maximum likelihood estimates are, in fact, solutions to non-convex problems, some of which being notoriously hard. This talk will briefly review a rapidly emerging literature showing that, perhaps surprisingly, some important non-convex problems may not be as hard as they seem. We will discuss some of this exciting research emphasizing applications in signal and image processing such as phase retrieval, and in machine learning such as low-rank factorization.

Emmanuel Candès is the Barnum-Simons Chair in Mathematics and Statistics, and professor of Electrical Engineering (by courtesy) at Stanford University, where he currently chairs the Department of Statistics. Emmanuel's work lies at the interface of mathematics, statistics, information theory, signal processing and scientific computing. Candès graduated from the Ecole Polytechnique in 1993 with a degree in science and engineering, and received his Ph.D. in Statistics from Stanford University in 1998. He received the 2006 Alan T. Waterman Award from NSF, the 2013 Dannie Heineman Prize from the Academy of Sciences at Göttingen, the 2010 George Polya Prize awarded by the Society of industrial and Applied Mathematics (SIAM), and the 2015 AMS-SIAM George David Birkhoff Prize in Applied Mathematics. He is a member of the National Academy of Sciences and the American Academy of Arts and Sciences. Candès has been named a 2017 MacArthurFellow, an honor popularly known as the genius grant.

Theoretical Analysis of Cutting-Planes in IP Solvers.

by **Santanu Dey**, GaTech, US KEYNOTE - Mo 1:30pm-2:30pm INVITED SESSION 538 Room: DENIGES Building: C, Ground Floor, Zone: 5 **Chair:** Gerard Cornuejols, Carnegie Mellon University, US Co-Authors: *Marco Molinaro*,

While many classes of cutting-planes are at the disposal of integer programming solvers, our scientific understanding is far from complete with regards to cutting-plane selection, that is the task of selecting a portfolio of cutting-planes to be added to the LP relaxation at a given node of the branch-and-bound tree. In order to keep the underlying linear program sparse, most commercial Mixed integer linear programming solvers consider sparsity of cuts as an important criterion for cutting-plane selection and use. The use of sparse cutting-planes may be viewed as a compromise between two competing objectives. On the one hand, the use of sparse cutting-planes aids in solving the linear programs encountered in the branch-and-bound tree faster. On the other hand, it is possible that important facet-defining or valid inequalities for the convex hull of the feasible solutions are dense and thus without adding these cuts, one may not be able to attain significant integrality gap closure. We analyze various aspects of sparsity in cutting-plane selection and use.

Santanu S. Dey is an Associate Professor in the H. Milton Stewart School of Industrial and Systems Engineering at Georgia Institute of Technology. Dr. Dey holds a Ph.D. in Industrial Engineering from Purdue University. Prior to joining Georgia Tech, he worked as a post-doctoral fellow at the Center for Operations Research and Econometrics (CORE) of the Catholic University of Louvain in Belgium. Dr. Dey's research interests are in the area of non convex optimization, and in particular mixed integer linear and nonlinear programming.

Multiobjective Optimization with PDE Constraints

by **Michael Hintermüller**, WIAS Berlin, DE SEMI - Mo 1:30pm-2:30pm INVITED SESSION 550 Room: Auditorium Building: Symphony Hall, Zone: 0 **Chair:** Stephen Wright, U Wisconsin-Madison, US

Motivated by engineering applications, but in particular also by applications in economics, where multi-agent market models integrate the physics of underlying processes (e.g., leading to spot markets with transport in connection with production and distribution of gas through a network of pipelines), generalized Nash games with partial differential equations (PDEs) and further private as well as global constraints are considered. The PDE typically models the underlying physics, may be subject to further constraints on the physical state and is influenced by the individual agents through their decision making process. The talk addresses some mathematical modeling issues with a particular focus on the interplay of constraint types and underlying topologies in infinite dimensions and the analysis of existence of Nash equilibria. It also includes aspects of an efficient numerical treatment of the problem class. Concerning the latter, path-following semi smooth Newton schemes are highlighted as they exhibit mesh independent convergence upon discretizing the original infinite dimensional problem. With respect to path-following techniques, sensitivity based Moreau-Yosida approaches, e.g. suitable for pointwise constraints on the state or its derivatives, will be intertwined with Nikaido-Isoda techniques for addressing the underlying game structure. Some numerical results for model problems, but also for a simplified spot market model with transport will be reported on. The talk closes by an outlook on possible future research in the field.

Michael Hintermüller is Professor of Applied Mathematics at Humboldt-Universität zu Berlin, Director of the Weierstrass Institute for Applied Analysis and Stochastics, and Speaker of the Einstein-Center for Mathematics Berlin. He received his PhD from the University of Linz in Austria and held positions at the University of Graz (Austria), Rice University (USA) and Sussex University (UK). He is SIAM Fellow and editor of several international peer-reviewed journals such as SIAM J. Num. Analysis or ESAIM COCV. His research interests include PDE-constrained optimization, quasi-variational inequalities and Nash games as well as variational image processing. Concerning applications, he is involved in interdisciplinary projects, e.g. focusing on energy markets or the design of next generation microprocessor, as well as in cooperations with industry.

Asymptotic Lagrangian duality for nonsmooth optimization

by **Regina Burachik**, UniSA, AU KEYNOTE - Tu 11:00am-12:00am INVITED SESSION 541 Room: DENIGES Building: C, Ground Floor, Zone: 5 **Chair:** Xiaojun Chen, Hong Kong Polytechnic Univ., HK

For nonconvex optimization problems, zero duality gap and saddle-point properties can be established by using a generalized Lagrangian function that verifies suitable properties. The latter fact was originally proved by Rockafellar and Wets in 2007 in finite dimensions and extended in various ways in the last decade. The main advantage of this approach is that the resulting dual problem is convex and hence tractable via standard techniques. In this way, the optimal value, and sometimes even a solution, of the original problem, can be obtained by solving the dual problem using nonsmooth convex techniques. In the first part of the talk, we will recall some recent advances and applications of this fact in nonconvex duality. We will show how techniques from nonsmooth convex analysis can be incorporated into this duality scheme and provide a solution of the original (nonconvex/nonsmooth problem). In the second part of the talk, we will report on some new results involving a sequence of dual problems that converge (in a suitable sense) to a given dual problem (called asymptotic dual problem). This model can be useful within an iterative scheme in which (i) we use a sequence of smooth approximations of a nonsmooth Lagrangian, or (ii) we want to incorporate current information to update the Lagrangian at each iteration. For the asymptotic duality, we establish hypotheses under which zero duality gap holds. We illustrate the new results in the context of equality constrained problems and nonlinear semi-definite problems.

Regina Burachik is an Associate Professor in Optimization at University of South Australia. She publishes extensively in nonsmooth/convex/nonconvex optimization, variational inequalities, and set-valued analysis. She co-authored the Springer research-level book: "Set-Valued Analysis and Monotone Mappings". Her interest is in both theoretical and practical aspects of nonsmooth optimization and related areas, including variational inequalities, maximal monotone maps, convex analysis, and duality theory for nonconvex optimization. She is part of editorial boards of around 10 international journals in the area of optimization, including JOTA, SIOPT, SVVAN and Optimization Letters.

Lower bounds on the size of linear programs

by **Thomas Rothvoss**, University of Washington, US KEYNOTE - Tu 11:00am-12:00am INVITED SESSION 545 Room: BROCA Building: W, 3rd floor, Zone: 0 **Chair:** Volker Kaibel, OVGU Magdeburg, DE

For half a century, proving that certain computational problems cannot be solved efficiently by a computer has turned out to be one of the hardest mathematical questions, with very little to no progress at all. However, in many scenarios it is very natural to consider restricted computational models, and here the situation is more promising. For example, a very standard approach in Operations Research is to model a computational problem as a linear program; this has the natural geometric interpretation of writing the solution space as projection of a higher dimensional polytope with few facets. There has been remarkable progress in the last few years in understanding this model, leading to almost tight lower bounds that we will describe in this talk.

Thomas Rothvoss is Assistant Professor in the Department of Mathematics and the Department of Computer Science and Engineering at the University of Washington. He is working in the intersection of theoretical computer science and discrete optimization. He received a STOC 2010 Best Paper Award, a SODA 2014 Best Paper Award and a STOC 2014 Best Paper Award. His research is supported by an Alfred P. Sloan Research Fellowship (2015), a David and Lucile Packard Foundation Fellowship (2016) as well as an NSF CAREER Award (2016).

Adaptive Robust Optimization with Scenario-wise Ambiguity Sets

by **Melvyn Sim**, NUS, SG SEMI - Tu 11:00am-12:00am INVITED SESSION 551 Room: Auditorium Building: Symphony Hall, Zone: 0 **Chair:** Daniel Kuhn, EPFL, CH Co-Authors: *Chen Zhi, Peng Xiong*,

We present a tractable format for optimization under uncertainty based on the framework of adaptive robust optimization via a new class of scenario-wise ambiguity sets. The new format naturally unifies classical stochastic programming and robust optimization, and also incorporates the more recent distributionally robust optimization with ambiguity sets based on generalized moments, mixture distribution, Wasserstein (or Kantorovich-Rubinstein) metric, ϕ -divergence, and new ones such as k-means clustering, among others. We introduce a compatible scenario-wise affine recourse approximation, which is developed on the classical affine recourse approximation (a.k.a. linear decision rule or affine policy), to provide tractable solutions to adaptive robust optimization problems.

Dr. Melvyn Sim is Professor and Provost's Chair at the Department of Analytics and Operations, NUS Business school. His research interests fall broadly under the categories of decision making and optimization under uncertainty with applications ranging from finance, supply chain management, healthcare to engineered systems. He is one of the active proponents of Robust Optimization and has given invited talks in this field at international conferences.

Monotone Operator Theory in Convex Optimization

by **Patrick Combettes**, North Carolina State Univ., US KEYNOTE - We 11:00am-12:00am INVITED SESSION 537 Room: BROCA Building: W, 3rd floor, Zone: 0 **Chair:** Samir Adly, Laboratoire XLIM, FR

Several aspects of the interplay between monotone operator theory and convex optimization are discussed. The crucial role played by monotone operators in the analysis and the numerical solution of convex minimization problems is emphasized. We review the properties of subdifferentials as maximally monotone operators and, in tandem, investigate those of proximity operators as resolvents. In particular, we study transformations which map proximity operators to proximity operators, and establish connections with self-dual classes of firmly nonexpansive operators. In addition, algorithmic considerations are discussed.

Online Competitive Algorithms for Resource Allocation

by **Maryam Fazel**, Univ. of Washington, US KEYNOTE - We 11:00am-12:00am INVITED SESSION 539 Room: DENIGES Building: C, Ground Floor, Zone: 5 **Chair:** Frank Curtis, Lehigh University, US

In online optimization with budgets, the data in the optimization problem is revealed over time, and at each step a decision variable needs to be set without knowing the future inputs, while there is a budget constraint that couples the decisions across time. In this talk, we consider an online optimization setup that includes problems such as online (budgeted) resource allocation with a fixed inventory, and the 'Adwords' problem popular in online advertising. We examine two classes of primal-dual algorithms, with a focus on the competitive ratio, i.e., the ratio of the objective achieved by the algorithm to that of the optimal offline sequence of decisions. We give a bound on this ratio and show how certain smoothing of the objective function can improve the bound, and how to seek the optimal smoothing by solving a convex design problem. This approach allows us to design effective smoothing customized for a given cost function and problem structure. We will illustrate this approach in several classical examples, as well as a few new ones.

Maryam Fazel is an Associate Professor of Electrical Engineering at the University of Washington, with adjunct appointments in Computer Science and Engineering, Mathematics, and Statistics. Maryam received her MS and PhD from Stanford University, her BS from Sharif University of Technology in Iran, and was a postdoctoral scholar at Caltech before joining UW. Her current research interests are in mathematical optimization and applications in machine learning. She is a recipient of the NSF Career Award, the UWEE Outstanding Teaching Award, UAI conference Best Student Paper Award (with her student), and coauthored a paper on low-rank matrix recovery selected as a Fast-Breaking paper by Science Watch (2011). She co-leads the NSF Algorithmic Foundations for Data Science Institute at UW, and is an associate editor of SIAM journals on Optimization and on Mathematics of Data Science.

Model-Based Methods, Sampling Models, and A New Second-Order Model-Based Method

by **Luis Nunes Vicente**, University of Coimbra, PT KEYNOTE - We 11:00am-12:00am INVITED SESSION 546 Room: LEYTEIRE Building: E, 3rd floor, Zone: 1 **Chair:** Stefan Wild, Argonne National Laboratory, US

The use of modeling in numerical optimization is ubiquitous. The accuracy of a model depends on how much we know about

the problem function, in particular about its derivatives. A model can be used as a surrogate either to directly compute an approximate solution to the problem at hand or in a subproblem for the step computation of some iterative method, such as a trust-region method. In this talk we will first review new complexity results for trust-region methods when the exact gradient is not available, covering the cases of inexact gradients, random models whose accuracy is provided with some probability, and derivative-free optimization where models are recovered using only function values. Such a rich background can deliver a model recovery in other scenarios. One can sample Hessian vector products where we do function values to build models with approximate curvature. Based on this idea, we will present a new Hessian free second-order model-based method.

Luis Nunes Vicente is a Professor of Mathematics at the University of Coimbra, Portugal. His research interests include Continuous Optimization, Computational Science and Engineering, and Machine Learning and Data Science. He obtained his PhD from Rice University in 1996, under a Fulbright scholarship, receiving from Rice the Ralph Budd Thesis Award. He was one of the three finalists of the 94-96 A. W. Tucker Prize of the Mathematical Optimization Society (MOS). In 2015, he was awarded the Lagrange Prize of SIAM (Society for Industrial and Applied Mathematics) and MOS for the co-authorship of the book - Introduction to Derivative-Free Optimization, MPS-SIAM Series on Optimization, SIAM, Philadelphia, 2009. He held visiting positions at the IBM T.J. Watson Research Center and the IMA/University of Minnesota in 2002/2003, at the Courant Institute of Mathematical Sciences/NYU and the Université Paul Verlaine of Metz in 2009/2010, and at Roma/Sapienza and Rice University in 2016/2017. He has served on numerous editorial boards, including SIAM Journal on Optimization (2009-2017), EURO Journal on Computational Optimization, and Optimization Methods and Software. He is currently Editor-in-Chief of Portugaliae Mathematica, the Portuguese Mathematical research journal published by the European Mathematical Society.

Insights via volumetric comparison of polyhedral relaxations

by **Jon Lee**, University of Michigan, US SEMI - We 11:00am-12:00am INVITED SESSION 548 Room: Auditorium Building: Symphony Hall, Zone: 0 **Chair:** Andrea Lodi, Polytechnique Montreal, CA

I will survey some mathematical results (many quite recent) concerning volumes of polytopes of interest in non-convex optimization. The motivation is in geometrically comparing relaxations in the context of mixed-integer linear and nonlinear optimization, with the goal of gaining modeling and algorithmic insights. We consider relaxations of: fixed-charge formulations, vertex packing, boolean-quadric polytopes, and relaxations of graphs of monomials on box domains. Besides surveying the area, I will highlight some good open problems.

Jon Lee is the G. Lawton and Louise G. Johnson Professor of Engineering at the University of Michigan. He received his Ph.D. from Cornell University. Jon is the author of the text - A First Course in Combinatorial Optimization- (Cambridge University Press), and the open-source book - A First Course in Linear Optimization- (Reex Press). He was the founding Managing Editor of the journal Discrete Optimization, he is currently Editor-in-Chief of the journal Mathematical Programming. Jon was Chair of the Executive Committee of the Mathematical Optimization Society, and Chair of the INFORMS Optimization Society. He was awarded the INFORMS Computing Society Prize, and he is a Fellow of INFORMS.

Cutting Planes in the Extended Space

by **Oktay Gunluk**, IBM Research, US KEYNOTE - Th 11:00am-12:00am INVITED SESSION 543 Room: BROCA Building: W, 3rd floor, Zone: 0 **Chair:** Adam Letchford, Lancaster University, GB

For a given formulation of an optimization problem, an extended formulation is one which uses additional variables to represent the same problem in an extended space. In integer programming literature there is a significant body of work that focuses on constructing compact polyhedral descriptions of integer programs in this framework. In this talk, we take a different approach and study the effect of adding cutting planes in the extended space for mixed-integer programs. We show that for 0-1 problems, even when the initial extended formulation is not stronger than the original LP formulation, it is possible to obtain the convex hull of integer solutions after adding one round of split cuts. This idea also leads to an lift-and-project operator with better theoretical properties than other similar operators. We also consider what we call binarization schemes that produce extended formulations by expressing each bounded integer variable with a collection of auxiliary binary variables. We present a hierarchy of such binarization schemes and present numerical experiments.

Oktay Gunluk is a research staff member at IBM Research. He has received his BS and MS degrees from Bogazici University and his Ph.D. in operations research from Columbia University. His research interests are mainly mixed-integer programming and discrete optimization. His applied work spans various industrial problems including production planning, fleet scheduling, port optimization, vehicle routing, oil pipeline scheduling and site selection in agriculture. He has served on the editorial boards of Networks, Mathematical Programming Computation, and MOS/SIAM Book Series on Optimization. He is currently an associate editor for Operations Research and Optimization and Engineering journals. He has served on the program committees for MIP, IPCO, and ISCO and currently serves in the IPCO steering committee.

Effective Scenarios and Scenario Reduction for Risk-Averse Stochastic Programs

by **Tito Homem-de-Mello**, Universidad Adolfo Ibanez, CL KEYNOTE - Th 11:00am-12:00am INVITED SESSION 544 Room: DENIGES Building: C, Ground Floor, Zone: 5 **Chair:** Jim Luedtke, University of Wisconsin-Madiso, US Co-Authors: *Sebastian Arpon, Bernardo Pagnoncelli, Hamed Rahimian, Guzin Bayraksan*,

In this talk we discuss some scenario reduction methods for risk-averse stochastic optimization problems. Scenario reduction techniques have received some attention in the literature and are used by practitioners, as such methods allow for an approximation of the random variables in the problem with a moderate number of scenarios, which in turn makes the optimization problem easier to solve. The majority of works for scenario reduction are designed for classical risk-neutral stochastic optimization problems; however, it is intuitive that in the risk-averse case one is more concerned with critical scenarios that correspond to high cost. The identification of such critical scenarios can be accomplished using the notion of effective scenarios recently introduced in the literature in the context of distributionally robust optimization problems. According to that notion, a scenario is effective if the removal of that scenario — defined in a precise way — causes a change in the optimal objetive function value; in some cases, it is possible to identify the effective scenarios analytically. By building upon these tools, we propose a scenario reduction technique for stochastic optimization problems where the objective function is a Conditional Value-at-Risk. The numerical results presented with problems from the literature illustrate the performance of the method and indicate the general cases where we expect it to perform well.

Tito Homem-de-Mello is a Professor in the School of Business at Universidad Adolfo Ibañez, Santiago, Chile. He obtained his Ph.D. in Industrial and Systems Engineering from Georgia Institute of Technology, and a B.Sc. in Computer Science and M.S. in Applied Mathematics from University of São Paulo, Brazil. His research focuses on optimization of systems under uncertainty. In particular, he studies theory and algorithms for stochastic optimization as well as applications of such methods in several areas such as risk management, energy, and transportations. He was co-Chair of the Program Committee of the XIV International Conference on Stochastic Programming, held in Brazil in 2016. Dr. Homem-de-Mello has been awarded prizes for Best Paper from IIE Transactions (2012), INFORMS Revenue Management and Pricing Section (2007), and INFORMS George Nicholson student paper competition (1998).

The BARON software for MINLP

by **Nikolaos Sahinidis**, Carnegie Mellon University, US SEMI - Th 11:00am-12:00am INVITED SESSION 547 Room: Auditorium Building: Symphony Hall, Zone: 0

Chair: Claudia D Ambrosio, LIX, FR

The BARON project for the global optimization of NLPs and MINLPs began in the early 1990s. The project has led to the introduction of a number of methodologies to the forefront of global optimization, including domain reduction techniques, finite branching schemes for continuous problems, polyhedral relaxations, dynamic convexity detection, and the use of multi-term relaxations, multi-constraint relaxations, integer programming relaxations, and portfolios of relaxations in branch-and-bound algorithms. In this talk, we review key developments in the history of BARON, and present computational results on benchmarks and an application in symbolic regression.

Nick Sahinidis is John E. Swearingen Professor and Director of the Center for Advanced Process Decision-making at Carnegie Mellon University. He joined Carnegie Mellon in 2007 after a sixteen-year long career at the University of Illinois at Urbana, where he taught in Industrial Engineering and Chemical Engineering. His research addresses the development of theory, algorithms, and the BARON software for global optimization of mixed-integer nonlinear programs, as well as applications in a variety of fields, including process systems optimization and machine learning. His honors have included the INFORMS Computing Society Prize, the Beale-Orchard-Hays Prize, the Computing in Chemical Engineering Award, the Constantin Carathéodory Prize, and the National Award and Gold Medal from HELORS. Professor Sahinidis is a fellow of INFORMS and AIChE. He is the Editor-in-Chief of Optimization and Engineering.

Majority judgment

by **Michel Balinski**, CNRS and Ecole Polytechnique, FR KEYNOTE - Fr 11:00am-12:00am INVITED SESSION 535 Room: LEYTEIRE Building: E, 3rd floor, Zone: 1 **Chair:** Martine Labbé, Université Libre de Bruxelles, BE

Every well-known voting procedure in use today hides important vices that can deny the will of the electorate including majority vote with only two candidates (the domination paradox), approval voting, and all methods that ask voters to rank-order candidates. The reason: voters cannot adequately express their opinions. Majority judgment asks voters to express their opinions by evaluating every candidate in a common language of ordinal grades such as: Great, Good, Average, Poor, or Terrible. Majorities determine the electorate's evaluation of each candidate and the ranking between every pair of candidates (necessarily transitive), with the first-placed among them the winner. Majority judgment is described together with real examples of its use. It was specifically designed to (1) permit voters to express their opinions, (2) be meaningful in the sense of measurement theory, (3) guarantee a transitive order-of-finish (avoiding Condorcet's paradox), (4) avoid Arrow's paradox (when the order-of-finish of two candidates depends on the presence/absence of another candidate), (5) combat strategic manipulation and encourage the honest expression of opinions. References M. Balinski and R. Laraki, Majority Judgment: Measuring, Ranking, and Electing, M.I.T. Press 2011. – and –, "Judge: Don't Vote!" Operations Research 62 (2014) 483-511.

Michel Balinski, a Williams College graduate, completed an M.S. in economics at MIT and a Ph.D. in mathematics at Princeton. He has taught at Princeton, Penn, CUNY Graduate Center, Yale and SUNY, Stony Brook. Beginning in 1982 he was Directeur de Recherche de classe exceptionnelle of the CNRS at the Ecole Polytechnique, Paris. He was awarded INFORMS's Lanchester Prize in 1965, the MAA's Lester R. Ford Award in 1976 and in 2009, an honorary degree in mathematics from the University of Augsburg in 2004, and INFORMS's John von Neumann Theory Prize in 2013. He is the founding editor of Mathematical Programming and a past President of the Mathematical Optimization Society. He is the author of Fair Representation: Meeting the Ideal of One Man, One Vote (1982, reissued 2001, with H. P. Young), Le suffrage universel inachevé (2004), and Majority Judgment: Measuring, Ranking and Electing (2011, with R. Laraki), and the author or co-author of about 150 articles. His principal current interest is the design of electoral systems. One of his electoral systems is used in several Swiss cantons.

Submodularity in mixed-integer quadratic and conic quadratic optimization

by **Alper Atamturk**, UC Berkeley, US KEYNOTE - Fr 11:00am-12:00am
INVITED SESSION 540 Room: DENIGES Building: C, Ground Floor, Zone: 5 **Chair:** Daniel Bienstock, Columbia University, US

Submodularity plays an important role in developing effective methods for numerous combinatorial optimization problems. However, its use beyond 0-1 optimization, especially for problems with continuous variables, has been limited. In this talk, we review the recent progress in exploiting submodularity or partial submodularity in mixed 0-1 quadratic and conic quadratic optimization for deriving strong formulations and effective algorithms.

Alper Atamturk is a Professor of Industrial Engineering and Operations Research at the University of California, Berkeley. He received his Ph.D. from the Georgia Institute of Technology in 1998 with a major in Operations Research and minor in Computer Science. His research interests are in optimization, integer programming, optimization under uncertainty with applications to energy, portfolio and network design, cancer therapy, and defense. Dr. Atamturk is a national security fellow (NSSEFF) of the US Department of Defense. He serves on the editorial boards of Mathematical Programming A, Mathematical Programming C, Discrete Optimization, and Journal of Risk.

Modern Branch-and-Cut Implementation

by **Matteo Fischetti**, University of Padua, IT KEYNOTE - Fr 11:00am-12:00am INVITED SESSION 542 Room: BROCA Building: W, 3rd floor, Zone: 0 **Chair:** Marc Pfetsch, TU Darmstadt, DE

The Branch and Cut (B and C) method was proposed in 1990's by Manfred Padberg and Giovanni Rinaldi, and is nowadays the method of choice for the exact solution of Mixed-Integer Linear Programs (MILPs). A typical use of the MILP technology consists in writing a computer program (in any high-level programming language such as C/C++, Python, Matlab, etc.) that reads the input data, internally generates the model of interest, and solves it by invoking appropriate functions provided by the solver. Open-source and commercial MILP solvers provide a wide set of parameters to control its execution. In some cases, however, one is interested in customizing the solver even further, by exploiting some problem-specific knowledge. To this end, modern MILP codes provide so-called "callback functions" that are automatically invoked by the solver at some critical points of its execution. By default, the callbacks are not installed, meaning that they are not active and the solver uses its own default solution strategy. By installing her own callbacks, an advanced user can then take control of the solution algorithm and fully customize it. In the talk we will quickly describe the most-used callback functions for a generic B and C solver for MILPs. As an example of application, we will show how callback functions can be used to allow a given MILP solver to handle (nonconvex) bilinear terms of the form $z_i = x_i y_i$, thus producing a fully-general B and C solver for mixed-integer quadratic problems.

Matteo Fischetti is full professor of Operations Research at the Department of Information Engineering of the University of Padova, Italy. He is Associate Editor of the international journals "Operations Research" and "Mathematical Programming Computation". He won, among others, the Best Ph.D. Dissertation on Transportation prize awarded by the Operations Research Society of America (1987) and the INFORMS Edelman award (2008). In 2015 he was awarded the Harold Larnder Prize by the Canadian Operational Research Society. His research interests include Integer Programming, Combinatorial Optimization, Railway Optimization, Vehicle Routing and Crew Scheduling Problems.

Tseng Memorial Lectureship in Continuous Optimization

SEMI - Fr 11:00am-12:00am INVITED SESSION 549 Room: Auditorium Building: Symphony Hall, Zone: 0 **Chair:** Yaxiang Yuan, Chinese Academy of Sciences, CN

Mini-Symposia

A.W. Tucker Prize Session

A.W. Tucker Prize Session

INTERFACE - Tu 3:15pm-4:45pm, Format: 3x30 min Room: SIGALAS Building: C, 2nd floor, Zone: 2

CONTRIBUTED SESSION 559 Chair: Simge Kucukyavuz, University of Washington, US

Interface

Stochastic optimization

INTERFACE - We 8:30am-10:30am, Format: 4x30 min Room: SIGALAS Building: C, 2nd floor, Zone: 2

Contributed Session 314 Chair: Alexei Gaivoronski, NTNU, NO

Logistics

INTERFACE - We 3:15pm-4:45pm, Format: 3x30 min Room: SIGALAS Building: C, 2nd floor, Zone: 2 CONTRIBUTED SESSION 388

Chair: Frieder Smolny, Technical University Berlin, DE

Solvers and softwares

INTERFACE - We 5:00pm-6:30pm, Format: 4x20 min Room: SIGALAS Building: C, 2nd floor, Zone: 2 CONTRIBUTED SESSION 390

Chair: François Clautiaux, Université de Bordeaux, FR

Energy

INTERFACE - Th 8:30am-10:30am, Format: 4x30 min Room: SIGALAS Building: C, 2nd floor, Zone: 2 CONTRIBUTED SESSION 387

Chair: Kazem Abbaszadeh, UoA, NZ

Planning

INTERFACE - Th 5:00pm-6:30pm, Format: 4x20 min Room: SIGALAS Building: C, 2nd floor, Zone: 2

CONTRIBUTED SESSION 389 Chair: Jeanjean Antoine, Recommerce Group, FR

Mixed-integer optimization with differential equations

Optimal Control Problems with Discrete Switches

MINLP - Fr 8:30am-10:30am, Format: 3x30 min Room: Salle 34 Building: B, 1st floor, Zone: 3 INVITED SESSION 102 **Organizer:** Christian Kirches, TU Braunschweig, DE

1 - An Algorithm for Model-Predictive Control of Switched Nonlinear Dynamic Systems Speaker: Adrian Bürger, Karlsruhe UAS, DE, talk 828
Co-Authors: Angelika Altmann-Dieses, Moritz Diehl, Clemens Zeile, Sebastian Sager,
2 - Approximation algorithms for MIOCPs with discontinuous switch costs
Speaker: Felix Bestehorn, TU Braunschweig, DE, talk 1043 Co-Authors: *Christian Kirches*, **3 - Numerical Modeling of Switched Systems with Jumps in Optimal Control Problems**Speaker: Matthias Schloeder, IAM Heidelberg University, DE, talk 570
Co-Authors: *Ekaterina Kostina*,

Outer Convexification and Mixed-Integer Optimal Control

MINLP - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 39 Building: E, 3rd floor, Zone: 1 INVITED SESSION 103 **Organizer:** Sebastian Sager, University Magdeburg, DE

 Improved Regularity Assumptions for Partial Outer Convexification of MIPDECOs Speaker: Paul Manns, TU Braunschweig, DE, talk 833
 Co-Authors: Christian Kirches,
 Combinatorial Integral Approximation Decompositions for Mixed-Integer Control Speaker: Clemens Zeile, University of Magdeburg, DE, talk 505
 Co-Authors: Tobias Weber, Sebastian Sager,
 Global optimization of ODE constrained network problems
 Speaker: Oliver Habeck, TU Darmstadt, DE, talk 376
 Co-Authors: Marc Pfetsch, Stefan Ulbrich,

Mixed-Integer PDE-Constrained Optimization

MINLP - Fr 5:00pm-6:30pm, Format: 3x30 min Room: DURKHEIM Building: A, 3rd floor, Zone: 1 INVITED SESSION 63 **Organizer:** Sven Leyffer, Argonne National Laboratory, US

1 - Inversion of Convection-Diffusion PDE with Discrete Source

Speaker: Meenarli Sharma, IIT Bombay, IN, talk 1094
Co-Authors: Sven Leyffer, Lars Ruthotto, **2 - Shape optimization towards binary variables with PDE constraints**Speaker: Martin Siebenborn, Universität Hamburg, DE, talk 607 **3 - Set-valued steepest descent for binary topology and control optimization**Speaker: Mirko Hahn, OvGU Magdeburg, DE, talk 1036
Co-Authors: Sebastian Sager, Sven Leyffer,

Convexification and more

Convexification and more (I)

MINLP - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 39 Building: E, 3rd floor, Zone: 1 INVITED SESSION 62 **Organizer:** Jon Lee, University of Michigan, US

 Treating indefinite quadratic and bilinear forms in MINLP Speaker: Marcia Fampa, UFRJ, BR, talk 620
 Co-Authors: Jon Lee,
 Valid inequalities for QCQPs Speaker: Amélie Lambert, Cedric-Cnam, FR, talk 745
 More Virtuous Smoothing Speaker: Luze Xu, University of Michigan, US, talk 772
 Co-Authors: Jon Lee, Daphne Skipper,

Convexification and more (II)

MINLP - Th 5:00pm-6:30pm, Format: 3x30 min Room: DURKHEIM Building: A, 3rd floor, Zone: 1 INVITED SESSION 106 **Organizer:** Akshay Gupte, Clemson University, US

1 - Binary Programming with Semilinear Elliptic PDE-constraints

Speaker: Christoph Buchheim, TU Dortmund, DE, talk 374
Co-Authors: *Renke Kuhlmann, Christian Meyer*, **2 - Using algebraic structure to accelerate polyhedral approximation**Speaker: Christopher Coey, MIT, US, talk 692
Co-Authors: *Juan Pablo Vielma*, **3 - Quadratic optimization with M-matrices and semi-continuous variables**Speaker: Andres Gomez, University of Pittsburgh, US, talk 220
Co-Authors: *Alper Atamturk*,

MIP under Uncertainty

MIP under Uncertainty 1

IPTHEORY - Tu 8:30am-10:30am, Format: 3x30 min Room: Salle 34 Building: B, 1st floor, Zone: 3 INVITED SESSION 231 **Organizer:** Fatma Kilinc-Karzan, Carnegie Mellon University, US

1 - Distributionally Robust Combinatorial Optimization

Speaker: Shabbir Ahmed, Georgia Tech, US, talk 1562
Co-Authors: *Ruiwei Jiang, Mohit Singh*, **2 - Risk-Averse Set Covering Problems**Speaker: Simge Kucukyavuz, University of Washington, US, talk 927
Co-Authors: *Hao-Hsiang Wu*, **3 - Mixed-Integer Recourse via Prioritization**Speaker: Ruiwei Jiang, University of Michigan, US, talk 1189
Co-Authors: *Yuanyuan Guo*,

MIP under Uncertainty 2

IPTHEORY - Tu 3:15pm-4:45pm, Format: 3x30 min Room: Salle 43 Building: C, 3rd floor, Zone: 1 INVITED SESSION 232 **Organizer:** Simge Kucukyavuz, University of Washington, US

1 - Two-stage stochastic p-order conic mixed integer programs

Speaker: Manish Bansal, Virginia Tech, US, talk 154
Co-Authors: *Yingqiu Zhang*, **2 - Inexact cutting plane techniques for two-stage stochastic mixed-integer programs**Speaker: Ward Romeijnders, University of Groningen, NL, talk 228
Co-Authors: *Niels van der Laan, Suvrajeet Sen*, **3 - Solving Stochastic and Bilevel Mixed-Integer Programs via a Generalized Value F.**Speaker: Andrew Schaefer, Rice University, US, talk 560
Co-Authors: *Onur Tavaslioglu, Oleg Prokopyev*,

Decomposition for multistage stochastic problems

Theoreticals and practicals aspects of decomposition algorithms for multistage stochastic problems: 1

STOCH - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 32 Building: B, Ground Floor, Zone: 5 INVITED SESSION 246 **Organizer:** Vincent Leclère, ENPC, FR

1 - Computing parameter sensitivities for discrete time Markov decision processes Speaker: David Wozabal, Technical University of Munich, DE, talk 1002 Co-Authors: *Goncalo Terca*,

2 - Modeling time-dependent randomness in stochastic dual dynamic programming

Speaker: Nils Löhndorf, University of Luxembourg, LU, talk 849
Co-Authors: *Alexander Shapiro*, **3 - Computing ellipsoidal controlled invariant sets for stochastic programming**Speaker: Benoît Legat, UCLouvain, BE, talk 1243
Co-Authors: *Raphaël Jungers*,

Theoreticals and practicals aspects of decomposition algorithms for multistage stochastic problems: 2

STOCH - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle 32 Building: B, Ground Floor, Zone: 5 INVITED SESSION 247 **Organizer:** Vincent Leclère, ENPC, FR

1 - The practitioners guide to SDDP: lessons from SDDP.jl

Speaker: Oscar Dowson, University of Auckland, NZ, talk 439
2 - Decomposing Dynamic Programming equations: from global to nodal value functions
Speaker: François Pacaud, CERMICS, FR, talk 615
Co-Authors: Carpentier Pierre, Michel De Lara,
3 - Energy portfolio optimization for Brazilian distribution companies: a multistage
Speaker: Vitor de Matos, Plan4, BR, talk 1373
Co-Authors: Guilherme Ramalho, Paulo Larroyd, Rodrigo Antunes, Luis Baran, Julia Paul, Marcos Coelho,
4 - Stochastic programming framework for risk aversion representation with SDDP
Speaker: Luiz Carlos da Costa Junior, PSR, BR, talk 1498
Co-Authors: Raphael Chabar, Joaquim Dias Garcia,

Theoreticals and practicals aspects of decomposition algorithms for multistage stochastic problems: **3**

STOCH - Fr 8:30am-10:30am, Format: 4x30 min Room: DENIGES Building: C, Ground Floor, Zone: 5 INVITED SESSION 245 **Organizer:** Vincent Leclère, ENPC, FR

1 - Distributionally Robust Dual Dynamic Programming

Speaker: David Morton, Northwestern University, US, talk 435
Co-Authors: Daniel Duque, **2 - Stochastic dual dynamic integer programming**Speaker: Andy Sun, Georgia Institute of Technolog, US, talk 943
Co-Authors: Shabbir Ahmed, Jikai Zou, **3 - A deterministic algorithm for solving stochastic minimax dynamic programmes**Speaker: Regan Baucke, University of Auckland, NZ, talk 900
Co-Authors: Anthony Downward, Golbon Zakeri, **4 - Exact converging bounds for Stochastic Dual Dynamic Programming**Speaker: Vincent Leclère, ENPC, FR, talk 349
Co-Authors: François Pacaud, Arnaud Lenoir, Jean-Philipp Chancelier, Carpentier Pierre,

First-order methods for large-scale convex problems

First-order methods for large-scale convex problems

LEARNING - Th 8:30am-10:30am, Format: 4x30 min Room: FABRE Building: J, Ground Floor, Zone: 8 INVITED SESSION 316 **Organizer:** Stephen Vavasis, University of Waterloo, CA

1 - A single potential governing convergence of CG, AG and Geometric Descent Speaker: Stephen Vavasis, University of Waterloo, CA, talk 582 Co-Authors: *Sahar Karimi*,

2 - Robust Accelerated Gradient Method

Speaker: Mert Gurbuzbalaban, Rutgers University, US, talk 1106

3 - Randomized methods for convex feasibility problems and applications to ML

Speaker: Peter Richtarik, KAUST, SA, talk 385
Co-Authors: *Ion Necoara, Andrei Patrascu*, **4 - Bregman Divergence for Stochastic Variance Reduction**Speaker: Yaoliang Yu, University of Waterloo, CA, talk 937
Co-Authors: *Xinhua Zhang, Zhan Shi*,

First-order methods for large-scale convex problems II

LEARNING - Th 5:00pm-6:30pm, Format: 4x20 min Room: FABRE Building: J, Ground Floor, Zone: 8 INVITED SESSION 318 **Organizer:** Stephen Vavasis, University of Waterloo, CA

1 - Convex Low Rank Semidefinite Optimization

Speaker: Madeleine Udell, Cornell, US, talk 770
Co-Authors: Lijun Ding, Volkan Cevher, Joel Tropp, Alp Yurtsever,
2 - Frank-Wolfe Splitting via Augmented Lagrangian Method
Speaker: Simon Lacoste-Julien, Université de Montréal, CA, talk 1514
Co-Authors: Gautheir Gidel, Fabian Pedregosa,
3 - Extending performance estimation beyond exact convex fixed-step methods
Speaker: Francois Glineur, UCLouvain, BE, talk 1072
Co-Authors: Adrien Taylor, Théo Golvet,
4 - Low-Storage Conditional Gradient Method for Low-Rank and Sparse Optimization
Speaker: Xuan Vinh Doan, The University of Warwick, GB, talk 1286
Co-Authors: Stephen Vavasis, Jimit Majmudar,

Advances in MINLP

MINLP (I)

MINLP - We 8:30am-10:30am, Format: 3x30 min Room: Salle 34 Building: B, 1st floor, Zone: 3 INVITED SESSION 65 **Organizer:** Daniel Bienstock, Columbia University, US

1 - Time-Varying Semidefinite Programs

Speaker: Bachir El Khadir, Princeton University, US, talk 1194
Co-Authors: Amir Ali Ahmadi,
2 - Strengthened Relaxations for Quadratic Optimization with Switching Variables
Speaker: Kurt Anstreicher, University of Iowa, US, talk 147
3 - A Simple Nearly-Optimal Restart Scheme For Speeding-Up First Order Methods
Speaker: James Renegar, Cornell University, US, talk 117
Co-Authors: Benjamin Grimmer,

MINLP (II)

MINLP - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 34 Building: B, 1st floor, Zone: 3 INVITED SESSION 66 **Organizer:** Daniel Bienstock, Columbia University, US

1 - Polyhedral relaxations for nonconvex quadratic functions

Speaker: Akshay Gupte, Clemson University, US, talk 1144
2 - Product convexification: A new relaxation framework for nonconvex programs
Speaker: Mohit Tawarmalani, Purdue University, US, talk 93
Co-Authors: *Taotao He*,
3 - Sparse conic optimization: low-rank solutions and near-linear time algorithms
Speaker: Javad Lavaei, UC Berkeley, US, talk 110
Co-Authors: *Richard Zhang*,

MINLP (III)

MINLP - We 5:00pm-6:30pm, Format: 3x30 min

Room: DURKHEIM Building: A, 3rd floor, Zone: 1 INVITED SESSION 67 **Organizer:** Daniel Bienstock, Columbia University, US

Cardinality-constrained linear regression with sparse matrices
 Speaker: Alberto Del Pia, UW-Madison, US, talk 167
 Co-Authors: *Robert Weismantel, Santanu Dey*,
 Computational evaluation of new dual bounding techniques for sparse PCA
 Speaker: Guanyi Wang, Georgia Tech, US, talk 935
 Co-Authors: *Santanu Dey, Rahul Mazumder*,
 Cutting Planes for Linear Programs with Complementarity Constraints
 Speaker: Jeff Linderoth, Univ. of Wisconsin-Madison, US, talk 1327
 Co-Authors: *Alberto Del Pia, Haoran Zhu*,

Efficient Methods for Piecewise Algorithmic Differentiation

Numerically Efficient Methods for Piecewise Algorithmic Differentiation I

ALGO - We 8:30am-10:30am, Format: 4x30 min Room: Salle 22 Building: G, 2nd floor, Zone: 6 INVITED SESSION 269 **Organizer:** Torsten Bosse, FSU Jena, DE

1 - Study of the numerical efficiency of structured abs-normal forms

Speaker: Sri Hari Narayanan, Argonne National Laboratory, US, talk 1505
Co-Authors: *Torsten Bosse*,
2 - (Almost) Matrix-free solver for piecewise linear functions in Abs-Normal form
Speaker: Torsten Bosse, FSU Jena, DE, talk 962
3 - An active signature method for piecewise differentiable/linear optimization.
Speaker: Andreas Griewank, Yachay Tech, EC, talk 1545
Co-Authors: *Andrea Walther, Lisa Hegerhorst*,
4 - Solving l₁ regularized minimax problems by successive piecewise linearization
Speaker: Angel Rojas, Yachay Tech, EC, talk 1549
Co-Authors: *Andreas Griewank*,

Numerically Efficient Methods for Piecewise Algorithmic Differentiation II

ALGO - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 22 Building: G, 2nd floor, Zone: 6 INVITED SESSION 270 **Organizer:** Torsten Bosse, FSU Jena, DE

 Pushing the Algorithmic Differentiation tool Tapenade towards new languages Speaker: Laurent Hascoet, INRIA, FR, talk 1534
 Co-Authors: Valerie Pascual,
 Generalized Sensitivity Analysis of Nonlinear Programs
 Speaker: Peter Stechlinski, University of Maine, US, talk 340
 Co-Authors: Kamil Khan, Paul Barton, Amir Akbari, Johannes Jaschke,
 Evaluating generalized derivatives efficiently for nonsmooth composite functions
 Speaker: Kamil Khan, McMaster University, CA, talk 1435
 Optimality Conditions for Nonsmooth Constrained Optimization Problems
 Speaker: Lisa Hegerhorst, Leibniz Universität Hannover, DE, talk 726

Progress in Conic and MIP Solvers

Progress in MIP Solvers I

ALGO - We 8:30am-10:30am, Format: 3x30 min Room: PITRES Building: O, Ground Floor, Zone: 8 INVITED SESSION 235 Organizer: Michael Winkler, Gurobi, DE

 New features and improvements in the SAS/OR optimization package Speaker: Imre Polik, SAS Institute, US, talk 898
 - MIPLIB 2017+1
 Speaker: Thorsten Koch, ZIB and TU Berlin, DE, talk 370
 Co-Authors: *The MIPLIB-team*,
 3 - Benchmarks of commercial and noncommercial optimization software Speaker: Hans Mittelmann, Arizona State University, US, talk 41

Progress in Conic and MIP Solvers

ALGO - We 3:15pm-4:45pm, Format: 3x30 min Room: PITRES Building: O, Ground Floor, Zone: 8 INVITED SESSION 237 **Organizer:** Imre Polik, SAS Institute, US

1 - Artelys Knitro 11.0, a new conic solver and other novelties

Speaker: Jean-Hubert Hours, Artelys, FR, talk 556
Co-Authors: *Richard Waltz, Figen Oztoprak Topkaya, Michaël Gabay, Sylvain Mouret,* **2 - MOSEK version 9**Speaker: Erling Andersen, MOSEK, DK, talk 346 **3 - Recent enhancements in MATLAB Optimization Toolbox solvers for LP and MILP**Speaker: Franz Wesselmann, The MathWorks GmbH, DE, talk 737

Progress in MIP Solvers II

ALGO - We 5:00pm-6:30pm, Format: 3x30 min Room: PITRES Building: O, Ground Floor, Zone: 8 INVITED SESSION 234 **Organizer:** Hans Mittelmann, Arizona State University, US

1 - Benders Decomposition in IBM CPLEX

Speaker: Andrea Tramontani, IBM, IT, talk 895
2 - Gurobi 8.0 - What's new
Speaker: Michael Winkler, Gurobi, DE, talk 1393
3 - Recent Progress in the Xpress Solvers
Speaker: Michael Perregaard, FICO, GB, talk 658

Computational Integer Programming

Computational Integer Programming I

ALGO - Fr 3:15pm-4:45pm, Format: 3x30 min Room: PITRES Building: O, Ground Floor, Zone: 8 INVITED SESSION 273 **Organizer:** Domenico Salvagnin, University of Padova, IT

Exploiting Degeneracy in MIP
 Speaker: Tobias Achterberg, Gurobi, DE, talk 412
 Co-Authors: Zonghao Gu, Edward Rothberg,
 Online Estimation of the Size of the Branch and Bound Tree in MIP Solvers
 Speaker: Pierre Le Bodic, Monash University, AU, talk 197
 Multi-Row Intersection Cuts based on the Infinity Norm
 Speaker: Alinson Xavier, Argonne National Laboratory, US, talk 858
 Co-Authors: Ricardo Fukasawa, Laurent Poirrier,

Computational Integer Programming II

ALGO - Fr 5:00pm-6:30pm, Format: 3x30 min Room: PITRES Building: O, Ground Floor, Zone: 8 INVITED SESSION 274 Organizer: Domenico Salvagnin, University of Padova, IT

1 - Tighter LP relaxations for configuration knapsacks using extended formulations Speaker: Gregor Hendel, Zuse Institute Berlin, DE, talk 381

Co-Authors: Ralf Borndörfer, Marika Karbstein, Timo Berthold, Heide Hoppmann,
2 - Lexicographic Optimization and Recovery in Two-Stage Robust Scheduling
Speaker: Dimitrios Letsios, Imperial College London, GB, talk 504
Co-Authors: Ruth Misener,
3 - Dynamic Row Disablement: a practical Implementation of the Kernel Simplex Method

Speaker: Roland Wunderling, IBM, AT, talk 861

Interior-point methods for large-scale problems

Implementation of interior-point methods for large-scale problems and applications I

ALGO - MO 3:15pm-4:45pm, Format: 2x30 min
Room: Salle 22 Building: G, 2nd floor, Zone: 6
INVITED SESSION 353
Organizer: Jordi Castro, Univ. Politècnica de Catalunya, ES

1 - A feasible direction interior point algorithm for linear programming

Speaker: Jose Herskovits, UFRJ, BR, talk 31

Co-Authors: *Miluzca Victorio*, *Nelson Maculan*, **2 - A specialized interior-point algorithm for very large minimum cost flows in bipa**Speaker: Stefano Nasini, IESEG School of Management, FR, talk 38
Co-Authors: *Jordi Castro*,

Implementation of interior-point methods for large-scale problems and applications II

ALGO - MO 5:00pm-6:30pm, Format: 3x30 min
ROOM: PITRES Building: O, Ground Floor, Zone: 8
INVITED SESSION 352
Organizer: Jordi Castro, Univ. Politècnica de Catalunya, ES

1 - On the implementation of the crossover algorithm

Speaker: Csaba Meszaros, FICO, GB, talk 992

2 - Interior point methods applied to context-free grammar parameter estimation Speaker: Aurelio Oliveira, University of Campinas, BR, talk 1040 Co-Authors: *Sofia Lopez*,
3 - A new specialized interior-point method for support vector machines Speaker: Jordi Castro, Univ. Politècnica de Catalunya, ES, talk 81

High-Performance Computing in Optimization

High-Performance Computing in Optimization I

ALGO - Th 8:30am-10:30am, Format: 3x30 min Room: Salle 18 Building: I, 1st floor, Zone: 7 INVITED SESSION 271 **Organizer:** Kibaek Kim, ANL, US

1 - Performance Assessment for Parallel MILP Solvers

Speaker: Ted Ralphs, Lehigh University, US, talk 1347
Co-Authors: Stephen Maher, Yuji Shinano,
2 - Ubiquity Generator Framework to parallelize state-of-the-art B and B based solvers
Speaker: Yuji Shinano, Zuse Institute Berlin, DE, talk 1181
3 - Branching Strategies on Decomposition Methods for Mixed-Integer Programming
Speaker: Kibaek Kim, ANL, US, talk 1510

Co-Authors: Brian Dandurand,

High-Performance Computing in Optimization II

ALGO - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 22 Building: G, 2nd floor, Zone: 6 CONTRIBUTED SESSION 466 Chair: Joaquim Dias Garcia, PSR and PUC-Rio, BR

1 - High-Performance Solver for Binary Quadratic Problems

Speaker: Timotej Hrga, University of Ljubljana, SI, talk 969
Co-Authors: *Janez Povh*, *Angelika Wiegele*, **2 - Bilevel optimization approaches for power system security**

Speaker: Brian Dandurand, Argonne National Laboratory, US, talk 1413

Co-Authors: Kibaek Kim, Sven Leyffer,

3 - Genesys: Simulating Power Systems by Solving Millions of MIPs

Speaker: Joaquim Dias Garcia, PSR and PUC-Rio, BR, talk 1091

Co-Authors: André Pinto, Raphael Chabar, Julio Dias, Luiz Carlos da Costa Junior, John Fazio, John Ollis, Dan Hua,

MINLP methods in gas transport optimization

MINLP methods in gas transport optimization (I)

MINLP - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 35 Building: B, Intermediate, Zone: 4 INVITED SESSION 162

Organizer: Lars Schewe, FAU, DE

 MIP techniques for instationary gas transport optimization and gas market models Speaker: Lars Schewe, FAU, DE, talk 1298
 Solving MINLPs by Simultaneous Convexification with Application to Gas Networks Speaker: Nick Mertens, TU Dortmund, DE, talk 742
 Co-Authors: Maximilian Merkert, Dennis Michaels, Frauke Liers, Alexander Martin,
 Complementarity-Based Nonlinear Programming Techniques for Optimal Mixing in Gas Speaker: Falk Hante, FAU Erlangen-Nürnberg, DE, talk 1288
 Co-Authors: Martin Schmidt,

MINLP methods in gas transport optimization (II)

MINLP - Mo 5:00pm-6:30pm, Format: 3x30 min Room: Salle 35 Building: B, Intermediate, Zone: 4 INVITED SESSION 163 **Organizer:** Lars Schewe, FAU, DE

 Exploiting acyclic orientations to solve nonlinear potential-based flow problems Speaker: Benjamin Hiller, Zuse Institute Berlin, DE, talk 905
 Co-Authors: *Kai-Helge Becker*,
 ASTS-Orientations on Undirected Graphs - A tool for optimizing network flows Speaker: Kai Becker, Zuse-Institute Berlin, DE, talk 1446
 Co-Authors: *Benjamin Hiller*,
 De talk 1446

3 - Robust Optimal Discrete Arc Sizing for Tree-Shaped Potential Networks Speaker: Johannes Thürauf, Universität Erlangen-Nürnberg, DE, talk 546 Co-Authors: *Lars Schewe, Martin Schmidt, Martin Robinius, Detlef Stolten, Lara Welder,*

Parallel Sessions

Monday 02

CLUSTER: Discrete Optimization & Integer Programming

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
IPtheory		Salle 43 <u>Bld</u> C, 3rd floor <u>Z</u> 1 <u>F</u> 3x30 min	Salle 34 Bld B, 1st floor Z 3 F 3x30 min
		Provable guarantees for Cut Generating	Lattice methods in Integer Optimisation
		Functions	Organizer: Iskander Aliev, session 78
		Organizer: Amitabh Basu, session 220	
IPpractice		Salle 44 Bld C, 3rd floor Z 1 F 3x30 min	Salle 44 Bld C, 3rd floor Z 1 F 4x20 min
		IP Practice I	Data Mining
		Chair: Maurice Queyranne, session 506	Chair: Marcus Poggi, session 504
IPpractice			Salle 36 Bld B, Intermediate Z 4 F 4x20 min
			IP Practice II
			Chair: Petra Bartmeyer, session 508
MINLP		Salle 39 <u>Bld</u> E, 3rd floor <u>Z</u> 1 <u>F</u> 3x30 min	DURKHEIM <u>Bld</u> A, 3rd floor <u>Z</u> 1 <u>F</u> 3x30 min
		Exact Optimization Algorithms for Com-	Mixed-Integer Conic Optimization
		pressed Sensing	Organizer: Sven Wiese, session 57
		Organizer: Marc Pfetsch, session 56	
MINLP		Salle 34 Bld B, 1st floor Z 3 F 3x30 min	Salle 39 Bld E, 3rd floor Z 1 F 3x30 min
		Tight relaxations in nonconvex MINLP	Polynomial optimization in binary variables
		Organizer: Ambros Gleixner, session 128	Organizer: Elisabeth Rodriguez-Heck, session
			58
MINLP		Salle 35 Bld B, Intermediate Z 4 F 3x30 min	Salle 35 <u>Bld</u> B, Intermediate <u>Z</u> 4 <u>F</u> 3x30 min
		MINLP methods in gas transport optimization	MINLP methods in gas transport optimization
		(I)	(II)
		Organizer: Lars Schewe, session 162	Organizer: Lars Schewe, session 163
APPROX		LEYTEIRE Bld E, 3rd floor Z 1 F 3x30 min	LEYTEIRE Bld E, 3rd floor Z 1 F 3x30 min
		Geometry of Polynomials and Applications in	Scheduling and File Migration
		Approximate Counting	Chair: Asaf Levin, session 345
		Organizer: Shayan Oveis Gharan, session 99	
APPROX		Salle 36 Bld B, Intermediate Z 4 F 3x30 min	Salle 43 <u>Bld</u> C, 3rd floor <u>Z</u> 1 <u>F</u> 4x20 min
		Matching and Matroids	Algorithms for matching markets
		Organizer: José Soto, session 341	Organizer: Amin Saberi, session 467
COMB		SIGALAS Bld C, 2nd floor Z 2 F 3x30 min	SIGALAS <u>Bld</u> C, 2nd floor <u>Z</u> 2 <u>F</u> 4x20 min
		On the Tree Augmentation Problem	Combinatorial optimization and convexity
		Organizer: Laura Sanità, session 240	Chair: Yu Yokoi, session 424
COMB		Salle 41 Bld C, 3rd floor Z 1 F 3x30 min	Salle 41 Bld C, 3rd floor Z 1 F 4x20 min
		Scheduling with setup, uncertainty and prece-	Practical aspects of network optimization
		dences	Chair: Kai Hoppmann, session 427
		Organizer: Monaldo Mastrolilli, session 419	
CP		DURKHEIM Bld A, 3rd floor Z 1 F 3x30 min	
		Global Optimization	
		Organizer: Hassan Hijazi, session 299	

Monday 02

CLUSTER: Optimization under Uncertainty

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
Stoch		Salle 32 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	Salle 32 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min
		Scenario discretization techniques in stochas-	Distributionally Robust Stochastic Program-
		tic optimization	ming: Theory and Applications
		Organizer: Fabian Bastin, session 287	Organizer: Ran Ji, session 250
Stoch			Salle 30 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x20 min
			Differentiability, convexity, and modeling in
			stochastic optimization
			Chair: Kai Spuerkel, session 493
Robust		DENIGES Bld C, Ground Floor Z 5 F 3x30 min	DENIGES Bld C, Ground Floor Z 5 F 3x30 min
		Preference robust optimization	Advances in Adjustable Robust Optimization
		Organizer: Erick Delage, session 166	Organizer: Do Young Yoon, session 350
Robust		Salle 33 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	Salle 37 Bld B, Intermediate Z 4 F 3x20 min
		Distributionally Robust Optimization - New	New models in robust optimization
		Theory and Applications	Chair: Juan Borrero, session 459
		Organizer: Zhichao Zheng, session 356	
Markov		Salle 31 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	Salle 31 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 2x30 min
		Approximate dynamic programming	Learning and dynamic programming
		Organizer: David Brown, session 159	Chair: Boxiao Chen, session 381
Game		Salle 30 Bld B, Ground Floor Z 5 F 3x30 min	
		Risk and Energy Markets	
		Chair: Julio Deride, session 376	

Monday 02

CLUSTER: Continuous Optimization

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
NLP		GINTRAC Bld Q, Ground Floor Z 8 F 3x30 min	GINTRAC Bld Q, Ground Floor Z 8 F 3x30 min
		Polynomial and tensor optimization I	Gradient Methods for Constrained Optimiza-
		Organizer: Jiawang Nie, session 5	tion Problems
			Organizer: Igor Konnov, session 4
NLP		Salle 05 Bld Q, 1st floor Z 11 F 3x30 min	Salle 05 Bld Q, 1st floor Z 11 F 4x20 min
		Convex regularization and inverse problems	Polynomial and tensor optimization III
		Organizer: Pierre Weiss, session 216	Organizer: Jiawang Nie, session 7
NLP		Salle KC7 Bld K, Intermediate 2 Z 10 F 3x30 min	Salle 9 Bld N, 4th floor Z 12 F 3x20 min
		Sparse Recovery	Modeling in NLP
		Chair: Mustafa Pinar, session 432	Chair: Laura Balzano, session 433
NonSmooth		Salle 8 Bld N, 4th floor Z 12 F 3x30 min	Salle 8 Bld N, 4th floor Z 12 F 3x30 min
		Nonconvex Optimization: Theory and Meth-	Extending the Reach of First-Order Methods,
		ods - Part 1	Part I
		Organizer: Shoham Sabach, session 184	Organizer: Haihao Lu, session 285
NonSmooth		Salle 9 Bld N, 4th floor Z 12 F 2x30 min	
		Adaptivity in non smooth optimization	
		Organizer: Masaru Ito, session 558	
SDP		Salle 20 <u>Bld</u> G, 1st floor <u>Z</u> 6 <u>F</u> 3x30 min	Salle 20 Bld G, 1st floor Z 6 F 3x30 min
		Using SDP relaxations and solving them faster	Solving large scale convex composite pro-
		Organizer: Elisabeth Gaar, session 113	gramming
			Organizer: Kim-Chuan Toh, session 130
SDP		Salle LC5 <u>Bld</u> L, Intermediate 1 Z 10 F 3x30 min	Salle LC5 <u>Bld</u> L, Intermediate 1 Z 10 F 3x30 min
		Algorithms for nonlinear conic problems	Convergence and Approximation in Conic
		Chair: Takayuki Okuno, session 463	Programming
			Chair: Tamás Terlaky, session 465
Variat		Salle 06 Bld Q, 1st floor Z 11 F 3x30 min	Salle 06 Bld Q, 1st floor Z 11 F 4x20 min
		Proximal Methods for Structured Problems	Nonlinear Optimization and Variational In-
		Organizer: Ting Kei Pong, session 147	equalities VI
			Organizer: Cong Sun, session 146
Variat		Salle ARNOZAN <u>Bld</u> Q, Ground Floor <u>Z</u> 8 <u>F</u> 3x30	Salle ARNOZAN <u>Bld</u> Q, Ground Floor \underline{Z} 8 \underline{F} 4x20
		min	min
		Algorithms for optimization and variational	Variational Analysis 4
		problems with possibly nonisolated solutions	Organizer: Jo Brueggemann, session 370
		I	
		Organizer: Andreas Fischer, session 152	
RandomM		Salle KC6 <u>Bld</u> K, Intermediate 1 <u>Z</u> 10 <u>F</u> 3x30 min	Salle KC6 <u>Bld</u> K, Intermediate 1 \underline{Z} 10 \underline{F} 3x20 min
		Coordinate Descent and Randomized Direct	Complexity of Randomized Algorithms
		Search Methods	Organizer: Raghu Pasupathy, session 347
		Organizer: Martin Takac, session 211	
DerFree		Salle 21 <u>Bld</u> G, Intermediate <u>Z</u> 6 <u>F</u> 3x30 min	Salle 21 <u>Bld</u> G, Intermediate <u>Z</u> 6 <u>F</u> 3x30 min
		Mixed-integer derivative-free optimization	Advances in DFO I
		Chair: Clément Royer, session 80	Chair: Sébastien Le Digabel, session 40
Control		Salle AURIAC <u>Bld</u> G, 1st floor \underline{Z} 6 \underline{F} 3x30 min	Salle AURIAC <u>Bld</u> G, 1st floor \underline{Z} 6 \underline{F} 4x20 min
		Theory and Methods for ODE- and PDE-	Advances in optimization methods for time de-
		Constrained Optimization 1	pendent problems:I
		Chair: Carl Greiff, session 331	Organizer: Matthias Heinkenschloss, session
			223

Monday 02

CLUSTER: Specific Models, Algorithms, and Software

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
Learning		FABRE Bld J, Ground Floor Z 8 F 3x30 min	FABRE Bld J, Ground Floor Z 8 F 4x20 min
		Distributed Optimization	Riemannian geometry in optimization for
		Organizer: Franck lutzeler, session 325	learning
			Organizer: Nicolas Boumal, session 320
Learning		Salle 16 Bld I, 2nd floor Z 7 F 3x30 min	Salle DENUCE Bld Q, Ground Floor Z 8 F 4x20
		Decisions and learning from data	min
		Chair: Christopher McCord, session 481	Exploiting structure in constrained optimiza-
			tion
			Organizer: Mihai Cucuringu, session 334
Learning			Salle 22 <u>Bld</u> G, 2nd floor <u>Z</u> 6 <u>F</u> 4x20 min
			Sparsity, variable selection and efficient algo-
			rithms
			Chair: Alex Sholokhov, session 475
Logistics		PITRES <u>Bld</u> O, Ground Floor <u>Z</u> 8 <u>F</u> 3x30 min	Salle 16 Bld I, 2nd floor Z 7 F 3x20 min
		Facility Layout	Packing and Capacity Management
		Chair: Anders Gullhav, session 450	Chair: Eugene Zak, session 452
Scheduling		Salle 23 <u>Bld</u> G, 3rd floor <u>Z</u> 6 <u>F</u> 3x30 min	Salle 18 Bld I, 1st floor Z 7 F 4x20 min
		Combinatorial Optimization in Chip Design	Manufacturing
		Organizer: Stefan Hougardy, session 257	Chair: Younsoo Lee, session 530
Energy		Salle DENUCE <u>Bld</u> Q, Ground Floor <u>Z</u> 8 <u>F</u> 3x30	Salle 23 Bld G, 3rd floor Z 6 F 3x30 min
		min	Novel data-driven OR techniques for power
		Progress in Algorithms for Optimal Power	system operations and planning
		Flow Problems I	Organizer: Juan Morales, session 52
		Organizer: Miguel Anjos, session 8	
Energy		Salle 24 Bld G, 3rd floor Z 6 F 3x30 min	Salle 24 Bld G, 3rd floor Z 6 F 3x30 min
		Topics in power systems	Structure and Learning in Power Grid Opti-
		Organizer: Alberto Lamadrid, session 438	mization
			Organizer: Deepjyoti Deka, session 135
Sciences		Salle LA4 Bld L, Basement Z 8 F 3x30 min	Salle LA4 <u>Bld</u> L, Basement <u>Z</u> 8 <u>F</u> 3x30 min
		Portfolio Optimization	Structure from evidence
		Chair: Bernardo Pagnoncelli, session 393	Organizer: Peter Gritzmann, session 386
Algo		Salle 22 <u>Bld</u> G, 2nd floor <u>Z</u> 6 <u>F</u> 2x30 min	PITRES <u>Bld</u> O, Ground Floor <u>Z</u> 8 <u>F</u> 3x30 min
		Implementation of interior-point methods for	Implementation of interior-point methods for
		large-scale problems and applications I	large-scale problems and applications II
		Organizer: Jordi Castro, session 353	Organizer: Jordi Castro, session 352
Algo		Salle 18 <u>Bld</u> I, 1st floor <u>Z</u> 7 <u>F</u> 3x30 min	
		Advances in Linear, Non Linear and Mixed-	
		Integer Optimization	
		Chair: Hiroshige Dan, session 400	

CLUSTER: Discrete Optimization & Integer Programming

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
IPtheory	Salle 43 Bld C, 3rd floor Z 1 F 4x30 min	Salle 43 Bld C, 3rd floor Z 1 F 3x30 min	
	Extended formulations	MIP under Uncertainty 2	
	Organizer: Stefan Weltge, session 219	Organizer: Simge Kucukyavuz, session 232	
IPtheory	Salle 34 Bld B, 1st floor Z 3 F 3x30 min		
	MIP under Uncertainty 1		
	Organizer: Fatma Kilinc-Karzan, session 231		
IPtheory	Salle 35 Bld B, Intermediate Z 4 F 4x30 min		
	Cutting Planes for Integer Programs		
	Chair: Matthias Köppe, session 512		
IPpractice	Salle 44 Bld C, 3rd floor Z 1 F 4x30 min	Salle 44 Bld C, 3rd floor Z 1 F 3x30 min	
	Machine Learning for Optimization	Symmetry Handling in Integer Programs	
	Organizer: Bistra Dilkina, session 138	Organizer: Christopher Hojny, session 129	
MINLP		DURKHEIM Bld A, 3rd floor Z 1 F 3x30 min	
		Applications in Mixed-Integer Quadratic Pro-	
		gramming	
		Organizer: Boshi Yang, session 107	
MINLP		Salle 34 Bld B, 1st floor Z 3 F 3x30 min	
		Convex relaxations in MINLP	
		Organizer: Adam Letchford, session 278	
MINLP		Salle 35 <u>Bld</u> B, Intermediate <u>Z</u> 4 <u>F</u> 3x30 min	
		Applications of MINLP	
		Organizer: Dolores Romero Morales, session	
		281	
APPROX	LEYTEIRE Bld E, 3rd floor Z 1 F 4x30 min	LEYTEIRE Bld E, 3rd floor Z 1 F 3x30 min	
	Streaming	Algorithms in the Sharing Economy	
	Organizer: Michael Kapralov, session 228	Organizer: David Shmoys, session 22	
APPROX	Salle 36 Bld B, Intermediate Z 4 F 4x30 min	Salle 36 Bld B, Intermediate Z 4 F 3x30 min	
	Approximation Algorithms for Clustering	Local Search and Facility Location	
	Organizer: Chaitanya Swamy, session 256	Organizer: Felix Willamowski, session 342	
COMB	SIGALAS <u>Bld</u> C, 2nd floor <u>Z</u> 2 <u>F</u> 4x30 min	Salle 41 Bld C, 3rd floor Z 1 F 3x30 min	
	Matching games and beyond	New developments in prophet inequalities and	
	Organizer: Jochen Koenemann, session 241	related settings	
		Organizer: Ruben Hoeksma, session 258	
COMB	Salle 41 Bld C, 3rd floor Z 1 F 4x30 min	Salle 39 <u>Bld</u> E, 3rd floor <u>Z</u> 1 <u>F</u> 3x30 min	
	Equilibrium Computation in Congestion	Submodular optimization and beyond	
	Games	Chair: Satoru Iwata, session 418	
	Organizer: Umang Bhaskar, session 242		
COMB	Salle 39 <u>Bld</u> E, 3rd floor <u>Z</u> 1 <u>F</u> 4x30 min		
	Exact approaches for problems over lattices		
	and graphs		
	Chair: Daniele Catanzaro, session 425		
CP	DURKHEIM <u>Bld</u> A, 3rd floor <u>Z</u> 1 <u>F</u> 4x30 min		
	Graphical Optimization Model 1		
	Organizer: Joris Kinable, session 295		

CLUSTER: Optimization under Uncertainty

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
Stoch	DENIGES Bld C, Ground Floor Z 5 F 4x30 min	Salle 32 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	
	Risk-averse stochastic programming	Distributionally Robust and Stochastic Opti-	
	Organizer: Andrzej Ruszczynski, session 252	mization: A Sampling/Scenario Perspective	
		Organizer: Guzin Bayraksan, session 249	
Robust	Salle 37 <u>Bld</u> B, Intermediate <u>Z</u> 4 <u>F</u> 3x30 min	Salle 33 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	
	Nonlinear Optimization with Uncertain Con-	Recent Advances in Robust Optimization I	
	straints	Organizer: Phebe Vayanos, session 442	
	Organizer: Charlie Vanaret, session 110		
Robust	Salle 33 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	DENIGES Bld C, Ground Floor Z 5 F 3x30 min	
	Robust Optimization and Operations Mange-	Recent Advances in Robust Optimization II	
	ment	Organizer: Wolfram Wiesemann, session 445	
	Organizer: Chaithanya Bandi, session 410		
Markov	Salle 31 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 4x30 min	Salle 31 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	
	Algorithms for stochastic games : new ap-	Market places and dynamic programming	
	proaches	Chair: Dan Iancu, session 380	
	Organizer: Hugo Gimbert, session 137		
Game	Salle 30 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 4x30 min	Salle 30 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	
	Algorithmic Game Theory I	Game Theory and Energy Markets	
	Organizer: Luce Brotcorne, session 311	Chair: Didier Aussel, session 375	

CLUSTER: Continuous Optimization

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
NLP	GINTRAC Bld Q. Ground Floor Z 8 F 4x30 min	GINTRAC Bld Q. Ground Floor Z 8 F 3x30 min	
	Stochastic and Nonlinear Optimization I	Sum-of-squares and moment problems: meth-	
	Organizer: Jorge Nocedal, session 47	ods and applications	
		Organizer: Etienne De Klerk, session 2	
NLP	Salle 05 Bld Q. 1st floor Z 11 F 4x30 min	Salle KC7 Bld K. Intermediate 2 Z 10 F 3x30 min	
	Machine learning and sparse optimisation	Bridging NLP and Theoretical Computer Sci-	
	Organizer: Coralia Cartis. session 109	ence	
		Organizer: Aleksander Madry, session 51	
NLP	Salle KC7 Bld K. Intermediate 2 Z 10 F 4x30 min	Salle 05 Bld Q. 1st floor Z 11 F 2x30 min	
	Unconstrained Optimization	Interior Point Methods in Engineering Appli-	
	Chair: Ekkehard Sachs, session 401	cations II	
		Organizer: Jacek Gondzio, session 61	
NLP		Salle 9 Bld N. 4th floor Z 12 F 3x30 min	
		Linear Optimization III	
		Chair: Rodrigo Mendoza Smith, session 439	
NonSmooth	Salle LC4 Bld L. Intermediate 1 Z 9 F 4x30 min	Salle 8 Bld N. 4th floor Z 12 F 3x30 min	
	Advances in Bundle Methods for Convex Op-	Nonconvex Optimization: Theory and Meth-	
	timization	ods - Part 2	
	Organizer: Christoph Helmberg, session 93	Organizer: Russell Luke, session 186	
NonSmooth	Salle 8 Bld N, 4th floor Z 12 F 4x30 min		
	Addressing problems with complex geome-		
	tries		
	Organizer: Edouard Pauwels, session 229		
SDP	Salle 20 Bld G. 1st floor Z 6 F 4x30 min	Salle 20 Bld G. 1st floor Z 6 F 3x30 min	
	Algebraic and geometric aspects of semidefi-	Recent Advances in Conic Programming I	
	nite programming	Organizer: Makoto Yamashita, session 82	
	Organizer: Hamza Fawzi, session 85		
SDP	Salle LC5 Bld L, Intermediate 1 Z 10 F 4x30 min	Salle LC5 Bld L, Intermediate 1 Z 10 F 3x30 min	
	Theory and algorithms in conic linear pro-	Relative Entropy Optimization II	
	gramming 1	Organizer: Venkat Chandrasekaran, session	
	Organizer: Gabor Pataki, session 88	112	
Variat	Salle 06 Bld Q, 1st floor Z 11 F 4x30 min	Salle 06 Bld Q, 1st floor Z 11 F 3x30 min	
	Nonlinear Optimization and Variational In-	Nonlinear Optimization and Variational In-	
	equalities V	equalities III	
	Organizer: Xin Liu, session 145	Organizer: Xin Liu, session 143	
Variat	Salle ARNOZAN <u>Bld</u> Q, Ground Floor <u>Z</u> 8 <u>F</u> 4x30		
	min		
	Optmization Algorithms and Variational In-		
	equalites I		
	Organizer: Bo Jiang, session 148		
RandomM	Salle KC6 Bld K, Intermediate 1 Z 10 F 4x30 min	Salle KC6 <u>Bld</u> K, Intermediate 1 Z 10 F 3x30 min	
	Larges Scale and Distributed Optimization	Recent Advances in Stochastic and Non-	
	Organizer: Ermin Wei, session 214	convex Optimization II	
		Organizer: Mingyi Hong, session 304	
DerFree	Salle 21 <u>Bld</u> G, Intermediate <u>Z</u> 6 <u>F</u> 4x30 min	Salle 21 Bld G, Intermediate Z 6 F 3x30 min	
	Bayesian and Randomized Optimization II	Advances in DFO II	
	Chair: Youssef Diouane, session 79	Chair: Warren Hare, session 37	
Control	Salle AURIAC Bld G, 1st floor Z 6 F 4x30 min	Salle AURIAC Bld G, 1st floor Z 6 F 3x30 min	
	Optimization Methods for PDE Constrained	Optimal Control and PDE Constrained Opti-	
	Problems	mization	
	Organizer: Michael Ulbrich, session 221	Organizer: Hasnaa Zidani, session 233	

CLUSTER: Specific Models, Algorithms, and Software

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
Learning	FABRE <u>Bld</u> J, Ground Floor <u>Z</u> 8 <u>F</u> 4x30 min	Salle 16 Bld I, 2nd floor Z 7 F 3x30 min	
	Optimization in Statistical Learning	Distributed and Asynchronous Learning	
	Organizer: Quentin Berthet, session 326	Organizer: Ion Necoara, session 323	
Learning	Salle DENUCE <u>Bld</u> Q, Ground Floor <u>Z</u> 8 <u>F</u> 4x30	FABRE <u>Bld</u> J, Ground Floor <u>Z</u> 8 <u>F</u> 3x30 min	
	min	Advances in large-scale machine learning	
	Statistics meets optimization: going beyond	Organizer: Mark Schmidt, session 327	
	convexity		
	Organizer: John Duchi, session 337		
Learning	Salle 22 Bld G, 2nd floor Z 6 F 4x30 min	Salle 22 Bld G, 2nd floor Z 6 F 2x30 min	
	Pricing	Learning for mixed integer optimization	
	Chair: Anastasiya Ivanova, session 478	Chair: Hari Bandi, session 482	
Network	Salle 18 Bld I, 1st floor Z 7 F 4x30 min		
	Path and tree problems		
	Chair: Arthur Delarue, session 360		
Logistics	Salle 16 <u>Bld</u> I, 2nd floor <u>Z</u> 7 <u>F</u> 3x30 min	PITRES <u>Bld</u> O, Ground Floor <u>Z</u> 8 <u>F</u> 3x30 min	
	Facility Location	Pricing Methods	
	Chair: Ivan Contreras, session 414	Organizer: Rafael Martinelli, session 182	_
Scheduling		Salle 23 <u>Bld</u> G, 3rd floor <u>Z</u> 6 <u>F</u> 3x30 min	
		Supply Chain and Lot Sizing	
		Chair: Simon Thevenin, session 534	
Energy	Salle 23 <u>Bld</u> G, 3rd floor \underline{Z} 6 \underline{F} 4x30 min	Salle DENUCE <u>Bld</u> Q, Ground Floor <u>Z</u> 8 <u>F</u> 3x30	
	Electric Vehicles and Decarbonization	min	
	Chair: Martim Joyce-Moniz, session 519	Equilibrium Modelling in Energy	
		Organizer: Thomas Kallabis, session 290	
Energy	Salle 24 <u>Bld</u> G, 3rd floor <u>Z</u> 6 <u>F</u> 4x30 min	Salle 24 <u>Bld</u> G, 3rd floor <u>Z</u> 6 <u>F</u> 3x30 min	
	Risk Models for Electricity Markets	Optimization Models for Renewable Energy	
	Chair: Michael Ferris, session 521	Integration 2	
		Chair: Michel Denault, session 523	
Sciences	Salle LA4 <u>Bld</u> L, Basement <u>Z</u> 8 <u>F</u> 4x30 min	Salle LA4 <u>Bld</u> L, Basement <u>Z</u> 8 <u>F</u> 3x30 min	
	Interval Global Optimization	Optimization in Medicine	
	Organizer: Frederic Messine, session 339	Organizer: Sebastian Sager, session 394	
Algo	PITRES Bld O, Ground Floor Z 8 F 4x30 min	Salle 18 Bld I, 1st floor Z 7 F 3x30 min	
	LP, Mixed Integer Convex Programming and	Optimization software and applications	
	Decomposition	Chair: Bartolomeo Stellato, session 399	
	Organizer: Thorsten Koch, session 236		

CLUSTER: Discrete Optimization & Integer Programming

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
IPtheory	Salle 43 Bld C, 3rd floor Z 1 F 4x30 min		Salle 43 Bld C, 3rd floor Z 1 F 2x30 min
	Determinantal structures of IPs		IP-Formulations
	Organizer: Martin Henk, session 131		Chair: Temitayo Ajayi, session 516
IPtheory	Salle 35 Bld B, Intermediate Z 4 F 4x30 min		
	Advances in Integer Programming		
	Organizer: Santanu Dey, session 230		
IPtheory	Salle 42 Bld C, 3rd floor Z 1 F 4x30 min		
	Primal Algorithms for Integer Programming		
	Problems		
	Organizer: Daniel Aloise, session 338		
IPpractice	Salle 44 Bld C, 3rd floor Z 1 F 4x30 min	Salle 44 Bld C, 3rd floor Z 1 F 3x30 min	Salle 44 Bld C, 3rd floor Z 1 F 3x30 min
	Benders Decomposition for Combinatorial	Knapsack Problems	Exact Approaches for Vehicle Routing and
	and Bilevel Optimization	Organizer: Enrico Malaguti, session 185	Variants
	Organizer: Fabio Furini, session 171		Organizer: Ricardo Fukasawa, session 288
IPpractice		Salle 36 <u>Bld</u> B, Intermediate <u>Z</u> 4 <u>F</u> 3x30 min	
		Decomposition I	
		Chair: Dieter Weninger, session 486	
MINLP	Salle 34 Bld B, 1st floor Z 3 F 3x30 min	DURKHEIM <u>Bld</u> A, 3rd floor <u>Z</u> 1 <u>F</u> 3x30 min	DURKHEIM <u>Bld</u> A, 3rd floor <u>Z</u> 1 <u>F</u> 3x30 min
	MINLP (I)	Decomposition methods for MINLP	MINLP (III)
	Organizer: Daniel Bienstock, session 65	Organizer: Ivo Nowak, session 55	Organizer: Daniel Bienstock, session 67
MINLP		Salle 34 Bld B, 1st floor Z 3 F 3x30 min	Salle 34 Bld B, 1st floor Z 3 F 3x30 min
		MINLP (II)	Robust Approaches for Challenging Uncertain
		Organizer: Daniel Bienstock, session 66	Optimization Problems
			Organizer: Frauke Liers, session 124
MINLP		Salle 35 <u>Bld</u> B, Intermediate <u>Z</u> 4 <u>F</u> 3x30 min	Salle 35 <u>Bld</u> B, Intermediate <u>Z</u> 4 <u>F</u> 3x30 min
		MINLP for Data Science	Advances in MINLP
		Organizer: Vanesa Guerrero, session 108	Organizer: Laura Palagi, session 165
APPROX	LEYTEIRE <u>Bld</u> E, 3rd floor \underline{Z} 1 \underline{F} 4x30 min	LEYTEIRE <u>Bld</u> E, 3rd floor \underline{Z} 1 \underline{F} 3x30 min	LEYTEIRE <u>Bld</u> E, 3rd floor \underline{Z} 1 \underline{F} 3x30 min
	Approximation Algorithms for the Traveling	Clustering	Approximation Algorithms for Geometric
	Salesman Problem	Organizer: Mohammad Salavatipour, session 30	Packing Problems
	Organizer: Anke van Zuylen, session 23		Organizer: Fabrizio Grandoni, session 28
APPROX	Salle 36 <u>Bld</u> B, Intermediate <u>Z</u> 4 <u>F</u> 4x30 min	Salle 43 <u>Bld</u> C, 3rd floor <u>Z</u> 1 <u>F</u> 3x30 min	Salle 36 Bld B, Intermediate Z 4 F 3x30 min
	Approximation Algorithms for Scheduling	Network Design and Routing	Online Optimization
	Problems	Chair: Yuko Kuroki, session 346	Organizer: Kevin Schewior, session 35
	Organizer: Nicole Megow, session 72		
COMB	Salle 41 <u>Bld</u> C, 3rd floor <u>Z</u> 1 <u>F</u> 4x30 min	Salle 41 <u>Bld</u> C, 3rd floor <u>Z</u> 1 <u>F</u> 3x30 min	Salle 41 <u>Bld</u> C, 3rd floor <u>Z</u> 1 <u>F</u> 4x20 min
	Discrete Convex Analysis	Variants of the Assignment problem	Connectivity problems and Steiner trees
	Organizer: Akiyoshi Shioura, session 243	Organizer: Kavitha Telikepalli, session 266	Chair: Andreas Feldmann, session 421
COMB	Salle 39 <u>Bld</u> E, 3rd floor <u>Z</u> 1 <u>F</u> 4x30 min	Salle 39 <u>Bld</u> E, 3rd floor <u>Z</u> 1 <u>F</u> 3x30 min	Salle 39 <u>Bld</u> E, 3rd floor <u>Z</u> 1 <u>F</u> 4x20 min
	Optimization under uncertainty	Polyhedral aspects of combinatorial optimiza-	Shortest paths and cutting stock
	Organizer: Marco Molinaro, session 261	tion problems	Chair: Arnaud Vandaele, session 426
		Chair: Guillerme Duvillié, session 404	
CP	DURKHEIM <u>Bld</u> A, 3rd floor \underline{Z} 1 \underline{F} 4x30 min		
	Learning in CP		
	Organizer: Arnaud Lallouet, session 301		

CLUSTER: Optimization under Uncertainty

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
Stoch	DENIGES Bld C, Ground Floor Z 5 F 4x30 min	Salle 32 Bld B, Ground Floor Z 5 F 3x30 min	DENIGES Bld C, Ground Floor Z 5 F 3x30 min
	Chance Constraint and Its Applications	Learning and Stochastic Programming	Stochastic Programming and Distributionally
	Organizer: Jianqiang Cheng, session 253	Organizer: Matthias Poloczek, session 254	Robust Optimization Models with Endoge-
			nous Uncertainty
			Organizer: Miguel Lejeune, session 248
Stoch	Salle 32 Bld B, Ground Floor Z 5 F 3x30 min		Salle 32 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 4x20 min
	Sampling and stability in stochastic optimiza-		Stochastic optimization models and applica-
	tion		tions
	Chair: Harsha Honnappa, session 488		Chair: FJavier Heredia, session 495
Robust	Salle 37 Bld B, Intermediate Z 4 F 4x30 min	DENIGES <u>Bld</u> C, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	Salle 37 Bld B, Intermediate Z 4 F 2x30 min
	Interfaces of Applied Probability and Opti-	Dynamic Optimization: Theory and Algo-	Robust Adaptive Control and Learning
	mization	rithms	Organizer: Siqian Shen, session 97
	Organizer: Omar El Housni, session 409	Organizer: Vineet Goyal, session 100	
Robust	Salle 33 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 4x30 min	Salle 37 Bld B, Intermediate Z 4 F 3x30 min	Salle 33 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 4x20 min
	Robust combinatorial optimization IV	Cursing the Dimensionality: Two-Stage and	Robust combinatorial optimization III
	Chair: Arie Koster, session 449	Multi-Stage Robust Optimization	Organizer: Moritz Mühlenthaler, session 255
		Organizer: Angelos Tsoukalas, session 443	
Markov		Salle 31 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 2x30 min	
		Dynamic programming applications	
		Chair: Susanne Hoffmeister, session 379	
Game	Salle 30 Bld B, Ground Floor Z 5 F 4x30 min	Salle 30 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	Salle 30 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min
	Risk and Financial Markets	Nonconvex and Complex Problems in Multi-	Aspects of Multiobjective Combinatorial Op-
	Chair: Markku Kallio, session 377	objective Optimization	timization
		Chair: Gabriele Fichfelder, session 268	Organizer: Matthias Ebroott session 87

CLUSTER: Continuous Optimization

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
NLP	GINTRAC Bld Q, Ground Floor Z 8 F 4x30 min	GINTRAC Bld Q, Ground Floor Z 8 F 3x30 min	GINTRAC Bld Q, Ground Floor Z 8 F 3x30 min
	Stochastic and Nonlinear Optimization III	The power and limits of the Lasserre hierar-	Software for Nonlinear Optimization
	Organizer: Jorge Nocedal, session 31	chy	Organizer: Sven Leyffer, session 133
		Organizer: Markus Schweighofer, session 9	
NLP	Salle 05 Bld Q, 1st floor Z 11 F 4x30 min	Salle 05 Bld Q, 1st floor Z 11 F 3x30 min	Salle 05 Bld Q, 1st floor Z 11 F 3x30 min
	Optimality conditions in NLP and conic prob-	Subspace methods in NLP I	Conjugate Gradient Methods
	lems	Organizer: Michal Kocvara, session 45	Chair: Giovanni Fasano, session 362
	Organizer: Roberto Andreani, session 43		
NLP	Salle KC7 <u>Bld</u> K, Intermediate 2 \underline{Z} 10 \underline{F} 4x30 min	Salle 9 <u>Bld</u> N, 4th floor <u>Z</u> 12 <u>F</u> 3x30 min	Salle 9 <u>Bld</u> N, 4th floor <u>Z</u> 12 <u>F</u> 3x30 min
	Computational advances in NLP	Quadratic Optimization	Linear Optimization II
	Chair: Jeffrey Pang, session 434	Chair: Anders Forsgren, session 417	Chair: Julian Hall, session 416
NLP	Salle 9 <u>Bld</u> N, 4th floor \underline{Z} 12 <u>F</u> 4x30 min		Salle ARNOZAN <u>Bld</u> Q, Ground Floor <u>Z</u> 8 <u>F</u> 3x30
	Fixed Point Approaches		
	Chair: Poom Kumam, session 435		Interior Point Methods in LP and NLP
Now Care of the			Chair: Andre Tits, session 430
NonSmooth	Salle LC4 <u>Bid</u> L, intermediate 1 $\underline{2}$ 9 \underline{F} 4x30 min	Salle 8 \underline{Bld} N, 4th floor \underline{Z} 12 \underline{F} 3x30 min	Salle 8 <u>Bid</u> N, 4th libor <u>Z</u> 12 <u>F</u> 3x30 min
	non smooth ontimization	Adaptivity in non-smooth optimization	miterion
	Organizar: Thomas Pock, socsion 198	Organizer. Volkan Gevner, session 187	Organizar: Michael Overton, session 86
NonSmooth	Salle 8 Bld N 4th floor 7 12 E 4x30 min		Organizer: Michael Overton, session oo
litonsmooth	Dynamical Systems and Ontimization		
	Organizer: Hedy Attouch session 351		
SDP	Salle AUBIAC Bid G 1st floor Z 6 E 4x30 min	Salle 20 Bld G 1st floor Z 6 E 3x30 min	Salle 20 Bld G 1st floor Z 6 E 3x30 min
	Recent Advances in Conic Programming II	SDP approaches to combinatorial and global	Noncommutative polynomial optimization:
	Organizer: Sena Safarina, session 83	optimization problems	semidefinite relaxations, free convexity and
		Organizer: Etienne De Klerk, session 15	applications to quantum information I
			Organizer: Monique Laurent, session 20
SDP	Salle 20 <u>Bld</u> G, 1st floor <u>Z</u> 6 <u>F</u> 4x30 min	Salle LC5 Bld L, Intermediate 1 Z 10 F 3x30 min	Salle LC5 Bld L, Intermediate 1 Z 10 F 4x20 min
	Theory and algorithms in conic linear pro-	Reformulation-based solution methods for	Completely Positive Cones and Applications
	gramming 2	quadratic programming	Chair: Patrick Groetzner, session 464
	Organizer: Gabor Pataki, session 89	Organizer: Dominique Quadri, session 215	
SDP	Salle LC5 <u>Bld</u> L, Intermediate 1 \underline{Z} 10 \underline{F} 4x30 min		
	New trends II		
Vaniat	Chair: Frank Permenter, session 500		Calle 00 Rid O. 1at flags 7.11 F.0.00 min
variat	Salle 06 $\underline{Bl0}$ Q, 1st licor $\underline{2}$ 11 \underline{F} 2x30 min	Salle 06 $\underline{Bl0}$ Q, 1st licer $\underline{2}$ 11 \underline{F} 3x30 min	Salle 06 $\underline{Bl0}$ Q, 1st lloor \underline{Z} 11 \underline{F} 3x30 min
	stochastic Optimization and variational m-	opumization Algorithms and variational m-	Organizer: Samir Noogy, sossion 173
	Organizer: Alejandro Jofre session 156	Organizer: Xiaogi Vang, session 150	Organizer: Samin Neogy, session 175
Variat	Salle ABNOZAN BId O Ground Floor Z 8 E 4x30	Salle ABNOZAN BId O. Ground Floor Z 8 E 3x30	
Variat		min	
	Variational Analysis 1	Nash equilibrium and games 1	
	Organizer: Samir Adly, session 364	Organizer: Lorenzo Lampariello, session 365	
RandomM	Salle KC6 Bld K, Intermediate 1 Z 10 F 4x30 min	Salle KC6 Bld K, Intermediate 1 Z 10 F 3x30 min	Salle KC6 Bld K, Intermediate 1 Z 10 F 4x20 min
	First Order Methods for Non-Smooth Con-	Fast Converging Stochastic Optimization Al-	Non-Convex and Second-order Methods in
	strained Optimization	gorithms	Machine Learning
	Organizer: Qihang Lin, session 305	Organizer: Francis Bach, session 213	Organizer: Martin Takac, session 33
DerFree	Salle 21 Bld G, Intermediate Z 6 F 4x30 min	Salle 21 Bld G, Intermediate Z 6 F 3x30 min	Salle 21 Bld G, Intermediate Z 6 F 3x30 min
	New derivative-free algorithms	Surrogate-based algorithms for constrained	Progress in methods and theory of derivative-
	Chair: Margherita Porcelli, session 34	derivative-free problems	free optimization
		Chair: Phillipe Sampaio, session 126	Chair: Serge Gratton, session 42
Control		Salle AURIAC <u>Bld</u> G, 1st floor \underline{Z} 6 \underline{F} 3x30 min	Salle AURIAC <u>Bld</u> G, 1st floor \underline{Z} 6 \underline{F} 4x20 min
		Risk-Averse PDE-Constrained Optimization-	Advances in optimization methods for time de-
		Methods and Applications	pendent problems II
		Organizer: Harbir Antil, session 222	Organizer: Denis Ridzal, session 225

CLUSTER: Specific Models, Algorithms, and Software

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
Learning	Salle 16 Bld I, 2nd floor Z 7 F 3x30 min	Salle DENUCE Bld Q, Ground Floor Z 8 F 3x30	FABRE <u>Bld</u> J, Ground Floor <u>Z</u> 8 <u>F</u> 3x30 min
-	First-Order Methods for Machine Learning		Problems in the intersection of machine learn-
	Organizer: Fabian Pedregosa, session 319	Second order methods for training ML models	ing and optimization
		Chair: Julien Mairal, session 474	Chair: Ross Anderson, session 328
Learning	FABRE Bld J, Ground Floor Z 8 F 4x30 min	FABRE <u>Bld</u> J, Ground Floor <u>Z</u> 8 <u>F</u> 3x30 min	Salle 22 Bld G, 2nd floor Z 6 F 2x20 min
	Structured Optimization for Machine Learn-	Convex optimization, distances and con-	Large-scale convex optimization
	ing and Signal Processing	straints	Chair: Alexander Rogozin, session 479
	Organizer: Lin Xiao, session 330	Chair: Pablo Parrilo, session 476	
Network	Salle 18 Bld I, 1st floor Z 7 F 4x30 min		
	Robust network optimization		
	Organizer: Dimitri Papadimitriou, session 357		
Logistics		Salle 16 Bld I, 2nd floor Z 7 F 3x30 min	Salle 24 Bld G, 3rd floor Z 6 F 4x20 min
		Rail and Maritime Transportation	Location and Routing
		Chair: Kazuhiro Kobayashi, session 454	Chair: Mustapha Oudani, session 451
Logistics			Salle 16 Bld I, 2nd floor Z 7 F 3x20 min
			Production-Routing
			Chair: Feng Gao, session 456
Scheduling		Salle 18 Bld I, 1st floor Z 7 F 3x30 min	Salle 18 Bld I, 1st floor Z 7 F 3x20 min
		Scheduling in Networks	Machine Scheduling 2
		Chair: Hamish Waterer, session 532	Chair: Guopeng Song, session 529
Energy	Salle DENUCE Bld Q, Ground Floor Z 8 F 4x30	Salle 23 Bld G, 3rd floor Z 6 F 3x30 min	Salle DENUCE Bld Q, Ground Floor Z 8 F 4x20
	min	Conic Optimization and Power Systems	min
	Decomposition Techniques to Solve Large-	Organizer: Jakub Marecek, session 68	Optimization and modeling of integrated en-
	Scale Optimization Problems for Electricity		ergy systems
	and Natural Gas Systems		Organizer: Jalal Kazempour, session 71
	Organizer: Ramteen Sioshansi, session 136		
Energy	Salle 23 Bld G, 3rd floor Z 6 F 4x30 min	Salle 24 Bld G, 3rd floor Z 6 F 2x30 min	Salle 23 Bld G, 3rd floor Z 6 F 3x30 min
	Energy-aware planning and scheduling 1	Emerging Energy Markets	Energy Market Models
	Organizer: Sandra U. Ngueveu, session 177	Organizer: Dennice Gayme, session 291	Chair: Sauleh Siddiqui, session 522
Energy	Salle 24 <u>Bld</u> G, 3rd floor <u>Z</u> 6 <u>F</u> 4x30 min		
	Distribution and Demand Flexibility		
	Chair: Golbon Zakeri, session 510		
Sciences	Salle LA4 Bld L, Basement Z 8 F 3x30 min	Salle LA4 Bld L, Basement Z 8 F 3x30 min	Salle LA4 <u>Bld</u> L, Basement <u>Z</u> 8 <u>F</u> 3x30 min
	Energy markets	Air Transportation and Air Traffic Manage-	Resource-constrained assignment and
	Organizer: Martine Labbé, session 50	ment	scheduling
		Organizer: Sonia Cafieri, session 315	Organizer: Fabian Bastin, session 398
Algo	PITRES <u>Bld</u> O, Ground Floor <u>Z</u> 8 <u>F</u> 3x30 min	PITRES <u>Bld</u> O, Ground Floor <u>Z</u> 8 <u>F</u> 3x30 min	PITRES <u>Bld</u> O, Ground Floor <u>Z</u> 8 <u>F</u> 3x30 min
	Progress in MIP Solvers I	Progress in Conic and MIP Solvers	Progress in MIP Solvers II
	Organizer: Michael Winkler, session 235	Organizer: Imre Polik, session 237	Organizer: Hans Mittelmann, session 234
Algo	Salle 22 Bld G, 2nd floor Z 6 F 4x30 min	Salle 22 Bld G, 2nd floor Z 6 F 3x30 min	
	Numerically Efficient Methods for Piecewise	Structure Detection in Integer Programming	
	Algorithmic Differentiation I	Organizer: Taghi Khaniyev, session 272	
	Organizer: Torsten Bosse, session 269		

CLUSTER: Discrete Optimization & Integer Programming

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
IPtheory	Salle 34 Bld B, 1st floor Z 3 F 4x30 min	Salle 42 Bld C, 3rd floor Z 1 F 3x30 min	Salle 43 Bld C, 3rd floor Z 1 F 4x20 min
	Integer linear programming, convex geome-	Non-Standard IP Methods	Advances in Integer Programming
	try, and lattices	Chair: Ulf Friedrich, session 513	Organizer: Robert Hildebrand, session 227
	Organizer: Sinai Robins, session 142		
IPtheory	Salle 35 Bld B, Intermediate Z 4 F 4x30 min	Salle 43 Bld C, 3rd floor Z 1 F 3x30 min	Salle 42 Bld C, 3rd floor Z 1 F 3x30 min
	Convexity and Polytopes	Polynomial Time Solvable Problems and	Cutting Planes for Special Problems
	Chair: David Warme, session 518	Complete Descriptions	Chair: Eleazar Madriz, session 517
		Chair: Andreas Bärmann, session 520	
IPpractice	Salle 44 Bld C, 3rd floor Z 1 F 4x30 min	Salle 44 Bld C, 3rd floor Z 1 F 3x30 min	Salle 36 Bld B, Intermediate Z 4 F 4x20 min
	Advanced Linear(ized) MIP Formulations for	Computational Issues in Integer Program-	Matching Problems
	Zero-One Programs	ming	Organizer: Sergio García Quiles, session 175
	Organizer: Sven Mallach, session 127	Organizer: Ricardo Fukasawa, session 289	
IPpractice			Salle 44 Bld C, 3rd floor Z 1 F 4x20 min
_			Cutting Planes
			Chair: Fabrizio Marinelli, session 485
MINLP		Salle 39 Bld E, 3rd floor Z 1 F 3x30 min	DURKHEIM Bld A, 3rd floor Z 1 F 3x30 min
		Convexification and more (I)	Convexification and more (II)
		Organizer: Jon Lee, session 62	Organizer: Akshay Gupte, session 106
MINLP		Salle 34 Bld B, 1st floor Z 3 F 3x30 min	Salle 34 Bld B, 1st floor Z 3 F 3x30 min
		Heuristics in MINLP	Relaxations in MINLP
		Chair: Bertrand Travacca, session 276	Chair: Jan Kronqvist, session 280
MINLP		Salle 35 Bld B, Intermediate Z 4 F 3x30 min	Salle 35 Bld B, Intermediate Z 4 F 3x30 min
		MINLP with quadratic terms	Applications in MINLP
		Chair: Enrico Bettiol, session 282	Chair: Justo Puerto, session 283
APPROX	LEYTEIRE Bld E, 3rd floor Z 1 F 4x30 min	LEYTEIRE Bld E, 3rd floor Z 1 F 3x30 min	LEYTEIRE Bld E, 3rd floor Z 1 F 3x30 min
	Submodular Maximization	Approximation Algorithms for Clustering.	Approximation Algorithms for Optimization
	Organizer: Moran Feldman, session 29	Organizer: Deeparnab Chakrabarty, session 32	under Uncertainty
			Organizer: Marc Uetz, session 95
APPROX	Salle 43 Bld C, 3rd floor Z 1 F 4x30 min	Salle 36 <u>Bld</u> B, Intermediate <u>Z</u> 4 <u>F</u> 3x30 min	
	Cycles and Trees	Routing and Inventory	
	Organizer: Tobias Mömke, session 90	Organizer: Dorit Hochbaum, session 343	
APPROX	Salle 36 Bld B, Intermediate Z 4 F 4x30 min		
	Bin Packing		
	Chair: Frits Spieksma, session 344		
COMB	Salle 41 Bld C, 3rd floor Z 1 F 4x30 min	SIGALAS <u>Bld</u> C, 2nd floor <u>Z</u> 2 <u>F</u> 3x30 min	Salle 41 Bld C, 3rd floor Z 1 F 3x30 min
	Graphs and clutters	Algorithms for TSP	Approximation algorithms for combinatorial
	Organizer: Gerard Cornuejols, session 263	Organizer: Ola Svensson, session 239	optimization problems
			Organizer: Thomas Rothvoss, session 265
COMB	Salle 39 Bld E, 3rd floor Z 1 F 4x30 min		Salle 39 <u>Bld</u> E, 3rd floor <u>Z</u> 1 <u>F</u> 4x20 min
	Graph theory		Heuristics for combinatorial optimization
	Chair: Thomas Bellitto, session 422		problems
			Chair: Evren Guney, session 428
CP	DURKHEIM Bld A, 3rd floor Z 1 F 4x30 min	DURKHEIM Bld A, 3rd floor Z 1 F 3x30 min	
	Parallel Computing and Sustainability	Applications of CP	
	Organizer: Bistra Dilkina, session 296	Organizer: Louis-Martin Rousseau, session 284	
СР	Salle 47 Bld A, 3rd floor Z 1 F 4x30 min		
	Performance Analysis		
	Organizer: Charlotte Truchet, session 298		

CLUSTER: Optimization under Uncertainty

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
Stoch	DENIGES Bld C, Ground Floor Z 5 F 4x30 min	Salle 32 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	Salle 32 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 4x20 min
	New results in chance-constrained optimiza-	Theoreticals and practicals aspects of decom-	Theoreticals and practicals aspects of decom-
	tion	position algorithms for multistage stochastic	position algorithms for multistage stochastic
	Chair: Bismark Singh, session 489	problems: 1	problems: 2
		Organizer: Vincent Leclère, session 246	Organizer: Vincent Leclère, session 247
Stoch	Salle 32 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 4x30 min		Salle 30 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x20 min
	Topics in multistage and integer stochastic op-		Topics in multistage stochastic optimization
	timization		Chair: Felipe Beltrán, session 492
	Organizer: Jim Luedtke, session 490		
Robust	Salle 37 Bld B, Intermediate Z 4 F 4x30 min	DENIGES Bld C, Ground Floor Z 5 F 3x30 min	DENIGES <u>Bld</u> C, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min
	K-adaptability	Distributionally Robust Optimization With	Robust Optimization under Data Uncertainty
	Organizer: Anirudh Subramanyam, session 1	Marginals and Cones	Organizer: Omid Nohadani, session 98
		Organizer: Divya Padmanabhan, session 354	
Robust	Salle 33 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	Salle 37 Bld B, Intermediate Z 4 F 3x30 min	Salle 37 Bld B, Intermediate Z 4 F 4x20 min
	New applications of robust optimizations	Non-linear robust optimization	Combinatorial robust optimization I
	Chair: Mirjam Duer, session 461	Chair: Laurent Alfandari, session 460	Organizer: Marc Goerigk, session 167
Markov			Salle 31 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min
			Approximation in dynamic programming
			Chair: Philip Placek, session 382
Game	Salle 30 Bld B, Ground Floor Z 5 F 4x30 min	Salle 30 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	
	Stackelberg Games	Generation and Representation Algorithms in	
	Chair: Stefano Coniglio, session 374	Multiobjective Optimization	
		Organizer: Michael Stiglmayr, session 267	

CLUSTER: Continuous Optimization

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
NLP	Salle ARNOZAN <u>Bld</u> Q, Ground Floor <u>Z</u> 8 <u>F</u> 4x30	Salle 05 <u>Bld</u> Q, 1st floor <u>Z</u> 11 <u>F</u> 3x30 min	Salle 05 <u>Bld</u> Q, 1st floor <u>Z</u> 11 <u>F</u> 4x20 min
	min	Methods of Optimization in Riemannian	Polynomial and tensor optimization II
	First-order methods: advances and applica-	Manifolds	Organizer: Jiawang Nie, session 6
	tions	Organizer: Orizon Ferreira, session 21	
	Organizer: Immanuel Bomze, session 3		
NLP	GINTRAC <u>Bld</u> Q, Ground Floor $\underline{Z} \ge \underline{F} + 4x30$ min		Salle KC7 <u>Bld</u> K, Intermediate 2 <u>Z</u> 10 <u>F</u> 3x20 min
	Recent advances in interior point methods and		First Order Methods II
	NLP		Chair: Guillaume Berger, session 437
NI D	Organizer: Michael Todo, session 77		
NLP	Salle 05 \underline{BIQ} Q, 1st 1001 \underline{Z} 11 \underline{F} 4x50 mm		
	Organizer: Coralia Cartis session 176		
NLP	Salle KC7 Bld K. Intermediate 2 Z 10 F 4x30 min		
	First Order Methods I		
	Chair: Sandra Santos, session 436		
Global			Salle 20 <u>Bld</u> G, 1st floor <u>Z</u> 6 <u>F</u> 4x20 min
			Global Optimization 3
			Chair: Jean-Baptist Hiriart-Urruty, session 503
NonSmooth	Salle LC4 Bld L, Intermediate 1 Z 9 F 4x30 min	Salle 8 Bld N, 4th floor Z 12 F 3x30 min	Salle LC4 Bld L, Intermediate 1 Z 9 F 3x30 min
	Universal methods in non-smooth analysis	Extending the Reach of First-Order Methods,	Efficient Semismooth Newton Methods for
	Organizer: Alexander Gasnikov, session 53	Part II	Large Scale Statistical Optimization Problems
		Organizer: Robert Freund, session 286	Organizer: Defeng Sun, session 123
NonSmooth	Salle 8 <u>Bld</u> N, 4th floor <u>Z</u> 12 <u>F</u> 4x30 min		Salle 8 <u>Bld</u> N, 4th floor <u>Z</u> 12 <u>F</u> 3x30 min
	First-order methods for nonconvex and patho-		Different faces of nonsmoothness in optimiza-
	logical convex problems		tion Organizary Tim Habaiaal, appaien 212
NonSmooth	Salle 9 Bld N 4th floor 7 12 E 4x30 min		Organizer. Thin Honeiser, session 212
Nonsmooth	Non smooth ontimization for large scale		
	noblems		
	Organizer: Yu Du, session 556		
SDP	Salle 20 Bld G, 1st floor Z 6 F 4x30 min	Salle LC5 Bld L, Intermediate 1 Z 10 F 3x30 min	Salle AURIAC Bld G, 1st floor Z 6 F 4x20 min
	Computer-assisted analyses of optimization	Noncommutative polynomial optimization:	Recent Advances in Conic Programming III
	algorithms I	semidefinite relaxations, free convexity and	Organizer: Masakazu Muramatsu, session 84
	Organizer: Adrien Taylor, session 19	applications to quantum information II	
		Organizer: Monique Laurent, session 18	
SDP	Salle LC5 <u>Bld</u> L, Intermediate 1 <u>Z</u> 10 <u>F</u> 4x30 min		Salle LC5 <u>Bld</u> L, Intermediate 1 \underline{Z} 10 \underline{F} 4x20 min
	Geometry and duality in convex optimization		Using coning programming in problems solv-
	Organizer: Javier Pena, session 160		ing Obsing Kart Mainwald, and alar 407
Variat	Salla 06 Bld O. 1at flaar 7.11 E. 1/20 min	Salla 06 Bld O. 1at flaar 7.11 F. 2v20 min	Chair: Kurt Majewski, session 497
vallat	Salle up du Q, ISU 1001 \angle II $\underline{\Gamma}$ 4X30 IIIII Nonlinear Ontimization and Variational In-	Salle up \underline{O} , ist invol \underline{Z} if $\underline{\Gamma}$ 3x30 illill Nonlinear Ontimization and Variational In-	Same up \underline{D} \underline{Q} , is not \underline{Z} if $\underline{\Gamma}$ 3X30 iiiii VII-decomposition techniques for nonemonth
	equalities I	equalities II	optimization
	Organizer: Xin Liu, session 140	Organizer: Cong Sun, session 141	Organizer: Claudia Sagastizabal. session 158
Variat			Salle ARNOZAN Bld Q, Ground Floor Z 8 F 4x20
			Variational Analysis 5
			Organizer: David Sossa, session 371
RandomM	Salle KC6 Bld K, Intermediate 1 Z 10 F 4x30 min	Salle KC6 Bld K, Intermediate 1 Z 10 F 3x30 min	Salle KC6 Bld K, Intermediate 1 Z 10 F 3x20 min
	Recent Advances on Stochastic Algorithms	Asynchronous Parallel and Distributed Opti-	Recent Progress on Second-order Type Opti-
	and Machine Learning	mization	mization Methods
DE	Organizer: Shiqian Ma, session 202	Organizer: Wotao Yin, session 200	Organizer: Andre Milzarek, session 302
DerFree	Salle 21 Bld G, Intermediate $\angle 6 + 4x30$ min Payagian and Payagian d Octimization I		Salle 21 BId G, Intermediate $\angle 6 + 3x30$ min
	Chair: Stafan Wild, sossion 30		Chair: Juan Meza, sossion 496
Control	Salle ALIBIAC Bid G 1st floor 7.6 E 4v30 min	Salle ALIBIAC Bld G. 1st floor 7.6 E 2v30 min	
Control	Ontimal Control of Variational Inequalities	Theory and Methods for ODE- and PDE-	
	and Complementarity Systems	Constrained Optimization 2	
	Chair: Alexandre Vieira, session 336	Chair: Johann Schmitt, session 333	

CLUSTER: Specific Models, Algorithms, and Software

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
Learning	FABRE <u>Bld</u> J, Ground Floor <u>Z</u> 8 <u>F</u> 4x30 min	FABRE <u>Bld</u> J, Ground Floor <u>Z</u> 8 <u>F</u> 3x30 min	FABRE Bld J, Ground Floor Z 8 F 4x20 min
	First-order methods for large-scale convex	Accelerating Learning	First-order methods for large-scale convex
	problems	Organizer: Martin Takac, session 322	problems II
	Organizer: Stephen Vavasis, session 316		Organizer: Stephen Vavasis, session 318
Learning	Salle DENUCE Bld Q, Ground Floor Z 8 F 4x30	Salle 16 Bld I, 2nd floor Z 7 F 3x30 min	Salle 16 Bld I, 2nd floor Z 7 F 4x20 min
	min	Robust first order methods	Advances in Reinforcement Learning Algo-
	Large-scale learning	Organizer: Fatma Kilinc-Karzan, session 332	rithms
	Organizer: Lorenzo Rosasco, session 335		Organizer: Lin Xiao, session 329
Learning	Salle 16 Bld I, 2nd floor Z 7 F 4x30 min		Salle 22 <u>Bld</u> G, 2nd floor \underline{Z} 6 \underline{F} 4x20 min
	Dynamical systems, control and optimization		Ranking and recommendation
	Chair: Benjamin Recht, session 470		Chair: Aleksandra Burashnikova, session 472
Network	Salle LA4 <u>Bld</u> L, Basement <u>Z</u> 8 <u>F</u> 4x30 min		
	Multi-commodity flows		
	Organizer: Ralf Borndörfer, session 358		
Logistics	PITRES <u>Bld</u> O, Ground Floor \underline{Z} 8 \underline{F} 3x30 min	PITRES <u>Bld</u> O, Ground Floor <u>Z</u> 8 <u>F</u> 2x30 min	Salle 24 <u>Bld</u> G, 3rd floor <u>Z</u> 6 <u>F</u> 3x20 min
	Vehicle Routing I	Path Problems	Vehicle Routing III
	Chair: Guy Desaulniers, session 411	Chair: Yanchao Liu, session 453	Chair: Raquel Bernardino, session 413
Scheduling		Salle 18 <u>Bld</u> I, 1st floor \underline{Z} 7 \underline{F} 3x30 min	Salle 18 <u>Bld</u> I, 1st floor \underline{Z} 7 \underline{F} 4x20 min
		Production Planning	Supply Chain
		Chair: Michel Siemon, session 531	Chair: Daniel Ramon-Lumbierres, session 533
Energy	Salle 23 <u>Bld</u> G, 3rd floor \underline{Z} 6 <u>F</u> 4x30 min	Salle DENUCE <u>Bid</u> Q, Ground Floor $\underline{2}$ 8 \underline{F} 3x30	Salle DENUCE Bid Q, Ground Floor \underline{Z} 8 \underline{F} 3x30
	Unit Commitment Problem and Applications		
	Organizer: Tiziano Parriani, session 94	Optimization Models for Renewable Energy	Equilibrium and Optimization in Energy
		Integration I	Markets
Enanari	Sollo 24 Pld C. 2rd floor 7.6 E 4y20 min	Organizer: Luis Zuluaga, session 120	Organizer: Asgeir Tomasgard, Session 151
Energy	Salle 24 \underline{BIO} G, SIG HOOF \underline{Z} 6 \underline{F} 4x30 Hill Mining Applications	Salle 23 \underline{BIO} G, 310 1001 $\underline{2}$ 6 \underline{F} 3330 11111	Salle 23 \underline{Blo} G, 310 1001 $\underline{2}$ 6 \underline{F} 5x30 1111
	Organizar: Alexandra Newman, accession 172	Flow Problems II	Gas Network and Market Optimization
	Organizer. Alexandra Newman, session 172	Chair: Miguel Anies, session 500	Organizer. Jonas Schweiger, session 293
Enormy		Sollo 24 Pld C. 2rd floor 7 6 E 2v20 min	
Energy		Flectricity Generation Scheduling and Dis-	
		natch	
		Chair: Christophe Duhamel session 511	
Sciences		Salle I A4 Bld I Basement 7 8 F 3x30 min	Salle I A4 Bld I Basement 7 8 F 4x20 min
Belefices		Inverse Problems in Physics	Medicine and Metabolic engineering
		Chair: Leo Liberti, session 391	Chair: Mahdi Doostmohammadi session 396
Algo	Salle 22 Bld G. 2nd floor Z 6 F 4x30 min	Salle 22 Bld G. 2nd floor Z 6 F 3x30 min	Salle 9 Bld N. 4th floor Z 12 F 4x20 min
	Numerically Efficient Methods for Piecewise	High-Performance Computing in Optimiza-	Large-scale combinatorial optimization im-
	Algorithmic Differentiation II	tion II	plementations
	Organizer: Torsten Bosse, session 270	Chair: Joaquim Dias Garcia, session 466	Organizer: Aaron Archer, session 96
Algo	Salle 18 Bld I, 1st floor Z 7 F 3x30 min		PITRES Bld O, Ground Floor Z 8 F 3x30 min
	High-Performance Computing in Optimiza-		Computational OR in Julia/JuMP
	tion I		Organizer: Miles Lubin, session 238
	Organizer: Kibaek Kim, session 271		

CLUSTER: Discrete Optimization & Integer Programming

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
IPtheory	Salle 43 Bld C, 3rd floor Z 1 F 4x30 min	Salle 34 Bld B, 1st floor Z 3 F 3x30 min	Salle 34 Bld B, 1st floor Z 3 F 4x20 min
	Recent advances in Integer Optimization	Polyhedral theory in practice	Machine Learning and Discrete Optimization
	Organizer: Alberto Del Pia, session 218	Organizer: Mourad Baiou, session 309	Organizer: Sebastian Pokutta, session 308
IPtheory	Salle 35 Bld B, Intermediate Z 4 F 4x30 min	Salle 42 Bld C, 3rd floor Z 1 F 3x30 min	
	Mixed Integer Programming Representability	Extended Formulations	
	Organizer: Juan Pablo Vielma, session 275	Chair: Bartosz Filipecki, session 514	
IPpractice	Salle 44 Bld C, 3rd floor Z 1 F 4x30 min	Salle 44 Bld C, 3rd floor Z 1 F 3x30 min	Salle 44 Bld C, 3rd floor Z 1 F 4x20 min
	Integer Programming and Crew Scheduling	Routing	Decomposition II
	Organizer: Francois Soumis, session 292	Chair: Cole Smith, session 484	Chair: Natashia Boland, session 487
IPpractice		Salle 36 Bld B, Intermediate Z 4 F 3x30 min	Salle 36 Bld B, Intermediate Z 4 F 2x20 min
		IP Practice III	Dual Ascent
		Chair: Samuel Brito, session 507	Chair: Sara Maqrot, session 505
MINLP	Salle 34 Bld B, 1st floor Z 3 F 3x30 min	Salle 39 <u>Bld</u> E, 3rd floor <u>Z</u> 1 <u>F</u> 3x30 min	DURKHEIM Bld A, 3rd floor Z 1 F 3x30 min
	Optimal Control Problems with Discrete	Outer Convexification and Mixed-Integer Op-	Mixed-Integer PDE-Constrained Optimiza-
	Switches	timal Control	tion
	Organizer: Christian Kirches, session 102	Organizer: Sebastian Sager, session 103	Organizer: Sven Leyffer, session 63
MINLP		DURKHEIM Bld A, 3rd floor Z 1 F 3x30 min	Salle 39 Bld E, 3rd floor Z 1 F 3x30 min
		Intersection cuts, disjunctions, and valid in-	Global Optimization for nonconvex MINLPs
		equalities	Organizer: Hassan Hijazi, session 92
		Organizer: Eli Towle, session 180	
MINLP		Salle 35 Bld B, Intermediate Z 4 F 3x30 min	Salle 35 Bld B, Intermediate Z 4 F 3x30 min
		Branch-and-cut techniques	Recent Advances and Applications of MINLP
		Organizer: Teodora Dan, session 277	Organizer: Jose Ucha, session 139
APPROX	LEYTEIRE <u>Bld</u> E, 3rd floor <u>Z</u> 1 <u>F</u> 4x30 min	LEYTEIRE <u>Bld</u> E, 3rd floor <u>Z</u> 1 <u>F</u> 3x30 min	LEYTEIRE <u>Bld</u> E, 3rd floor <u>Z</u> 1 <u>F</u> 4x20 min
	Data-Driven Revenue Management with Cus-	Submodular Maximization.	Algorithmic Fairness and Optimization
	tomer Choice	Organizer: Justin Ward, session 179	Organizer: Nisheeth Vishnoi, session 161
	Organizer: Jacob Feldman, session 81		
APPROX	Salle 36 Bld B, Intermediate Z 4 F 4x30 min	Salle 43 <u>Bld</u> C, 3rd floor <u>Z</u> 1 <u>F</u> 3x30 min	Salle 43 <u>Bld</u> C, 3rd floor <u>Z</u> 1 <u>F</u> 3x30 min
	Clustering.	Submodular and Incremental Maximization	Algorithmic Discrepancy
	Organizer: Zac Friggstad, session 155	Organizer: Martin Gross, session 340	Organizer: Nikhil Bansal, session 164
COMB	SIGALAS <u>Bld</u> C, 2nd floor <u>Z</u> 2 <u>F</u> 4x30 min	SIGALAS <u>Bld</u> C, 2nd floor <u>Z</u> 2 <u>F</u> 3x30 min	SIGALAS <u>Bld</u> C, 2nd floor <u>Z</u> 2 <u>F</u> 3x30 min
	Matching and scheduling	Combinatorial aspects of Linear Program-	Packing Steiner Trees
	Organizer: Seffi Naor, session 54	ming	Organizer: Stephan Held, session 260
		Organizer: Daniel Dadush, session 259	
COMB	Salle 41 <u>Bld</u> C, 3rd floor <u>Z</u> 1 <u>F</u> 4x30 min		Salle 41 <u>Bld</u> C, 3rd floor <u>Z</u> 1 <u>F</u> 4x20 min
	Recent progress in graph cut problems		Optimization problems in graphs and related
	Organizer: Karthekeyan Chandrasekaran, ses-		Chair: Claudio Arbib, session 423
	sion 244		
COMB	Salle 39 <u>Bld</u> E, 3rd floor <u>Z</u> 1 <u>F</u> 4x30 min		
	Algorithmic aspects of connectivity in network		
	design		
	Organizer: Neil Olver, session 264		
CP	DURKHEIM Bld A, 3rd floor Z 1 F 4x30 min		
	Graphical Optimization Model 2		
	Organizer: Maria Restrepo, session 297		

CLUSTER: Optimization under Uncertainty

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
Stoch	DENIGES Bld C, Ground Floor Z 5 F 4x30 min	Salle 32 Bld B, Ground Floor Z 5 F 3x30 min	Salle 30 Bld B, Ground Floor Z 5 F 3x20 min
	Theoreticals and practicals aspects of decom-	Risk-aware decision making	Topics in stochastic optimization
	position algorithms for multistage stochastic	Organizer: Minseok Ryu, session 251	Chair: Quentin Mercier, session 494
	problems: 3		
	Organizer: Vincent Leclère, session 245		
Stoch	Salle 32 Bld B, Ground Floor Z 5 F 4x30 min		
	New methods for stochastic optimization and		
	variational inequalities		
	Chair: Yunxiao Deng, session 491		
Robust	Salle 33 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	Salle 33 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	Salle 37 Bld B, Intermediate Z 4 F 4x20 min
	New Horizons in Robust Optimization	Distributionally Robust Optimization: Mod-	Robust Combinatorial Optimization II
	Organizer: Angelos Georghiou, session 447	els and Applications	Organizer: Agostinho Agra, session 168
		Organizer: Selin Ahipasaoglu, session 355	
Robust		DENIGES Bld C, Ground Floor Z 5 F 3x30 min	Salle 33 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min
		Distributionally Robust Optimization	Wasserstein Distributionally Robust Opti-
		Organizer: Daniel Kuhn, session 446	mization
			Organizer: Peyman Mohajerin Esfaha, session
			448
Markov	Salle 31 Bld B, Ground Floor Z 5 F 4x30 min	Salle 31 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	Salle 31 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min
	Advances in theory of dynamic programming	Discrete stochastic dynamic programming	Tractability and approximation algorithms in
	Chair: Stephane Gaubert, session 385	Chair: Adam Narkiewicz, session 384	dynamic programming
			Chair: Alexander Hopp, session 383
Game	Salle 30 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 4x30 min	Salle 30 <u>Bld</u> B, Ground Floor <u>Z</u> 5 <u>F</u> 3x30 min	
	Algorithmic Game Theory II	Scalarization, representation and the compar-	
	Chair: Margarida Carvalho, session 372	ison of methods in Multiobjective Optimiza-	
		tion	
		Chair: Tyler Perini, session 378	

CLUSTER: Continuous Optimization

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
NLP	Salle 05 Bld Q, 1st floor Z 11 F 4x30 min	GINTRAC Bld Q, Ground Floor Z 8 F 3x30 min	GINTRAC Bld Q, Ground Floor Z 8 F 3x30 min
	First order methods	Interior Point Methods in Engineering Appli-	Moment relaxations for polynomial optimiza-
	Organizer: Gerardo Toraldo, session 27	cations I	tion with symmetries
		Organizer: Jacek Gondzio, session 60	Organizer: Markus Schweighofer, session 10
NLP	GINTRAC Bld Q. Ground Floor Z 8 F 4x30 min	Salle 05 Bld Q. 1st floor Z 11 F 3x30 min	Salle KC7 Bld K. Intermediate 2 Z 10 F 3x30 min
	Stochastic and Nonlinear Optimization II	Nonlinear Optimization	Subspace methods in NLP II
	Organizer: Jorge Nocedal, session 48	Chair: Marc Steinbach, session 429	Organizer: Panos Parpas, session 44
NLP	Salle KC7 Bld K, Intermediate 2 Z 10 F 4x30 min		Salle 05 Bld Q, 1st floor Z 11 F 4x20 min
	Regularization and Iterative Methods in		Primal-dual and ADMM algorithms for non-
	Large-Scale Optimization		linear programming
	Organizer: Jacek Gondzio, session 59		Organizer: Marco Sciandrone, session 91
NLP	Salle 9 <u>Bld</u> N, 4th floor <u>Z</u> 12 <u>F</u> 4x30 min		Salle 9 <u>Bld</u> N, 4th floor <u>Z</u> 12 <u>F</u> 3x20 min
	Decomposition Methods		Linear Optimization I
	Chair: Roger Behling, session 431		Chair: Jianming Shi, session 415
Global		Salle 20 Bld G, 1st floor Z 6 F 3x30 min	Salle 20 <u>Bld</u> G, 1st floor <u>Z</u> 6 <u>F</u> 3x30 min
		Global Optimization 2	Global Optimization 1
		Chair: Mirjam Duer, session 502	Chair: Jean-Baptist Hiriart-Urruty, session 501
NonSmooth	Salle LC4 Bld L, Intermediate 1 Z 9 F 4x30 min	Salle 8 <u>Bld</u> N, 4th floor <u>Z</u> 12 <u>F</u> 3x30 min	Salle 8 <u>Bld</u> N, 4th floor <u>Z</u> 12 <u>F</u> 3x30 min
	Geometry in complexity analysis of non-	Advances in the first-order methods for con-	Nonsmooth DC optimization with applications
	smooth optimization methods	vex optimization	Chair: Napsu Karmitsa, session 46
	Organizer: Jalal Fadili, session 199	Organizer: Angelia Nedich, session 73	
NonSmooth	Salle 8 <u>Bld</u> N, 4th floor <u>Z</u> 12 <u>F</u> 4x30 min		Salle LC4 <u>Bld</u> L, Intermediate 1 Z 9 F 3x30 min
	Convergence analysis for non smooth opti-		Nonconvex Optimization: Theory and Meth-
	mization		ods - Part 3
	Organizer: Robert Csetnek, session 557		Organizer: Genaro Lopez, session 188
SDP	Salle 20 <u>Bld</u> G, 1st floor \underline{Z} 6 <u>F</u> 4x30 min	Salle LC5 <u>Bld</u> L, Intermediate 1 \underline{Z} 10 \underline{F} 3x30 min	Salle AURIAC <u>Bld</u> G, 1st floor \underline{Z} 6 \underline{F} 3x30 min
	Copositive and completely positive optimiza-	Relative Entropy Optimization I	Computer-assisted analyses of optimization
	tion	Organizer: Venkat Chandrasekaran, session	algorithms II
(DD	Organizer: Olga Kuryatnikova, session 24	111	Organizer: Adrien Taylor, session 16
SDP	Salle LC5 <u>Bid</u> L, intermediate 1 $\underline{2}$ 10 <u>F</u> 4x30 min		Salle LC5 <u>Bid</u> L, intermediate 1 $\underline{2}$ 10 <u>F</u> 3x30 min
	Stability and scaling in conic programming		Sparse Semidennite Programming
Variat	Chair: Diego Cliuentes, session 498	Sollo 06 Pld O. 1et floor 7 11 E 2v20 min	Organizer: Somayen Sojoudi, session 17
variat	Salle 06 $\underline{Bl0}$ Q, 1st licor $\underline{2}$ 11 \underline{F} 4x30 min	Salle 06 \underline{Blo} Q, 1st libor \underline{Z} 11 \underline{F} 3x30 min	Salle 06 Bld Q, 1st lloor <u>Z</u> 11 <u>F</u> 3x30 min
	stochastic Optimization and variational In-	Algorithms for optimization and variational	Nonmear Optimization and variational In-
	Organizar: Hailin Sun, sossion 149	TI Distributions	Organizer: Cong Sun, session 144
	Organizer: Haini Sun, session 149	n Organizer: Alexey Izmailov, session 153	Organizer: Cong Sun, session 144
Variat	Salle ABNOZAN Bld O. Ground Floor Z 8 E 4x30	Salle ABNOZAN BId O. Ground Floor Z 8 E 3x30	Salle ABNOZAN Bld Ω Ground Floor Z 8 E 4x20
Variat		min	min
	Variational Analysis 3	Nash equilibrium and Games 2	Variational Analysis 2
	Organizer: Johanna Burtscheidt, session 369	Organizer: Giancarlo Bigi, session 366	Organizer: David Salas, session 367
RandomM	Salle KC6 Bld K. Intermediate 1 Z 10 F 3x30 min		Salle KC6 Bld K. Intermediate 1 Z 10 F 4x20 min
	Recent Advances in Coordinate Descent and		Algorithms for Structured Statistical Opti-
	Constrained Problems		mization
	Organizer: Ion Necoara, session 208		Chair: Ilker Birbil, session 349
DerFree	Salle 21 Bld G, Intermediate Z 6 F 4x30 min	Salle 21 Bld G, Intermediate Z 6 F 3x30 min	Salle 21 <u>Bld</u> G, Intermediate <u>Z</u> 6 <u>F</u> 2x30 min
	Challenging applications in DFO	Advances in DFO IV	Derivative-free global optimization algo-
	Chair: Francesco Rinaldi, session 38	Chair: Katya Scheinberg, session 125	rithms
			Chair: Zaikun Zhang, session 41
Control	Salle AURIAC Bld G, 1st floor Z 6 F 3x30 min		
	Optimal Control in Engineering Applications		
	Chair: Maxime Grangereau, session 310		

CLUSTER: Specific Models, Algorithms, and Software

Stream	8:30-10:30 AM	3:15-4:45 PM	5:00-6:30 PM
Learning	FABRE <u>Bld</u> J, Ground Floor <u>Z</u> 8 <u>F</u> 3x30 min	Salle 16 Bld I, 2nd floor Z 7 F 3x30 min	FABRE Bld J, Ground Floor Z 8 F 4x20 min
	Dimensionality reduction tools for learning: A	Discrete methods for data centers and graphs	Spectral and Semidefinite Methods for Learn-
	sketchy session	Organizer: Aaron Archer, session 477	ing
	Organizer: Robert Gower, session 313		Organizer: Martin Jaggi, session 321
Learning	Salle 16 Bld I, 2nd floor Z 7 F 4x30 min	FABRE Bld J, Ground Floor Z 8 F 3x30 min	
	Dealing with non-convexity	Classification, regression and clustering	
	Chair: Damek Davis, session 473	Chair: Dimitris Bertsimas, session 480	
Network	Salle 18 <u>Bld</u> I, 1st floor <u>Z</u> 7 <u>F</u> 4x30 min		Salle 18 Bld I, 1st floor Z 7 F 4x20 min
	Telecommunications		Transportation networks
	Organizer: Edoardo Amaldi, session 361		Chair: Bernard Gendron, session 359
Logistics	PITRES Bld O, Ground Floor Z 8 F 4x30 min	Salle 24 Bld G, 3rd floor Z 6 F 3x30 min	Salle 16 Bld I, 2nd floor Z 7 F 2x20 min
	Hybrid Algorithms and Matheuristics for	Vehicle Routing II	Logistics Networks
	VRP	Chair: Chris Potts, session 412	Chair: El Hassan Laaziz, session 468
	Organizer: Thibaut Vidal, session 181		
Scheduling	Salle 23 Bld G, 3rd floor Z 6 F 3x30 min	Salle 18 Bld I, 1st floor Z 7 F 3x30 min	
	Scheduling Applications	Machine Scheduling 1	
	Chair: Mauricio de Souza, session 526	Chair: Renan Trindade, session 527	
Energy	Salle 24 Bld G, 3rd floor Z 6 F 3x30 min	Salle DENUCE Bld Q, Ground Floor Z 8 F 3x30	Salle 23 Bld G, 3rd floor Z 6 F 3x30 min
	Power Systems Models with Discrete Decision	min	Energy-aware planning and scheduling 2
	Variables	Estimation and Learning for Power Systems	Organizer: Christian Artigues, session 178
	Organizer: Adolfo Escobedo, session 26	Organizer: Javad Lavaei, session 25	
Energy	Salle DENUCE <u>Bld</u> Q, Ground Floor <u>Z</u> 8 <u>F</u> 4x30	Salle 22 Bld G, 2nd floor Z 6 F 3x30 min	Salle 24 <u>Bld</u> G, 3rd floor <u>Z</u> 6 <u>F</u> 3x20 min
	min	Optimization in Energy	Stochastic Methods for Energy Optimization
	Machine Learning in State Estimation and	Chair: Andrea Simonetto, session 515	Chair: Tristan Rigaut, session 294
	Situational Awareness in Power Grids		
	Organizer: Deepjyoti Deka, session 134		
Energy		Salle 23 <u>Bld</u> G, 3rd floor <u>Z</u> 6 <u>F</u> 3x30 min	
		Optimization for Energy System Planning	
		Chair: Andrew Liu, session 524	
Sciences	Salle LA4 Bld L, Basement Z 8 F 3x30 min	Salle LA4 Bld L, Basement Z 8 F 3x30 min	Salle LA4 Bld L, Basement Z 8 F 4x20 min
	Finance and Portfolio Optimization	Industrial dynamics and Environmental pol-	Optimization and Game Theory
	Organizer: Asaf Shupo, session 395	icy	Organizer: Veerle Timmermans, session 402
		Organizer: Inmaculada Garcia Fernandez, ses-	
		sion 392	
Algo	Salle 22 <u>Bld</u> G, 2nd floor <u>Z</u> 6 <u>F</u> 4x30 min	PITRES <u>Bld</u> O, Ground Floor <u>Z</u> 8 <u>F</u> 3x30 min	PITRES Bld O, Ground Floor Z 8 F 3x30 min
	New Developments in Optimization Modeling	Computational Integer Programming I	Computational Integer Programming II
	Software	Organizer: Domenico Salvagnin, session 273	Organizer: Domenico Salvagnin, session 274
	Organizer: Robert Fourer, session 101		

Program per Time Slot

Room	Invited Talks - Monday 11:00 AM – 12:00 AM	
Auditorium	On the relationship between machine learning and optimization, Organizer: Michel Goemans, session 552	PLENARY
Build Symph H, Z 0	FRANCIS BACH, On the relationship between	
Gambetta	machine learning and optimization	
1x60 min		

Room	Invited Talks - Monday 1:30 PM – 2:30 PM		
Auditorium	Multiobjective Optimization with PDE Constraints, Organizer: Stephen J Wright, session 550		
Build Symph H, Z 0	MICHAEL HINTERMÜLLER, Multiobjective		
Gambetta	Optimization with PDE Constraints		
1x60 min			
SIGALAS	What's happening in nonconvex optimization? A couple of stories,	KEYNOTE	
	Organizer: Jean-Baptist Hiriart-Urruty, session 536		
Build C, Z 2	EMMANUEL CANDES, What's happening in		
2nd floor	nonconvex optimization? A couple of sto-		
1x60 min	ries		
DENIGES	Theoretical Analysis of Cutting-Planes in IP Solvers., Organizer: Gerard Cornuejols, session 538 KEYNOTE		
Build C, Z 5	SANTANU DEY, Theoretical Analysis of		
Ground Floor	Cutting-Plane Selection in IP Solvers.		
1x60 min			

Room	Discrete Optimiza	tion & Integer Prog	ramming - Monday	3:15 PM – 4:45 PM
Salle 43	Provable guarantees for Cut Gener	ating Functions, Organizer: Amitabl	n Basu, session 220	IPtheory
Build C, Z 1	JOSEPH PAAT, Using the geometry of S-free	SRIRAM SANKARANARAYANAN, Can cut gener-	Амітавн Basu, Optimal cutting planes	
3rd floor	sets to find mixed-integer cut-generating	ating functions be good and efficient?	from the group relaxations	
3x30 min	functions			
Salle 44	IP Practice I , <i>Chair</i> : Maurice Queyr	ranne, session 506		IPpractice
Build C, Z 1	RAPHAEL HAUSER, IP models for dimension-	CARLOS CARDONHA, Network models for	MAURICE QUEYRANNE, Optimum Turn-	
3rd floor	ality reduction and feature selection in cat-	multiobjective discrete optimization	Restricted Paths, Nested Compatibility,	
5x50 mm				
Salle 39	Exact Optimization Algorithms for	Compressed Sensing, Organizer: M	arc E Pietsch, session 56	MINLP
Build E, Z I	CHRISTOPH BRAUER, A primai-dual nomo-	ANDREAS HILLMANN, SparkMIP: Mixed- Integer Programming for the (Vector) Me	FREDERIC MATTER, Complex-valued ℓ_0 min- imization problems with constant modulus	
3x30 min	norm constraints	troid Girth Problem	constraints	
Salle 34	Tight relevations in nonconvey MI	NIP Organizer: Ambros Gleivner se	ession 128	MINI D
Build B Z 3	EMILY SPEAKMAN Using mixed volume the-	STEFAN VIGERSKE Revising the handling of	AMBROS GLEIXNER Two-dimensional Pro-	MINLF
1st floor	ory to compute convex hull volume for tri-	nonlinear constraints in SCIP	jections for Separation and Propagation of	
3x30 min	linear monomials		Bilinear Terms	
Salle 35	MINLP methods in gas transport o	ptimization (I). Organizer: Lars Sch	ewe, session 162	MINLP
Build B, Z 4	LARS SCHEWE, MIP techniques for insta-	NICK MERTENS, Solving MINLPs by Simul-	FALK HANTE, Complementarity-Based	
Intermediate	tionary gas transport optimization and gas	taneous Convexification with Application	Nonlinear Programming Techniques for	
3x30 min	market models	to Gas Networks	Optimal Mixing in Gas	
LEYTEIRE	Geometry of Polynomials and App	ications in Approximate Counting,		APPROX
	Organizer: Shayan Oveis Gharan, ses	ssion 99		
Build E, Z 1				
0.10	GUUS REGTS, On a conjecture of Sokal on	PIYUSH SRIVASTAVA, Zeros of polynomials	NIMA ANARI, A Deterministic Approxima-	
3rd floor	Guus Regrs, On a conjecture of Sokal on the location of roots of the independence	PIYUSH SRIVASTAVA, Zeros of polynomials and Ising partition functions	NIMA ANARI, A Deterministic Approxima- tion Algorithm for Counting Bases of Ma-	
3rd floor 3x30 min	Guus Regrs, On a conjecture of Sokal on the location of roots of the independence polynomial	PIYUSH SRIVASTAVA, Zeros of polynomials and Ising partition functions	NIMA ANARI, A Deterministic Approxima- tion Algorithm for Counting Bases of Ma- troids	
3rd floor 3x30 min Salle 36	Gous Rears, On a conjecture of Sokal on the location of roots of the independence polynomial Matching and Matroids, Organizer	PIYUSH SRIVASTAVA, Zeros of polynomials and Ising partition functions : José A Soto, session 341	NIMA ANARI, A Deterministic Approxima- tion Algorithm for Counting Bases of Ma- troids	APPROX
3rd floor 3x30 min Salle 36 Build B, Z 4 Intermediate	Guus Regrs, On a conjecture of Sokal on the location of roots of the independence polynomial Matching and Matroids , <i>Organizer</i> MaxImILEN BURQ, Maximizing Efficiency in Dungmi Matching Markets	PTYDER SRIVASTAVA, Zeros of polynomials and Ising partition functions : José A Soto, session 341 MORTEZA ZADIMOGHADDAM, Online Weichted Matching, Bosting the 1/0	NIMA ANARI, A Deterministic Approxima- tion Algorithm for Counting Bases of Ma- troids	APPROX
3rd floor 3x30 min Salle 36 Build B, Z 4 Intermediate 3x30 min	Gous Rears, On a conjecture of Sokal on the location of roots of the independence polynomial Matching and Matroids , <i>Organizer</i> MAXIMILIEN BURQ, Maximizing Efficiency in Dynamic Matching Markets	PTYUSH SRIVASTAVA, Zeros of polynomials and Ising partition functions : José A Soto, session 341 MORTEZA ZADIMOGHADDAM, Online Weighted Matching: Beating the 1/2 Barrier	NIMA ANARI, A Deterministic Approxima- tion Algorithm for Counting Bases of Ma- troids José Soro, Strong Algorithms for the Ordi- nal Matroid Secretary Problem	APPROX
3rd floor 3x30 min Salle 36 Build B, Z 4 Intermediate 3x30 min SIGALAS	Guus Regrs, On a conjecture of Sokal on the location of roots of the independence polynomial Matching and Matroids , Organizer MAXIMILIEN BURQ, Maximizing Efficiency in Dynamic Matching Markets On the Tree Augmentation Problem	Pryush Srivastava, Zeros of polynomials and Ising partition functions : José A Soto, session 341 Morteza Zadimoghaddam, Online Weighted Matching: Beating the 1/2 Barrier Orranizer: Laura Sanità session 24	NIMA ANARI, A Deterministic Approxima- tion Algorithm for Counting Bases of Ma- troids José Soro, Strong Algorithms for the Ordi- nal Matroid Secretary Problem	APPROX
3rd floor 3x30 min Salle 36 Build B, Z 4 Intermediate 3x30 min SIGALAS Build C, Z 2	GUUS REGTS, On a conjecture of Sokal on the location of roots of the independence polynomial Matching and Matroids, Organizer MAXIMILIEN BURQ, Maximizing Efficiency in Dynamic Matching Markets On the Tree Augmentation Problem DAVID ADJIASHVILI, Beating Approximation	PYVUSH SRIVASTAVA, Zeros of polynomials and Ising partition functions : José A Soto, session 341 MORTEZA ZADIMOGHADDAM, Online Weighted Matching: Beating the 1/2 Barrier n, Organizer: Laura Sanità, session 24 JOCHEN KOENEMANN, Improved Approxima-	NIMA ANARI, A Deterministic Approxima- tion Algorithm for Counting Bases of Ma- troids José Soro, Strong Algorithms for the Ordi- nal Matroid Secretary Problem 0 RICO ZENKLUSEN, Improved Approxima-	APPROX
3rd floor 3x30 min Salle 36 Build B, Z 4 Intermediate 3x30 min SIGALAS Build C, Z 2 2nd floor	GUUS REGTS, On a conjecture of Sokal on the location of roots of the independence polynomial Matching and Matroids , Organizer MaxImILEN BURQ, Maximizing Efficiency in Dynamic Matching Markets On the Tree Augmentation Problem DAVID ADIJASHVILI, Beating Approximation Factor 2 For Weighted Tree Augmentation	Pryush SRIVASTAVA, Zeros of polynomials and Ising partition functions : José A Soto, session 341 MORTEZA ZADIMOGHADDAM, Online Weighted Matching: Beating the 1/2 Barrier n, Organizer: Laura Sanità, session 24 JOCHEN KOENEMANN, Improved Approxima- tion for Tree Augmentation via Chvatal	NIMA ANARI, A Deterministic Approxima- tion Algorithm for Counting Bases of Ma- troids José Soro, Strong Algorithms for the Ordi- nal Matroid Secretary Problem 0 RICO ZENKLUSEN, Improved Approxima- tion for Tree Augmentation: Saving by	APPROX
3rd floor 3x30 min Salle 36 Build B, Z 4 Intermediate 3x30 min SIGALAS Build C, Z 2 2nd floor 3x30 min	GUUS REGTS, On a conjecture of Sokal on the location of roots of the independence polynomial Matching and Matroids, Organizer MAXIMILIEN BURQ, Maximizing Efficiency in Dynamic Matching Markets On the Tree Augmentation Problem DAVID ADIASHVILI, Beating Approximation Factor 2 For Weighted Tree Augmentation With Bounded Costs	PYYUSH SRIVASTAVA, Zeros of polynomials and Ising partition functions : José A Soto, session 341 MORTEZA ZADIMOGHADDAM, Online Weighted Matching: Beating the 1/2 Barrier n, Organizer: Laura Sanità, session 24 JOCHEN KOENEMANN, Improved Approxima- tion for Tree Augmentation via Chvatal Gomory Cuts	NIMA ANARI, A Deterministic Approxima- tion Algorithm for Counting Bases of Ma- troids JOSÉ SOTO, Strong Algorithms for the Ordi- nal Matroid Secretary Problem 0 RICO ZENKLUSEN, Improved Approxima- tion for Tree Augmentation: Saving by Rewiring	APPROX
3rd floor 3x30 min Salle 36 Build B, Z 4 Intermediate 3x30 min SIGALAS Build C, Z 2 2nd floor 3x30 min Salle 41	GUUS REGTS, On a conjecture of Sokal on the location of roots of the independence polynomial Matching and Matroids, Organizer MAXIMILEN BURQ, Maximizing Efficiency in Dynamic Matching Markets On the Tree Augmentation Problem DAVID ADIJASHVILI, Beating Approximation Factor 2 For Weighted Tree Augmentation With Bounded Costs Scheduling with setup, uncertainty	PYYUSH SRIVASTAVA, Zeros of polynomials and Ising partition functions : José A Soto, session 341 MORTEZA ZADIMOGHADDAM, Online Weighted Matching: Beating the 1/2 Barrier a, Organizer: Laura Sanità, session 24 JOCHEN KOENEMANN, Improved Approxima- tion for Tree Augmentation via Chvatal Gomory Cuts and precedences, Organizer: Monale	NIMA ANARI, A Deterministic Approxima- tion Algorithm for Counting Bases of Ma- troids José Soro, Strong Algorithms for the Ordi- nal Matroid Secretary Problem 0 Rco ZENKLUSEN, Improved Approxima- tion for Tree Augmentation: Saving by Rewiring do Mastrolilli, session 419	APPROX COMB
3rd floor 3x30 min Salle 36 Build B, Z 4 Intermediate 3x30 min SIGALAS Build C, Z 2 2nd floor 3x30 min Salle 41 Build C, Z 1	GUUS REGTS, On a conjecture of Sokal on the location of roots of the independence polynomial Matching and Matroids, Organizer MAXIMILIEN BURQ, Maximizing Efficiency in Dynamic Matching Markets On the Tree Augmentation Problem DAVID ADJIASHVILI, Beating Approximation Factor 2 For Weighted Tree Augmentation With Bounded Costs Scheduling with setup, uncertainty KIM-MANUEL KLEIN, Empowering the	PYVUSH SRIVASTAVA, Zeros of polynomials and Ising partition functions : José A Soto, session 341 MORTEZA ZADIMOGHADDAM, Online Weighted Matching: Beating the 1/2 Barrier n, Organizer: Laura Sanità, session 24 JOCHEN KOENEMANN, Improved Approxima- tion for Tree Augmentation via Chvatal Gomory Cuts and precedences, Organizer: Monale Nicole Megow, Scheduling under Ex-	NIMA ANARI, A Deterministic Approxima- tion Algorithm for Counting Bases of Ma- troids José Soro, Strong Algorithms for the Ordi- nal Matroid Secretary Problem 40 RICO ZENKLUSEN, Improved Approxima- tion for Tree Augmentation: Saving by Rewiring do Mastrolilli, session 419 Jose VERSCHAE, Min-sum scheduling under	СОМВ
3rd floor 3x30 min Salle 36 Build B, Z 4 Intermediate 3x30 min SIGALAS Build C, Z 2 2nd floor 3x30 min Salle 41 Build C, Z 1 3rd floor	GUUS REGTS, On a conjecture of Sokal on the location of roots of the independence polynomial Matching and Matroids, Organizer MAXIMILIEN BURQ, Maximizing Efficiency in Dynamic Matching Markets On the Tree Augmentation Problem DAVID ADHASHVILI, Beating Approximation Factor 2 For Weighted Tree Augmentation With Bounded Costs Scheduling with setup, uncertainty KIM-MANUEL KLEIN, Empowering the Configuration-IP	PYVUSH SRIVASTAVA, Zeros of polynomials and Ising partition functions : José A Soto, session 341 MORTEZA ZADIMOGHADDAM, Online Weighted Matching: Beating the 1/2 Barrier n, Organizer: Laura Sanità, session 24 JOCHEN KOENEMANN, Improved Approxima- tion for Tree Augmentation via Chvatal Gomory Cuts and precedences, Organizer: Monale INCOLE MEGOW, Scheduling under Ex- plorable Uncertainty	NIMA ANARI, A Deterministic Approxima- tion Algorithm for Counting Bases of Ma- troids José Soro, Strong Algorithms for the Ordi- nal Matroid Secretary Problem IO RICO ZENKLUSEN, Improved Approxima- tion for Tree Augmentation: Saving by Rewiring do Mastrolilli, session 419 Jose VERSCHAE, Min-sum scheduling under precedence constraints	APPROX COMB
3rd floor 3x30 min Salle 36 Build B, Z 4 Intermediate 3x30 min SIGALAS Build C, Z 2 2nd floor 3x30 min Salle 41 Build C, Z 1 3rd floor 3x30 min	GUUS REGTS, On a conjecture of Sokal on the location of roots of the independence polynomial Matching and Matroids , Organizer MaxImILEN BURQ, Maximizing Efficiency in Dynamic Matching Markets On the Tree Augmentation Problem DAVID ADIASHVILI, Beating Approximation Factor 2 For Weighted Tree Augmentation With Bounded Costs Scheduling with setup, uncertainty KIM-MANUEL KLEIN, Empowering the Configuration-IP	PYVUSH SRIVASTAVA, Zeros of polynomials and Ising partition functions : José A Soto, session 341 MORTEZA ZADIMOGHADDAM, Online Weighted Matching: Beating the 1/2 Barrier n, Organizer: Laura Sanità, session 24 JOCHEN KOENEMANN, Improved Approxima- tion for Tree Augmentation via Chvatal Gomory Cuts and precedences, Organizer: Monale NicoLE MEGOW, Scheduling under Ex- plorable Uncertainty	NIMA ANARI, A Deterministic Approxima- tion Algorithm for Counting Bases of Ma- troids José Soro, Strong Algorithms for the Ordi- nal Matroid Secretary Problem O RICO ZENKLUSEN, Improved Approxima- tion for Tree Augmentation: Saving by Rewiring O Mastrolilli, session 419 JOSE VERSCHAE, Min-sum scheduling under precedence constraints	APPROX COMB
3rd floor 3x30 min Salle 36 Build B, Z 4 Intermediate 3x30 min SIGALAS Build C, Z 2 2nd floor 3x30 min Salle 41 Build C, Z 1 3rd floor 3x30 min DURKHEIM	GUUS REGTS, On a conjecture of Sokal on the location of roots of the independence polynomial Matching and Matroids, Organizer MAXIMILIEN BURQ, Maximizing Efficiency in Dynamic Matching Markets On the Tree Augmentation Problem DAVID ADIASHVILI, Beating Approximation Factor 2 For Weighted Tree Augmentation With Bounded Costs Scheduling with setup, uncertainty KIM-MANUEL KLEIN, Empowering the Configuration-IP Global Optimization, Organizer: H	PYYUSH SRIVASTAVA, Zeros of polynomials and Ising partition functions : José A Soto, session 341 MORTEZA ZADIMOGHADDAM, Online Weighted Matching: Beating the 1/2 Barrier n, Organizer: Laura Sanità, session 24 JOCHEN KOENEMANN, Improved Approxima- tion for Tree Augmentation via Chvatal Gomory Cuts and precedences, Organizer: Monale NICOLE MEGOW, Scheduling under Ex- plorable Uncertainty assan Hijazi, session 299	NIMA ANARI, A Deterministic Approxima- tion Algorithm for Counting Bases of Ma- troids José Soro, Strong Algorithms for the Ordi- nal Matroid Secretary Problem O RICO ZENKLUSEN, Improved Approxima- tion for Tree Augmentation: Saving by Rewiring O Mastrolilli, session 419 JOSE VERSCHAE, Min-sum scheduling under precedence constraints	APPROX COMB COMB
3rd floor 3x30 min Salle 36 Build B, Z 4 Intermediate 3x30 min SIGALAS Build C, Z 2 2nd floor 3x30 min Salle 41 Build C, Z 1 3rd floor 3x30 min DURKHEIM Build A, Z 1	GUUS REGTS, On a conjecture of Sokal on the location of roots of the independence polynomial Matching and Matroids, Organizer MAXIMILEN BURQ, Maximizing Efficiency in Dynamic Matching Markets On the Tree Augmentation Problem DAVID ADIASHVILI, Beating Approximation Factor 2 For Weighted Tree Augmentation With Bounded Costs Scheduling with setup, uncertainty KIM-MANUEL KLEIN, Empowering the Configuration-IP Global Optimization, Organizer: H ADAM OUOROU, A class of proximal al-	PYVSH SRIVASTAVA, Zeros of polynomials and Ising partition functions : José A Soto, session 341 MORTEZA ZADIMOGHADDAM, Online Weighted Matching: Beating the 1/2 Barrier a, Organizer: Laura Sanità, session 24 Jochen Koenemann, Improved Approxima- tion for Tree Augmentation via Chvatal Gomory Cuts and precedences, Organizer: Monale NICOLE MEGOW, Scheduling under Ex- plorable Uncertainty assan Hijazi, session 299 [KARTHIK SUNDAR, CONVEX relaxations for	NIMA ANARI, A Deterministic Approximation Algorithm for Counting Bases of Matroids José Soro, Strong Algorithms for the Ordinal Matroid Secretary Problem IO Rco ZENKLUSEN, Improved Approximation for Tree Augmentation: Saving by Rewiring do Mastrolilli, session 419 Jose VERSCHAE, Min-sum scheduling under precedence constraints	APPROX COMB COMB
3rd floor 3x30 min Salle 36 Build B, Z 4 Intermediate 3x30 min SIGALAS Build C, Z 2 2nd floor 3x30 min Salle 41 Build C, Z 1 3rd floor 3x30 min DURKHEIM Build A, Z 1 3rd floor	GUUS REGTS, On a conjecture of Sokal on the location of roots of the independence polynomial Matching and Matroids, Organizer MAXIMILEN BURQ, Maximizing Efficiency in Dynamic Matching Markets On the Tree Augmentation Problem DAVID ADJIASHVILI, Beating Approximation Factor 2 For Weighted Tree Augmentation With Bounded Costs Scheduling with setup, uncertainty KIM-MANUEL KLEIN, Empowering the Configuration-IP Global Optimization, Organizer: H ADAM OUGROU, A class of proximal al- gorithms based on Chebychev centers for uncomposite acruva c	PYVUSH SRIVASTAVA, Zeros of polynomials and Ising partition functions : José A Soto, session 341 MORTEZA ZADIMOGHADDAM, Online Weighted Matching: Beating the 1/2 Barrier n, Organizer: Laura Sanità, session 24 JOCHEN KOENEMANN, Improved Approxima- tion for Tree Augmentation via Chvatal Gomory Cuts and precedences, Organizer: Monala NICOLE MEGOW, Scheduling under Ex- plorable Uncertainty assan Hijazi, session 299 KAARTHIK SUNDAR, CONVEX relaxations for Mixed-Integer Multilinear Functions	NIMA ANARI, A Deterministic Approxima- tion Algorithm for Counting Bases of Ma- troids José Soro, Strong Algorithms for the Ordi- nal Matroid Secretary Problem IO RICO ZENKLUSEN, Improved Approxima- tion for Tree Augmentation: Saving by Rewiring do Mastrolilli, session 419 Jose VERSCHAE, Min-sum scheduling under precedence constraints TILLMANN WEISSER, Sparse Certificates for Polynomial Optimization	APPROX COMB COMB

Room	Optimizati	ion under Uncertain	ty - Monday 3:15 PN	I – 4:45 PM
Salle 32	Scenario discretization techniques i	in stochastic optimization, Organized	r: Fabian Bastin, session 287	Stoch
Build B, Z 5	THUY ANH TA, On a two-stage stochastic	JULIEN KEUTCHAYAN, Multistage stochastic	MICHEL GENDREAU, Effective Heuristics for	
Ground Floor	optimization problem with stochastic con-	optimization: discretization of probability	the Short-Term Hydro-Generation Plan-	
3x30 min	straints	distributions	ning Problem	
DENIGES	Preference robust optimization, Or	ganizer: Erick Delage, session 166		Robust
Build C, Z 5	WILLIAM HASKELL, Robust choice with	JONATHAN LI, Optimizing aspirational pref-	ERICK DELAGE, Utility-based Shortfall Risk	
Ground Floor	multi-attribute quasi-concave choice func-	erences when the choice of a measure is	Models when Preference Information is In-	
3x30 min	tions	ambiguous	complete	
Salle 33	Distributionally Robust Optimizati	on - New Theory and Applications,		Robust
	Organizer: Zhichao Zheng, session 3:	56		
Build B, Z 5	YINI GAO, Data-Driven Bounded Rational-	CAGIL KOCYIGIT, Distributionally Robust	ZHICHAO ZHENG, Schedule Reliability in	
Ground Floor	ity in Games- A Robust Framework	Mechanism Design	Liner Shipping by Distributionally Robust	
3x30 min			Optimization	
Salle 31	Approximate dynamic programmir	ng, Organizer: David Brown, session	159	Markov
Build B, Z 5	MARTIN HAUGH, Information Relaxation	HUSEYIN TOPALOGLU, Approximate Dy-	DAVID BROWN, Approximations to Stochas-	
Ground Floor	Bounds for Partially Observed Markov De-	namic Programming for Dynamic Assort-	tic Dynamic Programs via Information Re-	
3x30 min	cision Processes	ment Optimization	laxation Duality	
Salle 30	Risk and Energy Markets, Chair: J	ulio Deride, session 376		Game
Build B, Z 5	OLIVIER HUBER, On solving risk-averse	HENRI GERARD, On risk averse competitive	JULIO DERIDE, Stochastic General Equilib-	
Ground Floor	equilibrium problems via reformulations	equilibrium	rium Model with Application to Energy	
5X50 min			Markets	

Room	Continuous Optimization - M	/Ionday 3:15 PM –	4:45 PM
GINTRAC Build Q, Z 8 Ground Floor 3x30 min	Polynomial and tensor optimization I, Organizer: Jiawang Nie, session 5 JEAN LASSERRE, Sparse Polynomial Inter- Polation: Compressed Sensing, Super- resolution, or Prony?	ARM DERKSEN, Signal Denoising, Tensors d Singular Values	NLP
Salle 05 Build Q, Z 11 1st floor 3x30 min	Convex regularization and inverse problems, Organizer: Pierre Weiss, session VINCENT DUVAL, T-systems for super- resolution microscopy FREDERIC DE GOURNAY, Convex regularisa- tion, sparsity and representation theorem drait	ion 216 NAS KAHN, Bounds on the size of polye- al cones	NLP
Salle KC7 Build K, Z 10 Intermediate 2 3x30 min	Sparse Recovery, Chair: Mustafa C Pinar, session 432 JOHN CHINNECK, LP-based Sparse Solutions Revisited Vex Quadratic Splines	LOF TROENG, Efficient ℓ_0 Trend Filtering	NLP
Salle 8 Build N, Z 12 4th floor 3x30 min	Nonconvex Optimization: Theory and Methods - Part 1, Organizer: Shohar JEROME BOLTE, From error bounds to the YAKOV VAISBOURD, Globally Solving the SHC complexity of first-order descent methods Trust Region Subproblem Using Simple Bas First-Order Methods	um Sabach, session 184 нонам Sabach, Nonconvex Lagrangian- ased Optimization: Schemes and Global onvergence	NonSmooth
Salle 9 Build N, Z 12 4th floor 2x30 min	Adaptivity in non smooth optimization, Organizer: Masaru Ito, session 558 Masaru Iro, An adaptive first order Somayya Komal, A Subgradient Algorithm method for weakly smooth and uniformly for solving variational Inequality Problem convex problems		NonSmooth
Salle 20 Build G, Z 6 1st floor 3x30 min	Using SDP relaxations and solving them faster, Organizer: Elisabeth Gaar, s SAMUEL BURER, Exact SDPs for a Class NICOLO GUSMEROLI, SDP Based Solution YU: of (Random and Non-Random) Noncon- Wethods for Binary Quadratic Problems vex QCQPs	session 113 UZIXUAN ZHU, Sieve-SDP: A simple facial duction algorithm to preprocess SDPs	SDP
Salle LC5 Build L, Z 10 Intermediate 1 3x30 min	Algorithms for nonlinear conic problems, Chair: Takayuki Okuno, session 4 LEONARDO MITO, Augmented Lagrangian [CUNLU ZhoU, Long-Step Path-Following [TAK for nonlinear SDPs applied to the covering Algorithm for Nonlinear Symmetric Pro- problem [Subset State Sta	463 KAYUKI OKUNO, A primal-dual path fol- wing method for nonlinear semi-infinite DPs	SDP
Salle 06 Build Q, Z 11 1st floor 3x30 min	Proximal Methods for Structured Problems, Organizer: Ting Kei Pong, sess TIANXIANG LIU, A successive DC approxi- MAN-CHUNG YUE, Cubic Regularization TIN mation method for nonconvex nonsmooth Revisited: Faster (Local) Rates under gor optimization Weaker Assumptions	ssion 147 NG KEI PONG, Iteratively reweighted 11 al- rithms with extrapolation	Variat
Salle ARNOZAN	Algorithms for optimization and variational problems with possibly noniso	olated solutions I,	Variat
Build Q, Z 8 Ground Floor 3x30 min	Organizer: Andreas Fischer, session 132 Nico Strasbar, A special complementarity ALEXEY IZMAILOV, Critical solutions of non- function revisited linear equations: attraction for Newton- type methods	NDREAS FISCHER, Local attraction of New- n methods to critical solutions of con- rained systems	
Salle KC6 Build K, Z 10 Intermediate 1 3x30 min	Coordinate Descent and Randomized Direct Search Methods, Organizer: N Asu Ozbaglar, When Cyclic Coordinate EL HOUCINE BERGOU, Random direct search DIM Descent Outperforms Randomized Coordi- method for unconstrained smooth mini- nate Descent mization	Martin Takac, session 211 MITRI PAPAGEORGIOU, Active Metric earning for Supervised Classification	RandomM
Salle 21 Build G, Z 6 Intermediate 3x30 min	Mixed-integer derivative-free optimization, Chair: Clément Royer, session 8 ANDREW CONN, Underlying algorithms and DELPHINE SINOQUET, Benchmark of a trust [UBs/theory to our approach to MINLP without] region method for solving black-box proderivatives Control our approach to MINLP without]	80 BALDO GARCIA PALOMARES, A unified ap- oach for solving mixed integer Box- onstrained optimization	DerFree
Salle AURIAC Build G, Z 6 1st floor 3x30 min	Theory and Methods for ODE- and PDE-Constrained Optimization 1, Cha BEHZAD AZMI, On the Barzilai-Borwein BENJAMIN HORN, Shape Optimization with CAA step-sizes in Hilbert spaces Stress Constraints for Frictional Contact Problems	aair: Carl M Greiff, session 331 ARL GREIFF, Quadratic programming for ne-optimal control in differentially flat stems	Control

Room	Specific Models	, Algorithms, and So	oftware - Monday 3:	15 PM – 4:45 PM
FABRE Build J, Z 8 Ground Floor 3x30 min	Distributed Optimization, Organization, FRANCK IUTZELER, Distributed Optimization with Sparse Communications and Structure Identification	er: Franck Iutzeler, session 325 GUANGHUI LAN, Random gradient extrapo- lation for distributed and stochastic opti- mization	ALEXANDER GASNIKOV, Distributed Com- putation of Wasserstein Barycenters over Networks	Learning
Salle 16 Build I, Z 7 2nd floor 3x30 min	Decisions and learning from data, CÉDRIC ROMMEL, Gaussian mixture penal- ization for trajectory optimization prob- lems	Chair: Christopher McCord, session 4 CHRISTOPHER McCord, Optimization over Continuous Decisions with Observational Data	81 OSKAR SCHNEIDER, Combining Machine Learning and Optimization: Learning to emulate an expert	Learning
PITRES Build O, Z 8 Ground Floor 3x30 min	Facility Layout, Chair: Anders N G MIRKO DAHLBECK, Combinatorial Bounds for the (extended) Double Row Facility Layout Problem	ullhav, session 450 ANDERS GULLHAV, A Matheuristic Approach to the Hospital Facility Layout Problem	HANANE KHAMLICHI, A Multi task robot lay- out optimization with inventory lot-sizing problem	Logistics
Salle 23 Build G, Z 6 3rd floor 3x30 min	Combinatorial Optimization in Ch ULRICH BRENNER, Faster Adder Circuits for Inputs with Prescribed Arrival Times	ip Design, Organizer: Stefan Hougard PASCAL CREMER, BonnCell: Automatic Cell Layout for 7nm Processors	ly, session 257 SLAD DABOUL, Provably Fast and Near- Optimum Gate Sizing	Scheduling
Salle DENUCE Build Q, Z 8 Ground Floor 3x30 min	Progress in Algorithms for Optima MANUEL RUIZ, Solving an Optimal Power Flow (OPF) problem with preventive secu- rity constraints	I Power Flow Problems I, Organizer MIGUEL ANJOS, Tight-and-Cheap Conic Re- laxation for the AC Optimal Power Flow Problem	: Miguel F Anjos, session 8 MOSTAFA SAHRAFI ARDAKANI, Coordinated Planning and Operation of M-FACTS and Transmission Switching	Energy
Salle 24 Build G, Z 6 3rd floor 3x30 min	Topics in power systems, Organizer GULA DE ZOTT, Consumers Flexibility Estimation at the TSO Level for Balancing Services	: Alberto J Lamadrid, session 438 Joshua Taylor, Decentralized control of DC-segmented power systems	ALBERTO LAMADRID, Response to Disrup- tions in Electricity with Stochastic Micro- grids	Energy
Salle LA4 Build L, Z 8 Basement 3x30 min	Portfolio Optimization , <i>Chair</i> : Berr Luca MENCARELLI, A Multiplicative Weights Update Algorithm for Portfolio Selection Problems	nardo K. Pagnoncelli, session 393 BERNARDO PAGNONCELLI, Regularized port- folio optimization with risk measures	SINA YANSORI, LOg-optimal portfolios un- der random horizon	Sciences
Salle 22	Implementation of interior-point m	ethods for large-scale problems and	applications I,	Algo
Build G, Z 6 2nd floor 2x30 min	Organizer: Jordi Castro, session 555 Jose Herskovrts, A feasible direction in- terior point algorithm for linear program- ming	STEFANO NASINI, A specialized interior- point algorithm for very large minimum cost flows in bipa		
Salle 18 Build I, Z 7 1st floor 3x30 min	Advances in Linear, Non Linear an ERIK MÜHMER, Computational Experi- ments with Nested Dantzig-Wolfe Decom- positions	d Mixed-Integer Optimization, Cha XAVIER SCHEPLER, Restrict-and-fix: a con- structive heuristic for mixed-integer pro- grams	r: Hiroshige Dan, session 400 Hiroshige Dan, Automatic Differentiation Software for Indexed Optimization Prob- lems	Algo

Room	Discrete Optimiza	tion & Integer Prog	ramming - Monday	5:00 PM - 6:30 PM
Salle 34 Build B, Z 3 1st floor 3x30 min	Lattice methods in Integer Optimis GENNADIY AVERKOV, Approximation of cor- ner polyhedra with intersection cuts	ation, Organizer: Iskander Aliev, sess TIMM OERTEL, The Support of Integer Opti- mal Solutions	sion 78 ISKANDER ALIEV, Distances to Lattice Points in Knapsack Polyhedra	IPtheory
Salle 44 Build C, Z 1 3rd floor 4x20 min	Data Mining, Chair: Marcus V Pog, Takanno Kan, A weighting local search for huge assignment problems in item rec- ommendation	gi, session 504 Атѕиян Михисн, Exact Clustering via In- teger Programming and Maximum Satisfi- ability	DENNIS KREBER, The best subset selection problem in regression	IPpractice MARCUS POGGI, Cut and Column Genera- tion for Process Discovery
Salle 36 Build B, Z 4 Intermediate 4x20 min	IP Practice II, Chair: Petra M. Bartu GAËL GUILLOT, Application of the SSSDP method to combinatorial optimisation problems	Meyer, session 508 YI-SHUAI NIU, A Parallel Branch and Bound with DC Algorithm for Mixed In- teger Optimization	QUENTIN VIAUD, Two-dimensional bin packing problem with defects on bins	IPpractice PETRA BARTMEYER, A new approach to re- lax the binary variables on binary quadratic problems
DURKHEIM Build A, Z 1 3rd floor 3x30 min	Mixed-Integer Conic Optimization. LUCAS LETOCART, Exact methods based on SDP for the k-item quadratic knapsack problem	Organizer: Sven Wiese, session 57 TRISTAN GALLY, Knapsack Constraints over the Positive Semidefinite Cone	SVEN WIESE, The Mixed-integer Conic Op- timizer in MOSEK	MINLP
Salle 39 Build E, Z 1 3rd floor 3x30 min	Polynomial optimization in binary ARNAUD LAZARE, Unconstrained 0-1 polynomial optimization through convex quadratic reformulation	variables, Organizer: Elisabeth Rodri ANJA FISCHER, A study of specially struc- tured polynomial matroid optimization problems	guez-Heck, session 58 ELISABETH RODRIGUEZ-HECK, Linear and quadratic reformulations of nonlinear 0-1 optimization problems	MINLP
Salle 35 Build B, Z 4 Intermediate 3x30 min	MINLP methods in gas transport o BENJAMIN HILLER, Exploiting acyclic orien- tations to solve nonlinear potential-based flow problems	ptimization (II), Organizer: Lars Sch KAI BECKER, ASTS-Orientations on Undi- rected Graphs - A tool for optimizing net- work flows	newe, session 163 JOHANNES THÜRAUF, Robust Optimal Dis- crete Arc Sizing for Tree-Shaped Potential Networks	MINLP
LEYTEIRE Build E, Z 1 3rd floor 3x30 min	Scheduling and File Migration, Ch LILIANA GRIGORIU, Scheduling on Uniform Nonsimultaneous Parallel Machines	air: Asaf Levin, session 345 MARCIN BIENKOWSKI, On phase-based algo- rithms for online file migration	AsAF LEVIN, A unified framework for de- signing EPTAS's for load balancing on parallel machine	APPROX
Salle 43 Build C, Z 1 3rd floor 4x20 min	Algorithms for matching markets, ARASH ASADPOUR, Concise Bidding Through Dependent Randomized Round- ing	Organizer: Amin Saberi, session 467 BALASUBRAMAN SIVAN, Robust Repeated Auctions under Heterogeneous Buyer Be- havior	VAHAB MIRROKNI, Proportional Allocation: Simple, Distributed, and Diverse Matching w High Entropy	APPROX AMIN SABERI, Matching in dynamic envi- ronments
SIGALAS Build C, Z 2 2nd floor 4x20 min	Combinatorial optimization and co YUNI IWAMASA, Discrete convexity in bi- nary VCSPs	nvexity , <i>Chair</i> : Yu Yokoi, session 42- FEI WANG, Low matrix completion by a majorized penalty approach	4 GEORG LOHO, Abstract tropical linear pro- gramming	СОМВ Yu Yokoi, List Supermodular Coloring
Salle 41 Build C, Z 1 3rd floor 4x20 min	Practical aspects of network optimi SONIA VANIER, Energy-Efficient in Multi- Hop Wireless Networks Problem	zation, <i>Chair</i> : Kai Hoppmann, sessio KEISUKE HOTTA, Optimal division for the multi-member constituency system	n 427 SAMAN ESKANDARZADEH, Maintenance Scheduling in a Railway Corridor	COMB KAI HOPPMANN, Pushing a Network to its Limits - Finding Maximum Min-Cost- Flows

Room	Optimizati	on under Uncertain	ty - Monday 5:00 PN	A – 6:30 PM
Salle 32	Distributionally Robust Stochastic	Programming: Theory and Applicat	ions,	Stoch
	Organizer: Ran Ji, session 250	Organizer: Ran Ji, session 250		
Build B, Z 5	YILING ZHANG, Ambiguous Chance- KARTHYEK MURTHY, Distributionally Ro- RAN JI, Distributionally Robust Chance-			
Ground Floor	constrained Binary Programs Under	bust Optimization with optimal transport	Constrained Optimization with Wasser-	
3x30 min	Mean-covariance Information	(Wasserstein) costs	stein Metric	
Salle 30	Differentiability, convexity, and mo	deling in stochastic optimization, Cl	hair: Kai A. Spuerkel, session 493	Stoch
Build B, Z 5	HOLGER HEITSCH, Stochastic optimization	PEDRO PEREZ-AROS, Subdifferential charac-	KAI SPUERKEL, Strong Convexity in	
Ground Floor	with probabilistic/robust (probust) con-	terization of probability functions	Stochastic Programming with Deviation	
3x20 min	straints		Risk Measures	
DENIGES	Advances in Adjustable Robust Op	timization, Organizer: Do Young Yo	on, session 350	Robust
Build C, Z 5	DICK DEN HERTOG, Robust optimization for	ERNST Roos, Approximation of uncertain	Do Young Yoon, Monitoring with Limited	
Ground Floor	models with uncertain SOC and SDP con-	convex inequalities	Information	
3x30 min	straints			
Salle 37	New models in robust optimization,	, Chair: Juan S Borrero, session 459		Robust
Build B, Z 4	JAEYOONG LIM, On using cardinality con-	PHILIP KOLVENBACH, Robust optimization of	JUAN BORRERO, Robust optimization with	
Intermediate	strained uncertainty for objective coeffi-	PDE-constrained problems using second-	non-convex uncertainty sets	
3x20 min	cients	order methods		
Salle 31	Learning and dynamic programming	ng, Chair: Boxiao Chen, session 381		Markov
Build B, Z 5	MANU GUPTA, A unifying computation of	JOSE NINO-MORA, A verification theorem		
Ground Floor	Whittle's Index for Markovian bandits	for indexability of real-state restless ban-		
2x30 min		dits		

Room	Contin	uous Optimization -	Monday 5:00 PM -	6:30 PM
GINTRAC Build Q, Z 8 Ground Floor 3x30 min	Gradient Methods for Constrained IGOR KONNOV, Simple Adaptive Versions of Iterative Optimization Methods	Optimization Problems , Organizer: ALEXANDER ZASLAVSKI, Subgradient Projec- tion Algorithm with Computational Errors	Igor Konnov, session 4 ANDREA CRISTOFARI, An active-set frame- work for minimizing nonconvex functions over the simplex	NLP
Salle 05 Build Q, Z 11 1st floor 4x20 min	Polynomial and tensor optimization LEK-HENG LIM, Higher order cone pro- gramming	III , Organizer: Jiawang Nie, session KE YE, Ranks and decompositions of Han- kel tensors	7 ANNIE RAYMOND, Symmetric Sums of Squares over k-Subset Hypercubes	NLP JIAWANG NIE, Tight relaxations for polyno- mial optimization and lagrange multiplier expression
Salle 9 Build N, Z 12 4th floor 3x20 min	Modeling in NLP , <i>Chair</i> : Laura Bal LAURA BALZANO, LOW Algebraic Dimen- sion Matrix Completion	zano, session 433 MIRAI TANAKA, DC programming algo- rithm for fully convex bilevel optimization	NUTTAPOL PAKKARANANG, An inertial prox- imal point methods for solving minimiza- tion problems	NLP
Salle 8 Build N, Z 12 4th floor 3x30 min	Extending the Reach of First-Order BENJAMIN GRIMMER, Subgradient Method Convergence Rates without Lipschitz Con- tinuity or Convexity	r Methods, Part I, Organizer: Haihad YURI NESTEROV, Relative smoothness con- dition and its application to third-order methods.	D Lu, session 285 HAIHAO LU, Generalized Stochastic Frank- Wolfe Method	NonSmooth
Salle 20 Build G, Z 6 1st floor 3x30 min	Solving large scale convex composit KIM-CHUAN TOH, A block symmetric Gauss-Seidel decomposition theorem for convex composite QP	te programming, Organizer: Kim-Ch XIN YEE LAM, Fast algorithms for large scale generalized distance weighted dis- crimination	uan Toh, session 130 YANCHENG YUAN, An Efficient Semismooth Newton Based Algorithm for Convex Clustering	SDP
Salle LC5 Build L, Z 10 Intermediate 1 3x30 min	Convergence and Approximation in NURI VANLI, Convergence Rate of Block Coordinate Ascent for Nonconvex Burer- Monteiro Method	Conic Programming, Chair: Tamás YURIY ZINCHENKO, Towards efficient ap- proximation of p-cones	s Terlaky, session 465 TAMAS TERLAKY, Quadratic convergence to the optimal solution of second-order conic optimization	SDP
Salle 06 Build Q, Z 11 1st floor 4x20 min	Nonlinear Optimization and Variat FENGMIN XU, Balance analysis of sparsity and robustness for portfolio adjustment problem	ional Inequalities VI, Organizer: Co CHAO ZHANG, Two-stage stochastic pro- gram and stochastic variational inequalities	ng Sun, session 146 XIAO WANG, Proximal Stochastic Quasi- Newton methods for Nonconvex Compos- ite Optimization	Variat ZHONGMING WU, General inertial proximal gradient method for nonconvex nonsmooth optimization
Salle ARNOZAN Build Q, Z 8 Ground Floor 4x20 min	Variational Analysis 4, Organizer: J Jo BRUEGGEMANN, Path-following method for a class of obstacle problems with inte- gral constraints	To A. Brueggemann, session 370 YBOON GARCÍA RAMOS, NONCONVEX integra- tion using ϵ -subdifferentials	YAKUI HUANG, A family of two-point step- size gradient methods	Variat KHOA NGUYEN, Proximal alternating direc- tion method of multipliers in the noncon- vex setting
Salle KC6 Build K, Z 10 Intermediate 1 3x20 min	Complexity of Randomized Algorit MARTIN MORIN, On the Convergence of SAGA-like Algorithms	hms, Organizer: Raghu Pasupathy, se BANG VU, On the linear convergence of the projected stochastic gradient method	ssion 347 RAGHU PASUPATHY, The Complexity of Adaptive Sampling Accelerated Gradient Dsescent	RandomM
Salle 21 Build G, Z 6 Intermediate 3x30 min	Advances in DFO I, Chair: Sébastie WARREN HARE, Calculus Rules of the Sim- plex Gradient	n Le Digabel, session 40 MIGUEL MUNOZ ZUNIGA, Derivative free global Optimization with categorical- continuous variables	STEFAN WILD, A Taxonomy of Constraints for Blackbox-Based Optimization	DerFree
Salle AURIAC Build G, Z 6 1st floor 4x20 min	Advances in optimization methods Organizer: Matthias Heinkenschloss, MIHAI ANITESCU, Exponentially convergent receding horizon constrained optimal con- trol	for time dependent problems: I, session 223 CARL LARD, Parallel strategies for DAE optimization with direct Schur- complement decomp.	JOHANNES HAUBNER, Shape optimization for unsteady fluid-structure interaction	Control MATTHIAS HEINKENSCHLOSS, A parallel-in- time gradient-type method for optimal con- trol problems
Room	Specific Models	, Algorithms, and So	oftware - Monday 5:	00 PM – 6:30 PM
--	--	---	--	---
FABRE Build J, Z 8 Ground Floor 4x20 min	Riemannian geometry in optimizati NICOLAS BOUMAL, Global rates of conver- gence for nonconvex optimization on man- ifolds	ion for learning, Organizer: Nicolas RONNY BERGMANN, A parallel Douglas- Rachford algorithm for data on Hadamard manifolds	Boumal, session 320 PAUL BREIDING, Riemannian optimization for the canonical tensor rank approxima- tion problem	Learning JUNYU ZHANG, Primal-Dual Optimization Algorithms over Riemannian Manifolds
Salle DENUCE Build Q, Z 8 Ground Floor 4x20 min	Exploiting structure in constrained HEMANT TYAGI, Provably robust estimation of modulo 1 samples of a smooth function	optimization , <i>Organizer</i> : Mihai Cuc AKIKO TAKEDA, Efficient DC Algorithm for constrained sparse optimization problems	uringu, session 334 NIKITAS RONTSIS, Distributionally Ambigu- ous Optimization Techniques for Batch Bayesian Optimizati	Learning ANDRE USCHMAJEW, On critical points of quadratic low-rank matrix optimization problems
Salle 22 Build G, Z 6 2nd floor 4x20 min	Sparsity, variable selection and effu SAM TAJBAKHSH, Distributed algorithms for statistical learning with structured sparsity	cient algorithms, Chair: Alex Sholok JEAN PAUPHILET, Sparse regression: Scal- able algorithms and empirical performance	hov, session 475 ALEX SHOLOKHOV, Sparsified Huge-Scale Optimization for Regularized Regression Problems	Learning ZIXIN SHEN, Forward stepwise variable se- lection based on relative weights
Salle 16 Build I, Z 7 2nd floor 3x20 min	Packing and Capacity Managemen MARINA ANDRETTA, Solving Irregular Strip Packing Problems with free rotations	t, Chair: Eugene Zak, session 452 ALEXANDRE LE JEAN, A 3D-knapsack prob- lem with truncated pyramids and static sta- bility constraint	EUGENE ZAK, Minimization of sum of inverse sawtooth functions	Logistics
Salle 18 Build I, Z 7 1st floor 4x20 min	Manufacturing, Chair: Younsoo Le SÉBASTIEN BERAUDY, Detailed production planning models for semiconductor man- ufacturing with profit	e, session 530 TEUN JANSSEN, Scheduling in the Pho- tolithography Bay	HUGO HARRY KRAMER, Column generation and fix-and-optimize for the lot-sizing with remanufacturing	Scheduling YOUNSOO LEE, On the discrete lot-sizing and scheduling problem with sequence- dependent setup
Salle 23	Novel data-driven OR techniques for	or power system operations and plar	ning,	Energy
Build G, Z 6 3rd floor 3x30 min	Organizer: Juan M. Morales, session SALVADOR PINEDA MORENTE, Chronological Time-Period Clustering for Optimal Ca- pacity Expansion Planning	52 CHRISTOS ORDOUDIS, Energy and Re- serve Dispatch with Distributionally Ro- bust Joint Chance Constraints	JUAN MORALES, Predicting the electricity demand response via data-driven inverse optimization	
Salle 24 Build G, Z 6 3rd floor 3x30 min	Structure and Learning in Power G GAL DALAL, Chance-Constrained Outage Scheduling using a Machine Learning Proxy	Frid Optimization , Organizer: Deepj SIDHANT MISRA, Statistical Learning For DC Optimal Power Flow	yoti Deka, session 135 Apurv Shukla, Non-Stationary Streaming PCA	Energy
Salle LA4 Build L, Z 8 Basement 3x30 min	Structure from evidence, Organizer DOUGLAS GONÇALVES, Mathematical Pro- gramming in Quantum Information and Computation	r: Peter Gritzmann, session 386 Jorge Barreras, Detection of Uninformed Experts	PETER GRITZMANN, On constrained flow and multi assignment problems for plasma par- ticle tracking	Sciences
PITRES	Implementation of interior-point m	ethods for large-scale problems and	applications II,	Algo
Build O, Z 8 Ground Floor 3x30 min	CISABA MESZAROS, On the implementation of the crossover algorithm	AURELIO OLIVEIRA, Interior point methods applied to context-free grammar parameter estimation	JORDI CASTRO, A new specialized interior- point method for support vector machines	

Room	Discrete Optimizat	ion & Integer Progr	amming - Tuesday 8	5:30 AM – 10:30 AM
Salle 43 Build C, Z 1 3rd floor 4x30 min	Extended formulations, Organizer MICHELE CONFORTI, Balas formulation for the union of polytopes is optimal	Stefan Weltge, session 219 Толу Ниулн, Strengthening Convex Re- laxations of 0/1-Sets Using Boolean For- mulas	MAKRAND SINHA, Lower Bounds for Approximating the Matching Polytope	IPtheory STEFAN WELTGE, Lifting Linear Extension Complexity Bounds to the Mixed-Integer Setting
Salle 34 Build B, Z 3 1st floor 3x30 min	MIP under Uncertainty 1, Organize	er: Fatma Kilinc-Karzan, session 231 SHABBIR AHMED, Distributionally Robust Combinatorial Optimization	SIMGE KUCUKYAVUZ, Risk-Averse Set Covering Problems	IPtheory RUIWEI JIANG, Mixed-Integer Recourse via Prioritization
Salle 35 Build B, Z 4 Intermediate 4x30 min	Cutting Planes for Integer Program JIAWEI WANG, Characterization and Ap- proximation of General Dual-Feasible Functions	Is, Chair: Matthias Köppe, session 51 YUAN ZHOU, All finite group complexity in- jects	2 DANIEL PORUMBEL, Projective cutting- planes by projecting interior points onto polytope facets	IPtheory MATTHIAS KÖPPE, cutgeneratingfunctionol- ogy: Python software for CGFs and super- additive duality
Salle 44 Build C, Z 1 3rd floor 4x30 min	Machine Learning for Optimization BISTRA DILKINA, Machine Learning for Branch and Bound	n, Organizer: Bistra Dilkina, session I MARKUS KRUBER, Learning when to use a decomposition	38 ELIAS KHALIL, Learning Combinatorial Op- timization Algorithms Over Graphs	IPpractice ANDREA LODI, Learning Discrete Optimiza- tion
LEYTEIRE Build E, Z 1 3rd floor 4x30 min	Streaming , <i>Organizer</i> : Michael Kap ERIC PRICE, Counting subgraphs in graph streams	ralov, session 228 DAVID WOODRUFF, Sublinear Time Low Rank Approximation of Positive Semidefi- nite Matrices	PAN PENG, Estimating Graph Parameters from Random Order Streams	$\begin{array}{llllllllllllllllllllllllllllllllllll$
Salle 36 Build B, Z 4 Intermediate 4x30 min	Approximation Algorithms for Clu SARA AHMADIAN, Better Guarantees for k- Means Problem using Primal-Dual Algo- rithms	stering, Organizer: Chaitanya Swamy CHRIS SCHWIEGELSHOHN, On the Local Structure of Stable Clustering Instances	A, session 256 BENJAMIN MOSELEY, Approximation Bounds for Hierarchical Clustering	APPROX CHAITANYA SWAMY, Unifying k-Median and k-Center: Approximation Algorithms for Ordered k-Median
SIGALAS Build C, Z 2 2nd floor 4x30 min	Matching games and beyond, Orga ZHUAN KHYE KOH, Stabilizing Weighted Graphs	nizer: Jochen Koenemann, session 24 JUSTIN TOTH, Computing the Nucleolus of Weighted Cooperative Matching Games in Poly Time	I JANNIK MATUSCHKE, New and simple algo- rithms for stable flow problems	COMB Agnes CSEH, The complexity of cake cut- ting with unequal shares
Salle 41 Build C, Z 1 3rd floor 4x30 min	Equilibrium Computation in Cong IOANNIS PANAGEAS, Multiplicative Weights Update with Constant Step-Size in Con- gestion Games	estion Games, Organizer: Umang Bh TOBIAS HARKS, Equilibrium Computation in Resource Allocation Games	askar, session 242 GUIDO SCHÄFER, Computing Efficient Nash Equilibria in Congestion Games	COMB UMANG BHASKAR, Equilibrium Computa- tion in Atomic Splittable Routing Games with Convex Costs
Salle 39 Build E, Z 1 3rd floor 4x30 min	Exact approaches for problems ove AUSTIN BUCHANAN, Why is maximum clique often easy in practice?	r lattices and graphs, Chair: Daniele MATTEO COSMI, Scheduling for Last-Mile Food Delivery	e Catanzaro, session 425 Макти FRohn, Optimizing over lattices of unrooted binary trees: Part I - Foundations	COMB DANIELE CATANZARO, Optimizing over lat- tices of unrooted binary trees: Part II - On the BMEP
DURKHEIM Build A, Z 1 3rd floor 4x30 min	Graphical Optimization Model 1 , O DAVID BERGMAN, On the integrated last mile transportation problem	Organizer: Joris Kinable, session 295 WILLEM-JAN VAN HOEVE, Cut Generation for Integer (Non-)Linear Programming via Decision Diagrams	JORIS KINABLE, Hybrid Optimization Meth- ods for Time-Dependent Sequencing Prob- lems	JOHN HOOKER, Compact Representation of Near-Optimal Integer Programming Solu- tions

Room	Optimizatio	on under Uncertaint	y - Tuesday 8:30 AN	I – 10:30 AM
DENIGES	Risk-averse stochastic programmin	g, Organizer: Andrzej Ruszczynski, s	session 252	Stoch
Build C, Z 5	DARINKA DENTCHEVA, Asymptotics of	OZLEM CAVUS, Multi-objective risk-averse	ALEXANDER SHAPIRO, Distributionally ro-	ANDRZEJ RUSZCZYNSKI, Risk Disintegration
Ground Floor	stochastic optimization problems with	two-stage stochastic programming prob-	bust stochastic programming	with Application to Partially Observable
4x30 min	composite risk functionals	lems		Systems
Salle 37	Nonlinear Optimization with Uncer	rtain Constraints, Organizer: Charlie	e Vanaret, session 110	Robust
Build B, Z 4	-	ANDREAS WAECHTER, Nonlinear program-	ALEJANDRA PENA-ORDIERES, Nonlinear pro-	SVEN LEYFFER, Sequential Linearization for
Intermediate		ming reformulations of chance constraints	gramming reformulations of chance con-	Nonlinear Robust Optimization
3x30 min		(Part 2)	straints (Part 1)	
Salle 33	Robust Optimization and Operatio	ns Mangement, Organizer: Chaithan	ya Bandi, session 410	Robust
Build B, Z 5		NIKOS TRICHAKIS, Robustness of Static	OMAR BESBES, Prior-Independent Optimal	CHAITHANYA BANDI, Design and Control of
Ground Floor		Pricing Policies in the Face of Strategic	Auctions	Multi-class Queueing Networks via Robust
3x30 min		Customers		Optimization
Salle 31	Algorithms for stochastic games : n	new approaches, Organizer: Hugo Gi	mbert, session 137	Markov
Build B, Z 5	MARCIN JURDZINSKI, Quasi-polynomial al-	ANTONIN KUCERA, One-Counter Stochastic	MARCELLO MAMINO, Around tropically con-	MATEUSZ SKOMRA, The condition number
Ground Floor	gorithms for solving parity games	Games with Zero-Reachability Objectives	vex constraint satisfaction problems.	of stochastic mean payoff games
4x30 min				
Salle 30	Algorithmic Game Theory I, Organ	nizer: Luce Brotcorne, session 311		Game
Build B, Z 5	VICTOR BUCAREY, Solving Strong Stackel-	FRÄNK PLEIN, Models for the single-minded	CONCEPCION DOMINGUEZ, Branch-and-cut	YURY KOCHETOV, A matheuristic for the
Ground Floor	berg Equilibrium in Stochastic Games	bundle pricing problem	algorithm for the Rank Pricing problem	bilevel 0-1 public-private partnership prob-
4x30 min				lem

Room	Continu	ous Optimization - '	Tuesday 8:30 AM – 1	10:30 AM
GINTRAC Build Q, Z 8 Ground Floor 4x30 min	Stochastic and Nonlinear Optimiza RAGHU BOLLAPRAGADA, A Progressive Batching L-BFGS Method for Machine Learning	tion I, Organizer: Jorge Nocedal, ses: LEON BOTTOU, Convexity "à la carte"	sion 47 PHILIP THOMPSON, On variance reduction for stochastic optimization with multi- plicative noise	NLP FRANK CURTIS, Characterizing Worst-Case Complexity of Algorithms for Nonconvex Optimization
Salle 05 Build Q, Z 11 1st floor 4x30 min	Machine learning and sparse optim MARTIN LOTZ, Condition numbers and weak average-case complexity in opti- mization	isation, Organizer: Coralia Cartis, so ARMIN EFTEKHARI, A Long (Random) Walk Solves All Your (Linear) Problems	Ession 109 FLORENTIN GOYENS, Manifold lifting: prob- lems and methods	NLP JARED TANNER, Sparse non-negative super- resolution: simplified and stabilized
Salle KC7 Build K, Z 10 Intermediate 2 4x30 min	Unconstrained Optimization, Chain ANDREA CALICIOTTI, SYMMBK algorithm applied to Newton-Krylov methods for un- constrained optimization	r: Ekkehard Sachs, session 401 ELISA RICCIETTI, Regularizing trust-region methods for ill-posed nonlinear least- squares problems	MASSIMO ROMA, Approximate Inverse Pre- conditioning for Newton-Krylov methods	NLP EKKEHARD SACHS, Second Order Adjoints
Salle LC4 Build L, Z 9 Intermediate 1 4x30 min	Advances in Bundle Methods for C FRANK FISCHER, An Asynchronous Parallel Bundle Method Based on Inexact Oracles	Onvex Optimization, Organizer: Chr ANTONIO FRANGIONI, Fully Incremen- tal Bundle Methods: (Un)cooperative (Un)faithful Oracles and Upper	Istoph Helmberg, session 93 ELISABETH GAAR, The Bundle Method for Getting an Improved SDP Relaxation of the Stability Number	NonSmooth CHRISTOPH HELMBERG, A Dynamic Scaling Approach for Bundle Methods in Convex Optimization
Salle 8 Build N, Z 12 4th floor 4x30 min	Addressing problems with complex JEROME MALICK, Sensitivity analysis for mirror-stratifiable convex functions	geometries, Organizer: Edouard Pau COURTNEY PAQUETTE, An accelerated prox- imal method for minimizing compositions of convex functions	Wels, session 229 ANTOINE HOCHART, How to perturb semi- algebraic problems to ensure constraint qualification?	NonSmooth EDOUARD PAUWELS, The multiproximal lin- earization method for convex composite problems
Salle 20 Build G, Z 6 1st floor 4x30 min	Algebraic and geometric aspects of JAMES SAUNDERSON, Certificates of poly- nomial nonnegativity via hyperbolic opti- mization	semidefinite programming, Organiz XAVIER ALLAMIGEON, Log-barrier interior point methods are not strongly polynomial	zer: Hamza Fawzi, session 85 Аму Wiebe, Slack ideals of polytopes	SDP DOGYOON SONG, Measuring Optimality Gap in Conic Programming Approximations with Gaussian Width
Salle LC5 Build L, Z 10 Intermediate 1 4x30 min	Theory and algorithms in conic line HENRY WOLKOWICZ, LOW-Rank Matrix Completion (LRMC) using Nuclear Norm (NN) with Facial Reduction	ear programming 1, Organizer: Gab NEGAR SOHEILI, Solving conic systems via projection and rescaling	or Pataki, session 88 HENRIK FRIBERG, Projection and presolve in MOSEK: exponential and power cones	SDP LEVENT TUNCEL, TOTAL DUAL INTE- GRALITY FOR CONVEX, SEMIDEF- INITE, AND EXTENDED FORMULA- TIONS
Salle 06 Build Q, Z 11 1st floor 4x30 min	Nonlinear Optimization and Variat YAOHUA HU, LOWER-ORDER regularization method for group sparse optimization with application	ional Inequalities V, Organizer: Xin TNGTING WU, Solving Constrained TV2L1-L2 MRI Signal Reconstruction via an Efficient ADMM	Liu, session 145 OLEG BURDAKOV, On solving saddle-point problems and non-linear monotone equa- tions	Variat JAVAD FEIZOLLAHI, A first-order method for semidefinite stochastic variational inequal- ity problems
Salle ARNOZAN Build Q, Z 8 Ground Floor 4x30 min	Optmization Algorithms and Varia Yu-Hong DAI, Smoothing quadratic regularization method for the hemivariational inequalities	tional Inequalites I, Organizer: Bo J DEREN HAN, ADMM for Optimization Problems Involving Nonconvex Functions	iang, session 148 XINGJU CAI, ADMM-based methods for monotone inverse variational inequalities	Variat Bo JIANG, Vector Transport-Free SVRG with General Retraction for Riemannian Optimization
Salle KC6 Build K, Z 10 Intermediate 1 4x30 min	Larges Scale and Distributed Optim PONTUS GISELSSON, On Linear Conver- gence for Douglas-Rachford splitting and ADMM	nization , Organizer: Ermin Wei, sess JONATHAN ECKSTEIN, Block-Iterative and Asynchronous Projective Splitting for Monotone Operators	ion 214 GESUALDO SCUTARI, Achieving Geomet- ric Convergence for Distributed Asyn- chronous Optimization	RandomM ERMIN WEI, Asynchronous Distributed Network Newton Method
Salle 21 Build G, Z 6 Intermediate 4x30 min	Bayesian and Randomized Optimiz NATHALIE BARTOLI, Adaptive modeling strategy for high-dimensional constrained global optimization	ROBERT GRAMACY, Modeling an Aug- mented Lagrangian for Blackbox Con- strained Optimization	ssion 79 VICTOR PICHENY, Bayesian optimization un- der mixed constraints	DerFree ZI WANG, Bayesian Optimization Guided by Max-values
Salle AURIAC Build G, Z 6 1st floor 4x30 min	Optimization Methods for PDE Con ANTON SCHIELA, An affine covariant com- posite step method with inexact step com- putations	nstrained Problems, Organizer: Mic SEBASTIAN GARREIS, Optimal Control under Uncertainty: Adaptive Solution with Low- rank Tensors	Chael Ulbrich, session 221 CARLOS RAUTENBERG, On the optimal con- trol of quasi-variational inequalities	Control MICHAEL ULBRICH, Inexact bundle methods for nonconvex problems in Hilbert space with applications

Room	Specific Models,	Algorithms, and Sof	ftware - Tuesday 8:3	0 AM – 10:30 AM
FABRE Build J, Z 8 Ground Floor 4x30 min	Optimization in Statistical Learnin , JONATHAN WEED, Near-linear time approxi- mation algorithms for optimal transport	g, Organizer: Quentin Berthet, session ANDREAS ELSENER, Sharp Oracle In- equalities for nonconvex regularized M-estimators	1 326 ALEXANDRE D ASPREMONT, Sharpness, Restart and Compressed Sensing Perfor- mance	Learning FAN YANG, Towards a deeper understanding of generalization for kernel learning
Salle DENUCE Build Q, Z 8 Ground Floor 4x30 min	Statistics meets optimization: going MAHDI SOLTANOLKOTABI, Learning ReLUS and over-parameterized neural networks via gradient descent	beyond convexity , <i>Organizer</i> : John JU SUN, When are nonconvex optimization problems not scary?	Duchi, session 337 JOHN DUCHI, Solving composite optimiza- tion problems, with applications to phase retrieval an	Learning RINA BARBER, Optimal iterative threshold- ing algorithms for sparse optimization
Salle 22 Build G, Z 6 2nd floor 4x30 min	Pricing , <i>Chair</i> : Anastasiya Ivanova, ANASTASIYA IVANOVA, Distributed price ad- justment for the resource allocation prob- lem	session 478 YESMINE ROUIS, Price forecasting with ma- chine learning algorithms for recommerce activities	SARA CALLEJA, Volume forecasting with machine learning algorithms for recommerce activities	Learning SPYROS ZOUMPOULIS, Optimal Pricing and Introduction Timing of New Virtual Ma- chines
Salle 18 Build I, Z 7 1st floor 4x30 min	Path and tree problems, Chair: Art ANDREAS KARRENBAUER, Approximate Shortest Paths and Transshipment in Distributed and Streaming Models	hur J Delarue, session 360 DMYTRO MATSYPURA, Exact IP-based ap- proaches for the longest induced path prob- lem.	KIYOSHI SAWADA, Adding Edges of Short Lengths Incident with the Root to Com- plete K-ary Tree	Network ARTHUR DELARUE, Travel Time Estimation in the Age of Big Data
Salle 16 Build I, Z 7 2nd floor 3x30 min	Facility Location, Chair: Ivan Contr	reras, session 414 IVAN CONTRERAS, Exact solution of single source quadratic capacitated location prob- lems	BLAS PELEGRIN, Optimal multi-facility lo- cation for competing firms under quantity competition	Logistics DANIEL SANTOS, A new formulation for the Hamiltonian p-median problem
Salle 23 Build G, Z 6 3rd floor 4x30 min	Electric Vehicles and Decarbonizati PAOLO PISCIELLA, A techno-economic anal- ysis of the impact of decarbonization	ion, Chair: Martim Joyce-Moniz, sess FRANCISCO MUNOZ, Equilibrium Analysis of a Carbon Tax With Pass-through Restric- tions	ion 519 DANEL OLIVARES, Management of EV Charging Stations under Advance Reserva- tions Schemes	Energy MARTIM JOYCE-MONIZ, Increasing electric vehicle adoption via strategic siting of charging stations
Salle 24 Build G, Z 6 3rd floor 4x30 min	Risk Models for Electricity Market DANIEL RALPH, Risky Capacity Equilibrium Models for risk averse investment equilib- ria	s, Chair: Michael C Ferris, session 52 RYAN CORY-WRIGHT, Payment mechanisms, efficiency savings and risk-aversion in electricity markets	1 Fавю Moret, Risk and Information Shar- ing in Peer-to-Peer Electricity Markets	Energy MICHAEL FERRIS, Dynamic Risked Equilib- rium for Energy Planning
Salle LA4 Build L, Z 8 Basement 4x30 min	Interval Global Optimization, Orga TIBOR CSENDES, Nonlinear Symbolic Trans- formations for Simplifying Functions – In- terval Methods	anizer: Frederic Messine, session 339 BERTRAND NEVEU, An Interval Branch and Bound Algorithm for Parameter Estima- tion	DOMINIQUE MONNET, Interval Branch-and- Bound Algorithm for semi-infinite pro- gramming	Sciences FREDERIC MESSINE, Reliable convex relax- ation techniques for interval global opti- mization codes
PITRES Build O, Z 8 Ground Floor 4x30 min	LP, Mixed Integer Convex Program MITEN MISTRY, Optimising over Gradient- Boosted Regression Trees with Convex Penalty Functions	NIKOLAOS PLOSKAS, An advanced initializa- tion procedure for the simplex algorithm	r: Thorsten Koch, session 236 [STEPHEN MAHER, Experiments with a gen- eral Benders' decomposition framework for SCIP	Algo CHRISTIAN PUCHERT, Progress in the Branch-Price-and-Cut Solver GCG

Room	Invited Talks - Tuesday 11:00 AM – 12:00 AM			
Auditorium	Adaptive Robust Optimization with Scenario-wise Ambiguity Sets, Organizer: Dat	niel Kuhn, session 551 SEMI		
Build Symph H, Z 0	MELVYN SIM, Adaptive Robust Optimiza-			
Gambetta	tion with Scenario-wise Ambiguity Sets			
1x60 min				
DENIGES	Asymptotic Lagrangian duality for nonsmooth optimization, Organizer: Xiaojun Chen, session 541 KEYNOTE			
Build C, Z 5	REGINA BURACHIK, Asymptotic Lagrangian			
Ground Floor	duality for nonsmooth optimization			
1x60 min				
BROCA	Lower bounds on the size of linear programs, Organizer: Volker Kaibel, session 54.	5 KEYNOTE		
Build W, Z 0	THOMAS ROTHVOSS, Lower Bounds on the			
3rd floor	Size of Linear Programs			
1x60 min				

Room	Invited Talks - Tuesday 1:30 PM – 2:30 PM				
Auditorium	The Resurgence of Proximal Metho	ods in Optimization, Organizer: Clau	dia Sagastizabal, session 555	PLENARY	
Build Symph H, Z 0	MARC TEBOULLE, The resurgence of proxi-				
Gambetta	mal methods in optimization				
1x60 min	•				

Room	Discrete Optimiza	tion & Integer Prog	ramming - Tuesday	3:15 PM – 4:45 PM
Salle 43 Build C, Z 1 3rd floor 3x30 min	MIP under Uncertainty 2, Organiza MANISH BANSAL, Two-stage stochastic p- order conic mixed integer programs	er: Simge Kucukyavuz, session 232 WARD ROMEUNDERS, Inexact cutting plane techniques for two-stage stochastic mixed- integer programs	ANDREW SCHAEFER, Solving Stochastic and Bilevel Mixed-Integer Programs via a Gen- eralized Value F.	IPtheory
Salle 44 Build C, Z 1 3rd floor 3x30 min	Symmetry Handling in Integer Pro CECILE ROTTNER, Breaking full-orbitopal symmetries and sub-symmetries	grams, Organizer: Christopher Hojny DOMENICO SALVAGNIN, Symmetry Breaking Inequalities from the Schreier-Sims table	, session 129 CHRISTOPHER HOINY, Symmetry Breaking Polytopes: A Framework for Symmetry Handling in Binary Program	IPpractice
DURKHEIM Build A, Z 1 3rd floor 3x30 min	Applications in Mixed-Integer Qua BOSHI YANG, Improved Representations of the Quadratic Linear Ordering Problem	dratic Programming, Organizer: Bo AREESH MITTAL, Robust QCQPs Under Mixed Integer Uncertainty	shi Yang, session 107 CHIARA LITI, Machine Learning and Opti- mization for Neuroscience	MINLP
Salle 34 Build B, Z 3 1st floor 3x30 min	Convex relaxations in MINLP , Org BORZOU ROSTAMI, A convex reformulation and an outer approximation for a class of BQP	anizer: Adam N Letchford, session 27 FELIPE SERRANO, Separating over the con- vex hull of MINL constraints	8 ADAM LETCHFORD, Bi-Perspective Cuts for Mixed-Integer Fractional Programs	MINLP
Salle 35 Build B, Z 4 Intermediate 3x30 min	Applications of MINLP, Organizer: CLAUDIA LÓPEZ, Packing problem as mixed integer non-linear model using formulation space search	Dolores Romero Morales, session 28 STEFFEN REBENNACK, Piecewise Linear Function Fitting via Mixed-Integer Linear Programming	1 DOLORES ROMERO MORALES, Feature Selec- tion for Benchmarking	MINLP
LEYTEIRE Build E, Z 1 3rd floor 3x30 min	Algorithms in the Sharing Econom ANTHONY KIM, Minimizing Latency in On- line Ride and Delivery Services	y, Organizer: David Shmoys, session ALICE PAUL, Broken Bike Docks and the Prize-Collecting Traveling Salesman Prob- lem	22 DAVID SHMOYS, Allocating capacity in bike- sharing systems	APPROX
Salle 36 Build B, Z 4 Intermediate 3x30 min	Local Search and Facility Location NEELIMA GUPTA, Local Search based Ap- proximation Algorithms for Capacitated k median problems.	Organizer: Felix Willamowski, sessi KRZYSZTOF SORNAT, Proportional Approval Voting, Harmonic k-median, and Negative Association	on 342 FELIX WILLAMOWSKI, Hard Instances for Local Search via Mixed Integer Program- ming	APPROX
Salle 41 Build C, Z 1 3rd floor 3x30 min	New developments in prophet inequ Ashish Chiplunkar, Prophet Inequality and Prophet Secretary	alities and related settings, Organiz BRENDAN LUCIER, Prophets, Secretaries, and Prices	er: Ruben Hoeksma, session 258 Тім Ооsтекwик, Posted Prices and Thresh- old Strategies for Random Arrivals	СОМВ
Salle 39 Build E, Z 1 3rd floor 3x30 min	Submodular optimization and beyo MARTIN NÄGELE, Submodular Minimization Under Congruency Constraints	nd, Chair: Satoru Iwata, session 418 KENIRO TAKAZAWA, The <i>b</i> -bibranching Problem: TDI System, Packing, and Dis- crete Convexity	SATORU IWATA, Index Reduction via Uni- modular Transformations	СОМВ

Room	Optimizati	on under Uncertain	ty - Tuesday 3:15 PN	/I – 4:45 PM
Salle 32	Distributionally Robust and Stocha	stic Optimization: A Sampling/Scen	ario Perspective,	Stoch
	Organizer: Guzin Bayraksan, session	249	_	
Build B, Z 5	ALEXANDER ZOLAN, Optimizing the Design	JUN-YA GOTOH, Out-of-sample analysis of	GUZIN BAYRAKSAN, Effective Scenarios	
Ground Floor	of a Latin Hypercube Sampling Estimator	distributionally robust optimization	in Multistage Distributionally Robust	
3x30 min	for SAA		Stochastic Programs	
Salle 33	Recent Advances in Robust Optimi	zation I, Organizer: Phebe Vayanos,	session 442	Robust
Build B, Z 5	VISHAL GUPTA, Optimization in the Small-	VELIBOR MISIC, Interpretable Optimal Stop-	PHEBE VAYANOS, Fair, Efficient, and Inter-	
Ground Floor	Data, Large-Scale Regime	ping	pretable Policies for Allocating Scarce Re-	
3x30 min			sources	
DENIGES	Recent Advances in Robust Optimi	zation II, Organizer: Wolfram Wiese	mann, session 445	Robust
Build C, Z 5	JIANZHE ZHEN, A Robust Optimization Per-	HUAJIE QIAN, Calibrating Optimization un-	WOLFRAM WIESEMANN, The Distributionally	
Ground Floor	spective on Bilinear Programming	der Uncertainty	Robust Chance Constrained Vehicle Rout-	
3x30 min			ing Problem	
Salle 31	Market places and dynamic progra	mming, Chair: Dan A Iancu, session	380	Markov
Build B, Z 5	GONZALO ROMERO, Revenue Management	BOXIAO CHEN, Dynamic Inventory Control	DAN IANCU, Revenue Losses From Income	
Ground Floor	with Repeated Customer Interactions	with Stockout Substitution and Demand	Guarantees in Centralized Allocation Sys-	
3x30 min		Learning	tems	
Salle 30	Game Theory and Energy Markets	, Chair: Didier Aussel, session 375		Game
Build B, Z 5	ANTON SVENSSON, Constraint quali cations	Léonard vonNiederhäusern, TrEMa: A	DIDIER AUSSEL, Electricity market model	
Ground Floor	for parametrized optimization problems	Trilevel Energy Market Model	with elastic demand	
3x30 min	and applications			

Room	Continuous Optimization - Tuesday 3:15 PM –	4:45 PM
GINTRAC Build Q, Z 8 Ground Floor 3x30 min	Sum-of-squares and moment problems: methods and applications, Organizer: Etienne De Klerk, session 2 AMIR ALI AHMADI, LP, SOCP, and KzzyszroF Postek, Distributionally robust Georgina HALL, Nonnegative polynomials, Optimization-Free Approaches to Polyno- mial Optimization	NLP
Salle KC7 Build K, Z 10 Intermediate 2 3x30 min	Bridging NLP and Theoretical Computer Science, Organizer: Aleksander Madry, session 51 ALEKSANDER MADRY, Improved Max Flow LORENZO ORECCHIA, First-order methods: YIN TAT LEE, A homotopy method for and Bipartite Matching Algorithms via In- from dynamical systems to discrete opti- mization mization concordance	NLP
Salle 05 Build Q, Z 11 1st floor 2x30 min	Interior Point Methods in Engineering Applications II, Organizer: Jacek Gondzio, session 61 MICHAL KOCVARA, A multigrid interior JACEK GONDZIO, Solving large-scale truss point method for large scale topology op- layout optimization problems by a primal- dual IPM	NLP
Salle 9 Build N, Z 12 4th floor 3x30 min	Linear Optimization III, Chair: Rodrigo Mendoza Smith, session 439 RODRIGO MENDOZA SMITH, Neural con- Straint selection in Linear Programming urige type: the selection of th	NLP
Salle 8 Build N, Z 12 4th floor 3x30 min	Nonconvex Optimization: Theory and Methods - Part 2, Organizer: Russell Luke, session 186 Guovin Li, Splitting methods for noncon- vex feasibility problems PATRICK JOHNSTONE, Projective Splitting with Forward Steps Russell Luke, convergence Analysis for Nonconvex Optimization Made Easy	NonSmooth
Salle 20 Build G, Z 6 1st floor 3x30 min	Recent Advances in Conic Programming I, Organizer: Makoto Yamashita, session 82 BISSAN GHADDAR, Strong and Cheap SDP SUNYOUNG KIM, BP: a Matlab package DAVID PAPP, Sum-of-squares optimization and SOCP Hierarchies for Polynomial Op- based on the Bisection and Projection method for POPs ming	SDP
Salle LC5 Build L, Z 10 Intermediate 1 3x30 min	Relative Entropy Optimization II, Organizer: Venkat Chandrasekaran, session 112 VENKAT CHANDRASEKARAN, Newton Poly- topes and Relative Entropy Optimization Timo De WOLFF, Optimization over the Hy- percube via Sums of Nonnegative Circuit Polynomials ORCUN KARACA, The REPOP Toolbox:	SDP
Salle 06 Build Q, Z 11 1st floor 3x30 min	Nonlinear Optimization and Variational Inequalities III, Organizer: Xin Liu, session 143 XINWEI LIU, A primal-dual IPM with rapid detection on infeasibility for nonlinear pro- grams	Variat
Salle KC6 Build K, Z 10 Intermediate 1 3x30 min	Recent Advances in Stochastic and Non-convex Optimization II, Organizer: Mingyi Hong, session 304 TANBAO YANG, First-order Stochastic Algo- rithms for Escaping From Saddle Points John Birgg, Markov chain Monte Carlo Jong-Shi Pang, Composite Difference-Max methods for Dynamic Stochastic Opti- mization John Birgg, Markov chain Monte Carlo Jong-Shi Pang, Composite Difference-Max Programs for Modern Statistical Estima- tion Problems	RandomM
Salle 21 Build G, Z 6 Intermediate 3x30 min	Advances in DFO II, Chair: Warren Hare, session 37 Yves Lucer, Variable-fidelity derivative- free algorithms for road design MART MENICKELLY, Derivative-Free Robust Optimization by Outer Approximations Sébastien Le Digabel, The Mesh Adaptive Direct Search algorithm for granular and discrete variables	DerFree
Salle AURIAC Build G, Z 6 1st floor 3x30 min	Optimal Control and PDE Constrained Optimization, Organizer: Hasnaa Zidani, session 233 DAMIEN ALLONSIUS, Control of semi dis- cretized (in space) systems of parabolic equations. FRANCESCA CHITTARO, Strong local optimal- ity for generalised L ¹ optimal control prob- lems ZHENG CHEN, Shortest Dubins Paths	Control

Room	Specific Models	, Algorithms, and So	oftware - Tuesday 3:	15 PM – 4:45 PM
Salle 16	Distributed and Asynchronous Lea	rning, Organizer: Ion Necoara, sessio	on 323	Learning
Build I, Z 7	ADITYA DEVARAKONDA, AVOIDIng communi-	MARTEN VAN DIJK, On the Expected Con-	PUYA LATAFAT, Asynchronous primal-dual	
3x30 min	timization	vergence of SOD with Large Stepsizes	mization	
FADDE	A dyanges in large seals machine le	aming Organizar: Mark Sahmidt an	nization 227	- · ·
FADKE Build L 7 8	EDANCIS BACH, Exponential convergence of	Worken Cryster Mirrored Langevin Dy	ZAD HADCHAOH, Catalyst Acceleration for	Learning
Ground Floor	testing error for stochastic gradient meth-	namics	Gradient-based Optimization of Structured	
3x30 min	ods.		Models	
Salle 22	Learning for mixed integer optimiz	ation. Chair: Hari Bandi, session 482		Learning
Build G, Z 6	HARI BANDI, Learning a Mixture of Gaus-	TAKANORI MAEHARA, Learning for Tuning		
2nd floor	sians via Mixed Integer Optimization	Parameters of NUOPT MILP Solver		
2x30 min				
PITRES	Pricing Methods, Organizer: Rafae	l Martinelli, session 182		Logistic
Build O, Z 8	TEOBALDO BULHÕES JÚNIOR, A branch-and-	JACQUES DESROSIERS, Pricing, cycles, and	RUSLAN SADYKOV, Branch-Cut-and-Price	
Ground Floor	price algorithm for the Minimum Latency	pivots	Solver for Vehicle Routing Problems	
3x30 min	Problem			
Salle 23	Supply Chain and Lot Sizing, Chai	r: Simon Thevenin, session 534		Scheduling
Build G, Z 6	SIXIANG ZHAO, Decision Rule-based	KEREM AKARTUNALI, IWO-PERIOD Relax-	SIMON THEVENIN, Scenario based stochas-	
3x30 min	ity Planning Problem	dra and Algorithms	sizing problem	
Salle DENUCE	Fauilibrium Modelling in Energy	Organizer: Thomas Kallahis session	290	Enorm
Build O Z 8	MIRIAM AMBROSIUS Optimal Price Zones	THOMAS KALLABIS Strategic generation in-	CHRISTOPH WEBER Coordination Problems	Energ
Ground Floor	and Investment Incentives in Electricity	vestment using a stochastic rollinghorizon	in the Coupling of Gas and Electricity Mar-	
3x30 min	Markets	MPEC approach	kets	
Salle 24	Optimization Models for Renewabl	le Energy Integration 2, Chair: Mich	el Denault, session 523	Energy
Build G, Z 6	CRISTINA CORCHERO, A MIP formulation	KRISTINA JANZEN, Optimal Design of a De-	MICHEL DENAULT, Approximate dynamic	
3rd floor	of a Hybrid AC-DC offshore wind power	centralized Energy Network including Re-	programming for hydropower optimization	
3x30 min	plant topology	newable Energies		
Salle LA4	Optimization in Medicine, Organiz	er: Sebastian Sager, session 394		Science
Build L, Z 8	MANUEL TETSCHKE, Optimizing the indi-	NELSON MACULAN, Combinatorial Problems	SEBASTIAN SAGER, Towards optimized	
Basement	vidual treatment of patients with poly-	and Models to Help Prevention and Com-	consolidation (chemo)therapy for acute	
		bat Alboviluses		
Salle 18 Build L 7 7	BARTOLOMEO STELLATO, OSOP: An Opera	INALION KUKEELA High level abstractions	SIOII 599	Algo
1st floor	for Splitting Solver for Quadratic Programs	for checkpointing in PDF-constrained on-	rithm for linear programming	
3x30 min	an opining solver for Quadratic Hograins	timisation	finantion finear programming	

Room	Invited Talks - Tuesday 3:15 PM – 4:45 PM				
SIGALAS	A.W. Tucker Prize Session, Chair: Simge Kucukyavuz, session 559	INTERFACE			
Build C, Z 2					
2nd floor					

Room	Discrete Optimizat	ion & Integer Progr	amming - Wednesda	ny 8:30 AM – 10:30 AM
Salle 43 Build C, Z 1 3rd floor 4x30 min	Determinantal structures of IPs, O STEPHAN ARTMANN, Width in congruency- constrained TU-systems.	rganizer: Martin Henk, session 131 FRIEDRICH EISENBRAND, Faster algorithms for Integer Programming using the Steinitz Lemma	CHRISTOPH GLANZER, On the number of dis- tinct rows of a matrix with bounded sub- determinants	IPtheory ROBERT WEISMANTEL, Distances between LPs, IPs and MIPs
Salle 35 Build B, Z 4 Intermediate 4x30 min	Advances in Integer Programming SANJEEB DASH, A generalization of Gomory-Chvatal cuts	, Organizer: Santanu S Dey, session 2 BURAK KOCUK, Integer Programming Tech- niques for Optimal Transmission Switch- ing Problems	20 ALEJANDRO TORIELLO, Time-indexed Relax- ations for the Online Bipartite Matching Problem	IPtheory LAURENCE WOLSEY, Constant Capacity Flow Cover Inequalities on a Path or a Variant of Lot-Sizing
Salle 42 Build C, Z 1 3rd floor 4x30 min	Primal Algorithms for Integer Prog ADIL TAHIR, Integral Column Generation Algorithm for Set Partitioning Type Prob- lems	Framming Problems , Organizer: Dar OMAR FOUTLANE, Distributed Integral Sim- plex Using Decomposition for Set Parti- tioning Problems	icl Aloise, session 338 ILVAS HIMMICH, A Polyhedral Study of the Shortest Path Problem with Resource Con- straints	IPtheory DANIEL ALOISE, A scalable algorithm for the solution of large clustering problems
Salle 44 Build C, Z 1 3rd floor 4x30 min	Benders Decomposition for Combin ARTHUR MAHÉO, A Framework for Benders with Integer Sub-Problem	natorial and Bilevel Optimization, C PAOLO PARONUZZI, New ILP formulations for the k-Vertex Cut Problem	rganizer: Fabio Furini, session 171 Ivana Luubic, Decomposition Approaches to Covering Location Problems	IPpractice FABIO FURINI, The Maximum Clique Inter- diction Game
Salle 34 Build B, Z 3 1st floor 3x30 min	MINLP (I), Organizer: Daniel Bien	stock, session 65 BACHIR EL KHADIR, Time-Varying Semidef- inite Programs	KURT ANSTREICHER, Strengthened Relax- ations for Quadratic Optimization with Switching Variables	MINLP JAMES RENEGAR, A Simple Nearly-Optimal Restart Scheme For Speeding-Up First Or- der Methods
LEYTEIRE Build E, Z 1 3rd floor 4x30 min	Approximation Algorithms for the STEPHAN HELD, Vehicle Routing with Sub- tours	Traveling Salesman Problem, Orgar KENT QUANRUD, Fast Approximations for Metric TSP	<i>izer</i> : Anke van Zuylen, session 23 JENS VYGEN, The <i>s-t</i> -path TSP: past, present, and future	APPROX ANKE VAN ZUYLEN, The Salesman's Paths: Layered Christofides' Trees, Deletion and Matroids
Salle 36 Build B, Z 4 Intermediate 4x30 min	Approximation Algorithms for Sch RUBEN HOEKSMA, The general scheduling problem with uniform release dates is not APX-hard	eduling Problems, Organizer: Nicole CLIFFORD STEIN, Minimizing Maximum Flow Time on Related Machines via Dy- namic Pricing	e Megow, session 72 SVEN JÄGER, Generalizing the Kawaguchi- Kyan Bound to Stochastic Parallel Ma- chine Scheduling	APPROX JULIAN MESTRE, Precedence-Constrained Min Sum Set Cover
Salle 41 Build C, Z 1 3rd floor 4x30 min	Discrete Convex Analysis, Organize AKIYOSHI SHIOURA, M-convex Function Minimization under L1-distance Con- straint	er: Akiyoshi Shioura, session 243 Eric Balkanski, On the Construction of Substitutes	FABIO TARDELLA, Discrete Midpoint Con- vexity	COMB SATOKO MORIGUCHI, Scaling, proximity, and optimization of integrally convex functions
Salle 39 Build E, Z 1 3rd floor 4x30 min	Optimization under uncertainty , <i>C</i> WILLIAM UMBOH, Online Probabilistic Met- ric Embedding and its Applications	Drganizer: Marco Molinaro, session 26 RAVISHANKAR KRISHNASWAMY, Online and Dynamic Algorithms for Set Cover	1 SAHIL SINGLA, Algorithms and Adaptivity Gaps for Stochastic Probing	COMB MARCO MOLINARO, Online and Random- order Load Balancing Simultaneously
DURKHEIM Build A, Z 1 3rd floor 4x30 min	Learning in CP , <i>Organizer</i> : Arnaud NADJIB LAZAAR, Constraint acquisition	Lallouet, session 301 ARNAUD LALLOUET, Reasoning with Learned Constraints	ARNAUD GOTLIEB, Boundary Estimation: Learning Boundaries for Constraint Opti- mization Problems	CP MICHELA MILANO, Empirical Model Learn- ing: boosting optimization through ma- chine learning

Optimization under Uncertainty - Wednesday 8:30 AM – 10:30 AM

Room	Optimization	under Uncertainty	- Wednesday 8:30 A	M – 10:30 AM
DENIGES	Chance Constraint and Its Applicat	tions, Organizer: Jianqiang Cheng, se	ession 253	Stoch
Build C, Z 5	ABDEL LISSER, Joint chance constrained	JIA LIU, Distributionally robust geometric	FRANCESCA MAGGIONI, Bounds for proba-	JIANQIANG CHENG, Partial Sample Average
Ground Floor 4x30 min	general sum games	programs with chance constraints	bilistic constrained problems	Approximation Method for Chance Con- strained Problems
Salle 32	Sampling and stability in stochastic	optimization, Chair: Harsha Honna	ppa, session 488	Stoch
Build B, Z 5	10 1	EDWARD ANDERSON, Distributional Robust-	MATTHIAS CLAUS, On stability of stochastic	GERARD CORNUEJOLS, From Estimation to
Ground Floor		ness and Sample Average Approximation	bilevel programs with risk aversion	Optimization via Shrinkage
3x30 min				
Salle 37	Interfaces of Applied Probability a	nd Optimization, Organizer: Omar E	l Housni, session 409	Robust
Build B, Z 4	JULIEN GRAND CLEMENT, Robust Markov	OMAR EL HOUSNI, Beyond Worst-case: A	OMID NOHADANI, Sustainable Inventory	KARTHIK NATARAJAN, Distributionally Ro-
Intermediate	Decision Process: Beyond (and back to)	Probabilistic Analysis of Affine Policies	With Robust Periodic-affine Policies and	bust Markovian Traffic Equilibrium
4x30 min	Rectangularity		Med. Supply Chains	
Salle 33	Robust combinatorial optimization	IV, Chair: Arie Koster, session 449		Robust
Build B, Z 5	PEDRO MUNARI, The vehicle routing prob-	MARINA LEAL, A time-dependent version of	ARIE KOSTER, Scheduling Jobs under Un-	ROBERTO WOLFLER CALVO, Optimizing
Ground Floor	lem under uncertainty via robust optimiza-	the robust TSP and SPP.	certainty: A Customer-oriented Approach	the electricity production planning with
4x30 min	tion			stochastic outage durations
Salle 30	Risk and Financial Markets, Chair	: Markku J Kallio, session 377		Game
Build B, Z 5	STEFANO NASINI, Bilevel programming ap-	YANG ZHAN, A smooth path-following	MARKKU KALLIO, Cooperative Mitigation	ZHENYU HU, Stable Risk Sharing and Its
Ground Floor	proach for investment strategies under in-	method for computing equilibria in incom-	of Contagion in Financial Networks	Monotonicity
4x30 min	termediation	plete markets		

Room	Continuo	us Optimization - W	ednesday 8:30 AM -	- 10:30 AM
GINTRAC Build Q, Z 8 Ground Floor 4x30 min	Stochastic and Nonlinear Optimizal FRED ROOSTA, Efficient Newton-type meth- ods for non-convex machine learning prob- lems	tion III, Organizer: Jorge Nocedal, so JORGE NOCEDAL, Optimization Methods for Training Neural Networks	STEPHEN WRIGHT, A Newton-CG Method with Complexity Guarantees	NLP UDAY SHANBHAG, Smoothed Variable Sample-size Acc. Prox. Methods for Stoch. Convex Optimization
Salle 05 Build Q, Z 11 1st floor 4x30 min	Optimality conditions in NLP and c ROBERTO ANDREANI, A SEQUENTIAL OP- TIMALITY CONDITION RELATED TO THE QUASINORMALITY CQ	onic problems, Organizer: Roberto J GABRIEL HAESER, An extension of Yuan's Lemma and its applications in optimization	Andreani, session 43 Lus Felipe Bueno, Optimality Conditions for Generalized Nash Equilibrium Prob- lems	NLP TATIANA TCHEMISOVA, On Optimality Condi- tions for Linear Copositive Programming
Salle KC7 Build K, Z 10 Intermediate 2 4x30 min	Computational advances in NLP , C ALFONSO LOBOS RUZ, Optimal Bidding, Allocation, and Budget Spending for a Demand-Side Platform.	Chair: Jeffrey CH Pang, session 434 JEFFREY PANG, Distributed deterministic asynchronous optimization using Dyk- stra's splitting	ZHENING LI, Decompositions and optimiza- tions of symmetric conjugate complex forms	NLP MAX GONCALVES, An inexact Newton- like conditional gradient method for con- strained systems
Salle 9 Build N, Z 12 4th floor 4x30 min	Fixed Point Approaches, Chair: Poc KONRAWUT KHAMMAHAWONG, Convergence analysis of S-iteration process for discon- tinuous operators	m Kumam, session 435 Роом Кимам, A new Igorithms for split feasibility problems involving paramono- tone equilibria	KHANITIN MUANGCHOO-IN, Fixed point and convergence theorems for monotone (α, β) -nonexpansive	NLP WUDTHICHAI ONSOD, Monotone generalized almost contraction on weighted graph
Salle LC4	Recent advances in first-order algo	rithms for non-smooth optimization	,	NonSmooth
Build L, Z 9 Intermediate 1 4x30 min	Peter Ochs, Non-smooth Non-convex Bregman Minimization: Unification and new Algorithms	YURA MALITSKY, Primal-dual algorithm for linearly constrained optimization problem	MATTHIAS EHRHARDT, Stochastic PDHG with Arbitrary Sampling and Applications to Medical Imaging	STANISLAV MAZURENKO, Acceleration and global convergence of the NL-PDHGM
Salle 8 Build N, Z 12 4th floor 4x30 min	Dynamical Systems and Optimizati RADU IOAN BOT, The continuous proximal- gradient approach in the nonconvex setting	on, Organizer: Hedy Attouch, session ALEXANDRE CABOT, Accelerated Forward- Backward Algorithms	n 351 JUAN PEYPOUQUET, Inertial proximal algo- rithms for maximally monotone operators	NonSmooth SILVIA VILLA, A dual diagonal iterative reg- ularization method
Salle AURIAC Build G, Z 6 1st floor 4x30 min	Recent Advances in Conic Program RUJUN JIANG, Convex Relaxations for Nonconvex Quadratically Constrained Quadratic Program	ming II, Organizer: Sena Safarina, s SENA SAFARINA, Cone Decomposition Method for Mixed-Integer SOCP arising from tree breeding	ession 83 GORAN BANJAC, Infeasibility detection in ADMM for convex optimization	SDP MARTA CAVALEIRO, A Simplex-like algo- rithm for the infimum point w.r.t. the sec- ond order cone
Salle 20 Build G, Z 6 1st floor 4x30 min	Theory and algorithms in conic line MASAKAZU MURAMATSU, An extension of Chubanov's algorithm to symmetric cone programming	rar programming 2, Organizer: Gab JOACHIM DAHL, Extending MOSEK with ex- ponential cones	or Pataki, session 89 Sтегал SREMAC, Primal Facial Reduction in Semidefinite Programming and Matrix Completions	SDP BRUNO LOURENCO, Amenable cones: bridg- ing error bounds and facial reduction
Salle LC5 Build L, Z 10 Intermediate 1 4x30 min	New trends II , <i>Chair</i> : Frank Permen CLAUDIA ADAMS, An L^2 -approach to Copositivity	ter, session 500 FAIZAN AHMED, On algorithms to optimize homogeneous polynomial over the simplex and the sphere	JOHN MITCHELL, Complementarity formula- tions of rank minimization problems	SDP FRANK PERMENTER, Interior-point methods via the exponential map
Salle 06 Build Q, Z 11 1st floor 2x30 min	Stochastic Optimization and Variat	ional Inequalities II, Organizer: Ale	jandro R. Jofre, session 156 YUEYUE FAN, How does uncertainty of de- mand propagate to flows under network equilibrium	Variat ALEJANDRO JOFRE, Variance-based stochas- tic extragradient methods with linear search for Stoch. VI
Salle ARNOZAN Build Q, Z 8 Ground Floor 4x30 min	Variational Analysis 1, Organizer: S ALEXANDRA SCHWARTZ, Second Order Op- timality Conditions for Cardinality Con- strained Problems	Samir Adly, session 364 HELMUT GFRERER, Stability Analysis for Parameterized Equilibria with Conic Con- straints	MICHEL THERA, Stability and Sensitiv- ity Analysis of Parametrized Optimization Problems	Variat SAMIR ADLY, Sensitivity analysis of param- eterized nonlinear variational inequalities.
Salle KC6 Build K, Z 10 Intermediate 1 4x30 min	First Order Methods for Non-Smoo Shiqian Ma, On the Non-Ergodic Conver- gence Rate of an Inexact Augmented La- grangian Framework	th Constrained Optimization, Orga SELVAPRABU NADARAJAH, A level-set method for stochastic optimization with expecta- tion constraints	nizer: Qihang Lin, session 305 PENG ZHENG, Fast method for non-smooth non-convex minimization	RandomM DAOLI ZHU, Stochastic Primal-Dual Coor- dinate Method for Nonlinear Convex Cone Programs
Salle 21 Build G, Z 6 Intermediate 4x30 min	New derivative-free algorithms, Ch MARGHERITA PORCELLI, Gray-box optimiza- tion of structured problems and other new developments in BFO	air: Margherita Porcelli, session 34 FRANCESCO RINALDI, Model-based derivative-free methods for nonsmooth black-box functions	LINDON ROBERTS, A flexible, robust and efficient derivative-free solver for least squares	DerFree ANA CUSTODIO, MultiGLODS: Clever Mul- tistart in Multiobjective Directional Direct Search

Room	Specific Models, A	Igorithms, and Soft	ware - Wednesday 8	:30 AM - 10:30 AM
Salle 16 Build I, Z 7 2nd floor 3x30 min	First-Order Methods for Machine	Learning, Organizer: Fabian Pedrego NICOLAS FLAMMARION, Stochastic Compos- ite Least-Squares Regression with conver- gence rate O(1/n)	sa, session 319 FABIAN PEDREGOSA, Adaptive Three Opera- tor Splitting	Learning SEBASTIAN STICH, Approximate Composite Minimization: Convergence Rates and Ex- amples
FABRE Build J, Z 8 Ground Floor 4x30 min	Structured Optimization for Machi DONALD GOLDFARB, Training neural net- works using ADMM for multiaffine con- strai	In Learning and Signal Processing, XINHUA ZHANG, Generalized Conditional Gradient for Structured Sparsity and Con- vex Deep Network	Organizer: Lin Xiao, session 330 LIEVEN VANDENBERGHE, Proximal methods for optimization over nonnegative trigono- metric polynomials	Learning MIKAEL JOHANSSON, Fast convex optimiza- tion for eigenproblems and beyond
Salle 18 Build I, Z 7 1st floor 4x30 min	Robust network optimization, Orga JOE NAOUM-SAWAYA, Decomposition Ap- proach for Robust Network Interdiction	anizer: Dimitri Papadimitriou, session VARUN REDDY, Robust network slice design under correlated demand uncertainties	357 XUDONG HU, Equilibria for Robust Routing of Atomic Players	Network DIMITRI PAPADIMITRIOU, Reliable Multi- level Facility Location Problem (MFLP)
Salle DENUCE Build Q, Z 8 Ground Floor 4x30 min	Decomposition Techniques to Solve Systems, Organizer: Ramteen Sioshi JEAN-PAUL WATSON, Toward Scalable Stochastic Economic Dispatch on an Industrial-Scale Model	Large-Scale Optimization Problem ansi, session 136 DAVID POZO, Distributionally Robust Trans- mission Expansion Planning	s for Electricity and Natural Gas GERRIT SLEVOGT, Structures and algorithms for nomination validation in steady-state gas networks	Energy GIORGIA OGGIONI, A bilevel model for the waste-to-energy supply chain in a circular economy
Salle 23 Build G, Z 6 3rd floor 4x30 min	Energy-aware planning and schedu SOPHIE DEMASSEY, Robust optimisation of storage in a power generation expansion planning problem	Iling 1, Organizer: Sandra U. Ngueve PETER PFLAUM, Microgrid Energy Flexibil- ity Optimization – 3 use cases	u, session 177 PAOLO GIANESSI, ILP models for the job- shop scheduling problem with energy con- sideration	Energy SANDRA U. NGUEVEU, Decomposition method in a scheduling problem with energy storage and costs
Salle 24 Build G, Z 6 3rd floor 4x30 min	Distribution and Demand Flexibilit ALEJANDRO ANGULO, A Data–Driven Robust Power Management in Active Distribution Systems	y, Chair: Golbon Zakeri, session 510 ANJA HÄHLE, Exploiting Flexibility in Loads for Balancing Power in Electrical Grids	PAULIN JACQUOT, Analysis of a Routing Game Model for Demand Side Manage- ment	Energy GOLBON ZAKERI, Demand response in elec- tricity markets
Salle LA4 Build L, Z 8 Basement 3x30 min	Energy markets, Organizer: Martin	e Labbé, session 50 BERNARD FORTZ, Unit Commitment under Market Equilibrium Constraints	MARTIN SCHMIDT, The Impact of Physics on Market Equilibria in Energy Networks	Sciences MARTINE LABBÉ, Dynamic programming approach for bidding problems on day- ahead markets
PITRES Build O, Z 8 Ground Floor 3x30 min	Progress in MIP Solvers I, Organiz	er: Michael Winkler, session 235 IMRE POLIK, New features and improve- ments in the SAS/OR optimization pack- age	THORSTEN KOCH, MIPLIB 2017+1	Algo HANS MITTELMANN, Benchmarks of com- mercial and noncommercial optimization software
Salle 22 Build G, Z 6 2nd floor 4x30 min	Numerically Efficient Methods for 1 Organizer: Torsten F Bosse, session 2 SRI HARI NARAYANAN, Study of the nu- merical efficiency of structured abs-normal forms	Piecewise Algorithmic Differentiatio 269 Torsten Bosse, (Almost) Matrix-free solver for piecewise linear functions in Abs-Normal form	n I, ANDREAS GRIEWANK, An active signature method for piecewise differentiable/linear optimization.	Algo ANGEL ROJAS, Solving l_1 regularized mini- max problems by successive piecewise lin- earization

Room	Invi	ted Talks - Wedne	esday 8:30 AM – 10:30) AM
SIGALAS	Stochastic optimization, Chair: Alex	ei A. Gaivoronski, session 314		INTERFACE
Build C, Z 2	BERNARDO COSTA, Using disjunctive pro-	Anthony Downward, SDDP v	vith ALEXEI GAIVORONSKI, Stochastic optimiza-	KAZEM ABBASZADEH, Demand Response To
2nd floor	gramming to represent Risk Aversion poli-	stagewise-dependent objective co	effi- tion of simulation models: management of	Electricity Prices In Flexible Manufactur-
4x30 min	cies	cient uncertainty		ing

Invi	ted Talks - Wednesd	ay 11:00 AM – 12:0	0 AM
Insights via volumetric comparison	of polyhedral relaxations, Organize	r: Andrea Lodi, session 548	SEMI
son of polyhedral relaxations			
Monotone Operator Theory in Con	vex Optimization, Organizer: Samir	Adly, session 537	KEYNOTE
Theory in Convex Optimization			
,			
Online Competitive Algorithms for	Resource Allocation, Organizer: Fra	ink E. Curtis, session 539	KEYNOTE
MARYAM FAZEL, Online Competitive Algo-			
tinms for Resource Allocation			
Model-Based Methods, Sampling M	lodels, and A New Second-Order Mo	odel-Based Method,	KEYNOTE
Organizer: Stefan M Wild, session 54	.6		
LUIS NUNES VICENTE, Model-Based Meth-			
ods, Sampling Models, and A New Second Order Model Based Method			
	Invi nsights via volumetric comparison N LEE, Insights via volumetric compari- on of polyhedral relaxations Ionotone Operator Theory in Con NTRICK COMBETTES, Monotone Operator heory in Convex Optimization Diline Competitive Algorithms for MARYAM FAZEL, Online Competitive Algo- thms for Resource Allocation Iodel-Based Methods, Sampling M Drganizer: Stefan M Wild, session 54 UIS NUMES VICENTE, Model-Based Meth- ds, Sampling Models, and A New econd-Order Model-Based Method	Invited Talks - Wednesd nsights via volumetric comparison of polyhedral relaxations, Organize N LEE, Insights via volumetric compari- on of polyhedral relaxations Ionotone Operator Theory in Convex Optimization, Organizer: Samir ATRICK COMBETTES, Monotone Operator heory in Convex Optimization Diline Competitive Algorithms for Resource Allocation, Organizer: Fra MARVAM FAZEL, Online Competitive Algo- thms for Resource Allocation Iodel-Based Methods, Sampling Models, and A New Second-Order Model-Based Method Sampling Models, and A New econd-Order Model-Based Method	Invited Talks - Wednesday 11:00 AM – 12:00 nsights via volumetric comparison of polyhedral relaxations, Organizer: Andrea Lodi, session 548 N LEE, Insights via volumetric compari- on of polyhedral relaxations Ionotone Operator Theory in Convex Optimization, Organizer: Samir Adly, session 537 ARRAM FAZEL, Online Competitive Algo- thms for Resource Allocation Iodel-Based Methods, Sampling Models, and A New Second-Order Model-Based Method, Organizer: Stefan M Wild, session 546 UIS NUMES VICENTE, Model-Based Meth- ds, Sampling Models, and A New econd-Order Model-Based Method

Room	Inv	vited Talks - Wednes	sday 1:30 PM – 2:30	PM
Auditorium	Relaxations and Approximations of	Chance Constraints, Organizer: Sir	nge Kucukyavuz, session 525	PLENARY
Build Symph H, Z 0	SHABBIR AHMED, Relaxations and Approxi-			
Gambetta	mations of Chance Constraints			
1x60 min				

Room	Discrete Optimizat	ion & Integer Progr	amming - Wednesda	y 3:15 PM – 4:45 PM
Salle 44	Knapsack Problems, Organizer: Er	rrico Malaguti, session 185	0	• IPpractice
Build C, Z 1	Ashwin Arulselvan, Algorithms for	ORLANDO RIVERA-LETELIER, Cutting Planes	ENRICO MALAGUTI, The Fractional Knap-	
3rd floor	bilevel knapsack problem	for the Multi-Modal Precedence Con-	sack Problem with Penalties	
3x30 min		strained Problem		
Salle 36	Decomposition I, Chair: Dieter Wei	ninger, session 486		IPpractice
Build B, Z 4	KEREM BULBUL, Benders Decomposition	PAUL STURSBERG, Improved Cut Selection	DIETER WENINGER, A Penalty Alternating	
3x30 min	w/Column Dependent Powe	for Benders Decomposition	MIDe	
DUDVIEIM	Decomposition methods for MINI	P Organizar: Ivo Nowak again 55	IVIII S	
Build A 7 1	Ivo Noway, Decomposition-based Succes-	PAVIO MUTS Decogo - A new	FUCIUS HENDRIX On simplicial monotonic-	MINLP
3rd floor	sive Approximation Methods for MINLP	decomposition-based MINLP solver	ity and dimension reduction in MINLP	
3x30 min				
Salle 34	MINLP (II). Organizer: Daniel Bier	nstock, session 66		MINLP
Build B, Z 3	AKSHAY GUPTE, Polyhedral relaxations for	MOHIT TAWARMALANI, Product convexifica-	JAVAD LAVAEL Sparse conic optimization:	
1st floor	nonconvex quadratic functions	tion: A new relaxation framework for non-	low-rank solutions and near-linear time al-	
3x30 min	-	convex programs	gorithms	
Salle 35	MINLP for Data Science, Organize	er: Vanesa Guerrero, session 108		MINLP
Build B, Z 4	SANDRA BENÍTEZ-PEÑA, COSt-sensitive SVM	CRISTINA MOLERO-RÍO, Optimizing classifi-	VANESA GUERRERO, MINLP to visualize dy-	
Intermediate		cation trees via non-linear continuous pro-	namic proximities and frequencies	
3x30 min		gramming		
LEYTEIRE	Clustering, Organizer: Mohammad	R Salavatipour, session 30		APPROX
Build E, Z 1	ARAVINDAN VIJAYARAGHAVAN, Clustering	KONSTANTIN MAKARYCHEV, Correlation	MELANIE SCHMIDT, Analysis of Ward's	
3rd floor	Mixtures of Well-Separated Gaussians	Clustering	method	
3x30 min				
Salle 43	Network Design and Routing, Cha	Ir: Yuko Kuroki, session 346	Hereiner Oren Time denendent ebertet	APPROX
Build C, Z I	YUSA MATSUDA, A 4-approximation algo-	YUKO KUROKI, Approximation algorithm	JEREMY OMER, Time-dependent shortest	
3x30 min	problems	problems	paur with discounted waiting	
Salle 41	Variants of the Assignment problem	n Organizer: Kawitha Telikenalli ses	sion 266	CONTR
Build C Z 1	TOBIAS MOMKE Approximating Airports	AMI PAZ A (2+eps)-Approximation for	KAVITHA TELIKEPALLI Popularity Mixed	Сомв
3rd floor	and Railways	Maximum Weight Matching in the Semi-	Matchings, and Self-duality	
3x30 min		Streaming Model		
Salle 39	Polyhedral aspects of combinatoria	optimization problems. Chair: Gui	llerme Duvillié, session 404	СОМВ
Build E, Z 1	Shungo Koichi, A polyhedral insight into	SERGEI CHUBANOV, Alternating contractions	GUILLERME DUVILLIÉ, Comparison of some	
3rd floor	covering a 2/3 supermodular function by a	and their combinatorial applications	symmetry breaking techniques for graph	
3x30 min	graph		coloring problem	

Room	Optimizatio	n under Uncertainty	v - Wednesday 3:15 H	PM – 4:45 PM
Salle 32	Learning and Stochastic Program	ning, Organizer: Matthias Poloczek, s	session 254	Stoch
Build B, Z 5	JUNYI LIU, Asymptotic Results For Two-	HAOXIANG YANG, Optimizing Crashing De-	MATTHIAS POLOCZEK, Bayesian Optimiza-	
Ground Floor 3x30 min	stage Stochastic Quadratic Programming	cisions in a Project Management Problem with Disruptions	tion of Combinatorial Structures	
DENIGES	Dynamic Optimization: Theory and	d Algorithms, Organizer: Vineet Goy	al, session 100	Robust
Build C, Z 5	SHIMRIT SHTERN, A Scalable Algorithm for	BRADLEY STURT, Data-Driven Multi-Stage	VINEET GOYAL, Optimal Approximation via	
Ground Floor	Two-Stage Adaptive Linear Optimization	Adaptive Optimization	Affine Policies for Two-stage Robust Opti-	
3x30 min			mization	
Salle 37	Cursing the Dimensionality: Two-S	tage and Multi-Stage Robust Optim	ization,	Robust
	Organizer: Angelos Tsoukalas, sessio	on 443		
Build B, Z 4	CHIN PANG HO, Efficient Algorithms for Ro-	FRANS DE RUITER, Dual approach for two-	ANGELOS TSOUKALAS, ROBUST Dual Dy-	
Intermediate	bust MDPs with State Rectangularity	stage robust nonlinear optimization models	namic Programming	
3x30 min				
Salle 31	Dynamic programming application	s, Chair: Susanne Hoffmeister, sessio	n 379	Markov
Build B, Z 5	SUSANNE HOFFMEISTER, Markov Decision	PAOLO SERAFINI, A Model to evaluate the		
Ground Floor	Processes for Sport Strategy Optimization	cost-effectiveness trade-off for urologic		
2x30 min		treatments		
Salle 30	Nonconvex and Complex Problems	in Multiobjective Optimization,		Game
	Chair: Gabriele Eichfelder, session 2	68		
Build B, Z 5	GABRIELE EICHFELDER, A Trust Region	ELIZABETH KARAS, Multiobjective program-	Томмаѕо Levato, Sparse multiobjective	
Ground Floor	Method for Heterogeneous Multiobjective	ming via bundle methods	optimization via concave approximations	
3x30 min	Optimization			

Room	Continue	ous Optimization - V	Vednesday 3:15 PM	- 4:45 PM
GINTRAC Build Q, Z 8 Ground Floor 3x30 min	The power and limits of the Lassern STANDA ZIVNY, The power and limits of convex relaxations for general-valued CSPs	hierarchy , Organizer: Markus Sch ADAM KURPISZ, On the convergence of the Lasserre/SoS hierarchy for 0/1 optimiza- tion problems.	Weighofer, session 9 MONALDO MASTROLILLI, High Degree SOS Proofs, Bienstock-Zuckerberg hierarchy and Chvatal-Gomory cuts	NLP
Salle 05 Build Q, Z 11 1st floor 3x30 min	Subspace methods in NLP I, Organ ZAIKUN ZHANG, A Space Transformation Framework for Nonlinear Optimization: Part I	<i>izer</i> : Michal Kocvara, session 45 SERGE GRATTON, A Space Transformation Framework for Nonlinear Optimization: Part II	FRANCISCO SOBRAL, Quasi-Newton and the Unreduced Matrix in Interior Point Meth- ods	NLP
Salle 9 Build N, Z 12 4th floor 3x30 min	Quadratic Optimization, Chair: Ar DAVID EK, On limited-memory quasi- Newton methods for minimizing a quadratic function	ders Forsgren, session 417 ANDERS FORSGREN, On degeneracy in active-set methods for linear and convex quadratic programming	FERNANDA RAUPP, An algorithm for project- ing a point onto a level set of a quadratic function	NLP
Salle 8 Build N, Z 12 4th floor 3x30 min	Adaptivity in non-smooth optimiza OLIVIER FERCOQ, Adaptive Double Loop Smoothing Algorithms	tion, Organizer: Volkan Cevher, sessi KFIR LEVY, Universal Acceleration through Learning Rate Adaptation	on 187 STEPHEN BECKER, ADMM vs gradient methods for ill-conditioned imaging prob- lems	NonSmooth
Salle 20	SDP approaches to combinatorial a	nd global optimization problems,		SDP
Build G, Z 6 1st floor 3x30 min	SAMUEL GUTEKUNST, Semidefinite Pro- gramming Relaxations of the Traveling Salesman Problem	HAO HU, On Solving the Quadratic Short- est Path Problem.	AHMADREZA MARANDI, SDP relaxations of polynomial optimization problems with chordal structure	
Salle LC5	Reformulation-based solution meth	ods for quadratic programming,		SDP
Build L, Z 10 Intermediate 1 3x30 min	ERIC SOUTIL, NOn-convex Quadratic Inte- ger Programming : a piecewise lineariza- tion	HADRIEN GODARD, Solving Alternative Cur- rent Optimal Power Flow to global opti- mality	SOUROUR ELLOUMI, Preprocessing and re- formulation for the Quadratic Assignment Problem	
Salle 06 Build Q, Z 11 1st floor 3x30 min	Optimization Algorithms and Varia XLAOQI YANG, On Error Bound Moduli for Locally Lipschitz and Regular Functions	tional Inequalities II, Organizer: Xi MIN LI, Inexact primal-dual hybrid gradi- ent methods for saddle-point problems	acoqi Yang, session 150 KUANG BAI, On directional pseudo/quasi- normality and directional enhanced KKT conditions	Variat
Salle ARNOZAN Build Q, Z 8 Ground Floor 3x30 min	Nash equilibrium and games 1, Org ANNA THÜNEN, Solving Multi-Leader- Follower Games	zanizer: Lorenzo Lampariello, session JACQUELINE MORGAN, Nash equilibrium: uniqueness and approximation via contin- uous optimization	365 MAURO PASSACANTANDO, Fixed point and ex- tragradient algorithms for quasi-equilibria	Variat
Salle KC6 Build K, Z 10 Intermediate 1 3x30 min	Fast Converging Stochastic Optimit: AYMERIC DIEULEVEUT, Bridging the Gap between Constant Step Size SGD and Markov Chains	zation Algorithms, Organizer: Franc AUDE GENEVAY, Stochastic Optimization for Large Scale Optimal Transport	is Bach, session 213 ROBERT GOWER, Variance Reduced Meth- ods via Sketching	RandomM
Salle 21	Surrogate-based algorithms for con	strained derivative-free problems,	•	DerFree
Build G, Z 6 Intermediate 3x30 min	Charl: Fillinge R. Saniparo, session 1 MANUEL RAMOS-CASTILLO, Optimal agri- cultural scheduling through MINLP surrogate-based optimization	PHILLIPE SAMPAIO, A global optimization algorithm for derivative-free constrained problems	GEOVANI GRAPIGLIA, Derivative-Free Trust- Region Algorithms for L1, Minimax and Bi-Objective Optimiz	
Salle AURIAC	Risk-Averse PDE-Constrained Opt	imization–Methods and Application	S,	Control
Build G, Z 6 1st floor 3x30 min	RUEDIGER SCHULTZ, Stochastic Dominance in Elastic Shape Optimization	HARBIR ANTIL, Weighted Sobolev Spaces with Application to Image Processing	DREW KOURI, Smoothing Techniques for Risk-Averse PDE-Constrained Optimiza- tion	

Room	Specific Models , A	Algorithms, and Soft	tware - Wednesday 3	3:15 PM – 4:45 PM
Salle DENUCE Build Q, Z 8 Ground Floor 3x30 min	Second order methods for training AMIR ABDESSAMAD, Newton method with an adjusted generalized Hessian matrix for SVMs	ML models, Chair: Julien Mairal, see JULIEN MAIRAL, A Variable Metric Inex- act Proximal Point Algorithm for Quasi- Newton Acceleration	ssion 474 Robert Mohr, An Adaptive Sample Size Trust-Region Method for Empirical Risk Minimization	Learning
FABRE Build J, Z 8 Ground Floor 3x30 min	Convex optimization, distances and PAVEL DVURECHENSKY, Computational Opti- mal Transport: Accelerated Gradient De- scent vs Sinkhorn	constraints, Chair: Pablo A Parrilo, PABLO PARRILO, Geodesic distance maxi- mization	session 476 ADIL SALIM, A Splitting Algorithm for Minimization under Stochastic Linear Constraints	Learning
Salle 16 Build I, Z 7 2nd floor 3x30 min	Rail and Maritime Transportation, KAZUHIRO KOBAYASHI, Accelerated column generation for a ship routing problem with speed optimization	Chair: Kazuhiro Kobayashi, session STANLEY SCHADE, Column Generation in Railway Optimization	454 TATSUKI YAMAUCHI, Optimizing Train Stop- ping Patterns for Congestion Management	Logistics
Salle 18 Build I, Z 7 1st floor 3x30 min	Scheduling in Networks, <i>Chair</i> : Ha GRATIEN BONVIN, Global optimization for the pump scheduling problem in drinking water networks	mish Waterer, session 532 AMADEU Coco, Addressing a scheduling problem for planned disruptions on urban road networks	HAMISH WATERER, Scheduling of mainte- nance windows in a mining supply chain railway network	Scheduling
Salle 23 Build G, Z 6 3rd floor 3x30 min	Conic Optimization and Power Sys ARVIND RAGHUNATHAN, Degeneracy in Chordal Decomposition of Semidefinite Programs	tems, Organizer: Jakub Marecek, sess Jakub Marecek, When to switch from a convex relaxation to Newton's method on the non-convex POP	sion 68 KONSTANTIN TURITSYN, Convex restrictions of power flow feasibility sets	Energy
Salle 24 Build G, Z 6 3rd floor 2x30 min	Emerging Energy Markets, Organi MARYAM KAMGARPOUR, Designing coalition-proof mechanisms - the case of electricity markets	zer: Dennice F. Gayme, session 291 SEAN MEYN, Irrational Agents and the Power Grid		Energy
Salle LA4 Build L, Z 8 Basement 3x30 min	Air Transportation and Air Traffic AHMED KHASSIBA, A two-stage stochastic model for scheduling aircraft arrivals un- der uncertainty	Management, Organizer: Sonia Cafi FERNANDO DIAS, Aircraft conflict resolution and heading recovery with mixed-integer programming	eri, session 315 SONIA CAFIERI, MINLP for aircraft conflict avoidance via speed and heading angle de- viations	Sciences
PITRES Build O, Z 8 Ground Floor 3x30 min	Progress in Conic and MIP Solvers JEAN-HUBERT HOURS, Artelys Knitro 11.0, a new conic solver and other novelties	Organizer: Imre Polik, session 237 Erling Andersen, MOSEK version 9	FRANZ WESSELMANN, Recent enhancements in MATLAB Optimization Toolbox solvers for LP and MILP	Algo
Salle 22 Build G, Z 6 2nd floor 3x30 min	Structure Detection in Integer Prog TAGHI KHANIYEV, Automatic structure de- tection in mixed integer programs	ramming, Organizer: Taghi Khaniye MICHAEL BASTUBBE, Modular Detection of Model Structure in Integer Programming	v, session 272 JoAAS WITT, A Computational Investiga- tion on Generic Cutting Planes in Branch- Price-and-Cut	Algo

Room	Inv	vited Talks - Wednesday 3:15 PM – 4:45 PM	
SIGALAS	Logistics, Chair: Frieder Smolny, set	INI ISSION 388	FERFACE
Build C, Z 2	KAJ HOLMBERG, Using OpenStreetMap data	GWÉNAËL RAULT, Modeling the Periodic FRIEDER SMOLNY, Multiscale optimization	
2nd floor	for route optimization: extraction and re-	Vehicle Routing Problem in an industrial of logistics networks	
3x30 min	duction	context	

Room	Discrete Optimizat	ion & Integer Progr	amming - Wednesda	iy 5:00 PM – 6:30 PM
Salle 43 Build C, Z 1 3rd floor 2x30 min	IP-Formulations , <i>Chair</i> : Temitayo J WOLFGANG RIEDL, The quadratic assign- ment problem: a comparison of two lin- earizations	Ajayi, session 516 Темттауо Алау, Assessing Parametrized Linear Programming Relaxations With Su- peradditive Duality		IPtheory
Salle 44 Build C, Z 1 3rd floor 3x30 min	Exact Approaches for Vehicle Rout RICARDO FUKASAWA, The Capacitated Vehi- cle Routing Problem with Stochastic De- mands	ing and Variants, Organizer: Ricardo CLAUDIO CONTARDO, Efficient metaheuristic pricing in vehicle routing	D Fukasawa, session 288 RAFAEL MARTINELLI, Exact Solution of a Class of Vehicle Scheduling Problems	IPpractice
DURKHEIM Build A, Z 1 3rd floor 3x30 min	MINLP (III), Organizer: Daniel Bie ALBERTO DEL PIA, Cardinality-constrained linear regression with sparse matrices	enstock, session 67 GUANYI WANG, Computational evaluation of new dual bounding techniques for sparse PCA	JEFF LINDEROTH, Cutting Planes for Lin- ear Programs with Complementarity Con- straints	MINLP
Salle 34 Build B, Z 3 1st floor 3x30 min	Robust Approaches for Challenging Organizer: Frauke Liers, session 124 TMO GERSING, A New Approach for Ex- tending Cover Inequalities for the Robust Knapsack Polytope	g Uncertain Optimization Problems, ANDREAS SCHMITT, An Interdiction Ap- proach for the Design of High-Rise Water Supply Systems	SEBASTIAN TSCHUPPIK, Robust optimization with selected scenarios	MINLP
Salle 35 Build B, Z 4 Intermediate 3x30 min	Advances in MINLP, Organizer: La MARIANNA DE SANTIS, An Active Set Algo- rithm for Robust Combinatorial Optimiza- tion	aura Palagi, session 165 VERONICA PICCIALLI, Membrane System De- sign Optimization	EMILIANO TRAVERSI, Dantzig Wolfe Decom- position for Binary Quadratic Program- ming	MINLP
LEYTEIRE Build E, Z 1 3rd floor 3x30 min	Approximation Algorithms for Geo FABRIZIO GRANDONI, Approximating Geo- metric Knapsack via L-Packings	ADDREAS WESS, Parameterized (1+eps)- approximation algorithms for packing problems	r: Fabrizio Grandoni, session 28 KLAUS JANSEN, Closing the gap for pseudo- polynomial strip packing	APPROX
Salle 36 Build B, Z 4 Intermediate 3x30 min	Online Optimization, Organizer: K VICTOR VERDUGO, How large is your graph?	evin Schewior, session 35 ANDREAS TÖNNIS, Submodular Secretary Problems: Cardinality, Matching, and Lin- ear Constraints	KEVIN SCHEWIOR, Tight Competitive Anal- ysis for Online TSP on the Line	APPROX
Salle 41 Build C, Z 1 3rd floor 4x20 min	Connectivity problems and Steiner MARCUS BRAZIL, Computing minimum 2- connected Steiner networks in the Eu- clidean plane	trees, Chair: Andreas E Feldmann, ss YASUKO MATSUI, Enumerating All Span- ning Subgraphs with Edge-Connectivity at Least k	ession 421 MARK TURNER, The variable-cost node- weighted Steiner tree problem in the Eu- clidean plane.	COMB ANDREAS FELDMANN, Parameterized Ap- proximation Algorithms for Bidirected Steiner Network Problems
Salle 39 Build E, Z 1 3rd floor 4x20 min	Shortest paths and cutting stock, C PEDRO DE LAS CASAS, Cost Projection Meth- ods for the Shortest Path Problem with Crossing Costs	Chair: Arnaud Vandaele, session 426 Adam Schienle, Solving the Time- Dependent Shortest Path Problem using Super-Optimal Wind	MIRIAM SCHLÖTER, Earliest Arrival Trans- shipments in Networks With Multiple Sinks	COMB ARNAUD VANDAELE, One-dimensional cut- ting stock instances for which few patterns are needed

Room	Optimization	n under Uncertainty	- Wednesday 5:00 H	PM – 6:30 PM		
DENIGES	Stochastic Programming and Distri	Stochastic Programming and Distributionally Robust Optimization Models with Endogenous stoch				
	Uncertainty, Organizer: Miguel Lej	eune, session 248				
Build C, Z 5	NILAY NOYAN, Distributionally Robust Op-	KARTIKEY SHARMA, Optimization Under	MIGUEL LEJEUNE, Chance-Constrained Op-			
Ground Floor	timization with Decision-Dependent Am-	Decision-dependent Uncertainty	timization Models with Endogenous and			
3x30 min	biguity Set		Exogenous Uncertainty			
Salle 32	Stochastic optimization models and	applications, Chair: FJavier Hered	ia, session 495	Stoch		
Build B, Z 5	GEOFFREY OXBERRY, Design optimization	GISLAINE PERICARO, Optimal non-	ALEXANDER VINEL, A Generalized Risk Par-	FJAVIER HEREDIA, A multistage stochastic		
Ground Floor	under uncertainty	anticipative scenarios for nonlinear	ity Model with Application for Hazmat	programming model for the optimal bid of		
4x20 min		hydrothermal power systems	Transportation	a wind producer		
Salle 37	Robust Adaptive Control and Lear	ning, Organizer: Siqian Shen, session	97	Robust		
Build B, Z 4	SIQIAN SHEN, Distributionally Robust	LAUREN STEIMLE, Leveraging stochastic				
Intermediate	Adaptive Control under Nonstationary	programming to design robust policies for				
2x30 min	Uncertainty	Markov decision				
Salle 33	Robust combinatorial optimization	III, Organizer: Moritz Mühlenthaler,	session 255	Robust		
Build B, Z 5	MORITZ MÜHLENTHALER, Robust Matching	VIKTOR BINDEWALD, Solving Bulk-Robust	FELIX HOMMELSHEIM, Assignment Problems	JAEHYEON RYU, Distributionally Robust		
Ground Floor	Augmentation	Assignment Problems to Optimality	with few Failure Resources	Chance-Constrained Binary Knapsack		
4x20 min				Problem		
Salle 30	Aspects of Multiobjective Combina	torial Optimization, Organizer: Mat	thias Ehrgott, session 87	Game		
Build B, Z 5	SERPIL SAYIN, Generating Representative	KIM ANDERSEN, A multi-objective approach	FRITZ BÖKLER, Approximating the Multi-			
Ground Floor	Sets for Multiobjective Discrete Optimiza-	to sensitivity analysis of MILP	objective Shortest Path Problem in Practice			
3x30 min	tion Problems					

Room	Continuo	ous Optimization - V	Vednesday 5:00 PM	– 6:30 PM
GINTRAC Build Q, Z 8 Ground Floor 3x30 min	Software for Nonlinear Optimization CHARLIE VANARET, Argonot: An Open- Source Software Framework for Nonlinear Optimization	n, Organizer: Sven Leyffer, session 1 PHILP GILL, A Primal-Dual Shifted Barrier Method for Nonlinear Optimization	33 ELIZABETH WONG, L-RH-B: Software for Large-Scale Bound-Constrained Optimization	NLP
Salle 05 Build Q, Z 11 1st floor 3x30 min	Conjugate Gradient Methods, Cha. MEHIDDIN AL-BAALI, A New Diagonaliz- able Conjugate Gradient Method for Un- constrained Optimization	ir: Giovanni Fasano, session 362 GIOVANNI FASANO, Conjugate Direction Methods and Polarity for Quadratic Hyper- surfaces	LUIS LUCAMBIO PEREZ, Non-linear conju- gate gradient for vector optimization on Riemannian manifolds	NLP
Salle 9 Build N, Z 12 4th floor 3x30 min	Linear Optimization II, Chair: Julia JULAN HALL, Starting the dual revised sim- plex method from an advanced basis	an Hall, session 416 MASAYA TANO, On the number of simplex iterations of the steepest-edge for a nonde- generate LP	MARINA EPELMAN, New Results on the Sim- plex Method for Minimum Cost Flows in Infinite Networks	NLP
Salle ARNOZAN Build Q, Z 8 Ground Floor 3x30 min	Interior Point Methods in LP and N ANDRE TITS, CONSTRAINT-Reduced MPC for CQP, with a Modified Active Set Identifi- cation Scheme	ILP , <i>Chair</i> : Andre L Tits, session 430 THIANE COLIBORO, An IPM approach for a time dependent large-scale assortment al- location problem) NGOC NGUYEN TRAN, Local analysis of a primal-dual method for NLP without con- straint qualification	NLP
Salle 8 Build N, Z 12 4th floor 3x30 min	Methods and Analysis for Nonsmoo MICHAEL OVERTON, Partial Smoothness of the Numerical Radius	th Optimization, Organizer: Michae ADRIAN LEWIS, Partial smoothness and ac- tive sets: a fresh approach	EL Overton, session 86 DMITRIY DRUSVXISKIY, Subgradient meth- ods for sharp weakly convex problems	NonSmooth
Salle 20 Build G, Z 6 1st floor 3x30 min	Noncommutative polynomial optim quantum information I, Organizer: MARKUS SCHWEIGHOFER, Inclusion of spec- trahedra, free spectrahedra and coin toss- ing	ization: semidefinite relaxations, fre Monique Laurent, session 20 ToM-LUKAS KRIEL, Matrix convex sets and matrix extreme points	Per convexity and applications to	SDP
Salle LC5 Build L, Z 10 Intermediate 1 4x20 min	Completely Positive Cones and App MUHAMMAD IQBAL, Approximation Hierar- chies for Copositive and Completely Posi- tive Tensor Cones	lications, Chair: Patrick Groetzner, s MINA SAEE BOSTANABAD, Inner approximat- ing the completely positive cone via the cone of SDD matrices	Eession 464 ELLEN FUKUDA, Solving nonlinear conic programming problems with a new DC ap- proach	SDP PATRICK GROETZNER, A method to compute factorizations for completely positive ma- trices
Salle 06 Build Q, Z 11 1st floor 3x30 min	Complementarity Problems, Organ MUDDAPPA GOWDA, Weakly homogeneous variational inequalities	<i>izer</i> : Samir K. Neogy, session 173 SAMIR NEOGY, On testing matrices with nonnegative principal minors	DIPTI DUBEY, Total Dual Integrality and In- tegral Solutions of Linear Complementar- ity Problem	Variat
Salle KC6 Build K, Z 10 Intermediate 1 4x20 min	Non-Convex and Second-order Met AURELIEN LUCCHI, Escaping Saddles with Stochastic Algorithms	hods in Machine Learning, Organiz Reza Babanezhad, Convergence Rate of Expectation-Maximization	ter: Martin Takac, session 33 [FRAKCESCO ORABONA, Parameter-free non- smooth convex stochastic optimization through coin betting	RandomM MARTIN TAKAC, SGD and Hogwild! Con- vergence Without the Bounded Gradients Assumption
Salle 21 Build G, Z 6 Intermediate 3x30 min	Progress in methods and theory of e CHARLES AUDET, Mesh-based Nelder-Mead algorithm for inequality constrained opti- mization	derivative-free optimization, Chair: JEFFREY LARSON, Manifold Sampling for Nonconvex Optimization of Piecewise Linear Compositions	Serge Gratton, session 42 MORTEZA KIMAEI, Competitive derivative- free optimization with optimal complexity	DerFree
Salle AURIAC Build G, Z 6 1st floor 4x20 min	Advances in optimization methods is STEFAN ULBRICH, Preconditioners for un- steady PDE-constrained optimization and parallel variants	for time dependent problems II, Ora SEBASTIAN GOETSCHEL, Parallel-in-time PDE-constrained optimization using PFASST	ganizer: Denis Ridzal, session 225 ANDREAS POTSCHKA, Direct Multiple Shoot- ing for parabolic PDE constrained opti- mization	Control DENIS RIDZAL, Multigrid-in-time methods for optimization with nonlinear PDE/DAE constraints

Room	Specific Models,	Algorithms, and Soft	tware - Wednesday 5	5:00 PM - 6:30 PM
FABRE Build J, Z 8 Ground Floor 3x30 min	Problems in the intersection of mac BRANDON AMOS, OptNet: End-to-End Dif- ferentiable Constrained Optimization	hine learning and optimization, Cha Ross ANDERSON, Solving argmax for a neu- ral network with MIP, and related opti- mization problems	air: Ross M Anderson, session 328 VINOD NAIR, Learning Fast Optimizers for Contextual Stochastic Integer Programs	Learning
Salle 22 Build G, Z 6 2nd floor 2x20 min	Large-scale convex optimization, C ALEXANDER ROGOZIN, Optimal distributed convex optimization on slowly time- varying graphs	Chair: Alexander V. Rogozin, session 4 TOMMASO COLOMBO, Leverage data struc- ture to improve Stochastic Gradient De- scent algorithm	79	Learning
Salle 24 Build G, Z 6 3rd floor 4x20 min	Location and Routing, Chair: Muss IMEN BEN MOHAMED, Stochastic Two- echelon Location-Routing	apha Oudani, session 451 RASUL ESMAEILBEIGI, Benders decomposi- tion for a hierarchical facility location problem	NICOLAS KÄMMERLING, Benders Decompo- sition for Uncertain Hub Location with Variable Allocation	Logistics MUSTAPHA OUDANI, The Incomplete Hub Location and Routing Problem
Salle 16 Build I, Z 7 2nd floor 3x20 min	Production-Routing, Chair: Feng C FENG GAO, Models and Algorithms for Ro- bust Production Routing Under Demand Uncertainty	Gao, session 456 SARANTHORN PHUSINGHA, Meta-Heuristics for Multi-Period Sales Districting Problem	YUZHUO QIU, Models and Algorithms for Stochastic and Robust Production Routing with Time Win	Logistics
Salle 18 Build I, Z 7 1st floor 3x20 min	Machine Scheduling 2, Chair: Guo CRISTIANE FERREIRA, Human-Robot Scheduling in Collaborative Environments	peng Song, session 529 MARGAUX NATTAF, Parallel machine scheduling with time constraints on machine qualifications	GUOPENG SONG, The robust machine availability problem	Scheduling
Salle DENUCE Build Q, Z 8 Ground Floor 4x20 min	Optimization and modeling of integ STEFANOS DELIKARAOGLOU, Market-based valuation of natural gas network flexibility	grated energy systems, Organizer: Ja IBRAHIM ABADA, Unintended consequences: The snowball effect of energy communities	lal Kazempour, session 71 LESIA MITRIDATI, Coordination of Heat and Electricity Systems via Market-Based Mechanisms	Energy ANNA SCHWELE, Virtual bidders and self- schedulers in electricity and natural gas markets
Salle 23 Build G, Z 6 3rd floor 3x30 min	Energy Market Models, Chair: Sau THOMAS KLEINERT, Global Optimization of Multilevel Electricity Market Models	leh A Siddiqui, session 522 EMRE CELEBI, Co-optimization Models with Market-Clearing Equilibrium: A Ro- bust Approach	SAULEH SIDDIQUI, Solving Problems with Equilibrium Constraints Applied to Energy Markets	Energy
Salle LA4 Build L, Z 8 Basement 3x30 min	Resource-constrained assignment a GIORGIO SARTOR, A novel formulation for job-shop scheduling in traffic management	nd scheduling, Organizer: Fabian Ba VIPIN VLIAYALAKSHMI, Improving local search for distributed resource allocation and equilibrium.	stin, session 398 Fавал Bastin, A learning-based approach for multi-skill staffing optimization in call centers	Sciences
PITRES Build O, Z 8 Ground Floor 3x30 min	Progress in MIP Solvers II, Organi ANDREA TRAMONTANI, Benders Decomposi- tion in IBM CPLEX	zer: Hans Mittelmann, session 234 MICHAEL WINKLER, Gurobi 8.0 - What's new	MICHAEL PERREGAARD, Recent Progress in the Xpress Solvers	Aigo

Room	Invited Talks - Wednesday 5:00 PM – 6:30 PM
SIGALAS	Solvers and softwares, Chair: François Clautiaux, session 390 INTERFACE
Build C, Z 2	ULIEN DARLAY, Solving packing, rout-PAWEL LICHOCKI, Applied mixed integer/ROBERT LUCE, Solving MIPs with Gurobi/JOHANNES MÜLLER, Creating an optimiza-
2nd floor	ng and scheduling problems using Local- programming: The why and how Instant Cloud tion web app with FICO Xpress
4x20 min	Solver

Room	Discrete Optimizat	ion & Integer Progr	amming - Thursday	8:30 AM - 10:30 AM
Salle 34 Build B, Z 3 1st floor 4x30 min	Integer linear programming, conve ACHILL SCHÜRMANN, Exploiting Linear Symmetries in Integer Convex Optimiza- tion	x geometry, and lattices, Organizer: MATTHIAS SCHYMURA, On the reverse isodi- ametric problem	Sinai Robins, session 142 KEVIN WOODS, The Complexity of Pres- burger Arithmetic in Fixed Dimension	IPtheory SINAI ROBINS, Fourier transforms of poly- topes, solid angle sums, and discrete vol- umes
Salle 35 Build B, Z 4 Intermediate 4x30 min	Convexity and Polytopes, Chair: Da EMILIANO LANCINI, BOX-TOtal Dual Integral- ity and k-Edge-Connectivity	avid Warme, session 518 TAMON STEPHEN, On the Circuit Diameter Conjecture	FILIPE CABRAL, The role of extreme points for convex hull operations.	IPtheory DAVID WARME, Metrics for Strength of In- equalities with Respect to a Polytope
Salle 44 Build C, Z 1 3rd floor 4x30 min	Advanced Linear(ized) MIP Formu LEON EIFLER, Mixed-Integer Programming for Clustering in Non-reversible Markov Processes	Adatat JABRAYILOV, A new ILP for the Steiner Tree Problem with Revenues, Bud- get and Hop Constraints	ganizer: Sven Mallach, session 127 DANIEL SCHMIDT, An extended formulation for the Steiner Forest Problem	IPpractice SVEN MALLACH, Compact Linearization for Zero-One Quadratic Programs
LEYTEIRE Build E, Z 1 3rd floor 4x30 min	Submodular Maximization, Organi MORAN FELDMAN, Deterministic and Com- binatorial Algorithms for Submodular Maximization	izer: Moran Feldman, session 29 BARUCH SCHIEBER, Constrained Submodu- lar Maximization via Greedy Local Search	SIMON BRUGGMANN, Submodular Maxi- mization through the Lens of Linear Pro- gramming	APPROX NIV BUCHBINDER, Constrained Submodular Maximization via a Non-symmetric Tech- nique
Salle 43 Build C, Z 1 3rd floor 4x30 min	Cycles and Trees, Organizer: Tobia: ALANTHA NEWMAN, Coloring and Dominat- ing Set on Digraphs with Bounded Inde- pendence Number	s Mömke, session 90 ANTONIOS ANTONIADIS, A PTAS for TSP with Hyperplane Neighborhoods	László Kozma, Maximum Scatter TSP in doubling metrics	APPROX RALF KLASING, Approximability of Hub Al- location Problems
Salle 36 Build B, Z 4 Intermediate 4x30 min	Bin Packing, Chair: Frits CR Spieks NADIA BRAUNER, Automatically computed bounds for the online bin stretching prob- lem	sma, session 344 Leан Epstein, Batched bin packing	SHLOMO KARHI, Online Packing of Arbi- trary Size Items into Designated and Mul- tipurpose Bins	APPROX FRITS SPIEKSMA, Partitioning Vectors into Quadruples
Salle 41 Build C, Z 1 3rd floor 4x30 min	Graphs and clutters, Organizer: Ge GUOLI DING, Packing cycles in a tourna- ment	rard Cornuejols, session 263 SHARAT IBRAHIMPUR, Min-Max Theorems for Packing and Covering Odd (u,v)-trails	Анмад Авді, Cuboids, a class of clutters	COMB DABEEN LEE, Deltas, extended odd holes and their blockers
Salle 39 Build E, Z 1 3rd floor 4x30 min	Graph theory, Chair: Thomas Belli ISABEL BECKENBACH, A Tight Cut Decompo- sition for Hypergraphs with Perfect Match- ings	tto, session 422 Хили Снеи, Densities, Matchings, and Fractional Edge-Colorings	YUTARO YAMAGUCHI, Making Bipartite Graphs DM-irreducible	COMB THOMAS BELLITTO, Optimal weighting to minimize the independence ratio of a graph
DURKHEIM Build A, Z 1 3rd floor 4x30 min	Parallel Computing and Sustainabi FEI FANG, Designing the game to play in se- curity and sustainability domains	lity, Organizer: Bistra Dilkina, sessio NAHID JAFARI, A Robust Optimization Model for an Invasive Species Manage- ment Problem	n 296 SALVADOR ABREU, Parallel HYbridization for Simple Heuristics	CP CIARAN McCREESH, Parallel Search, Order- ing, Reproducibility, and Scalability
Salle 47 Build A, Z 1 3rd floor 4x30 min	Performance Analysis, Organizer: O LARS KOTTHOFF, The Shapley Value and the Temporal Shapley Value for Algorithm Analysis	Charlotte Truchet, session 298 GUILHEM SEMERJIAN, Phase transitions in random constraint satisfaction problems	CHARLOTTE TRUCHET, A probabilistic study of the propagation of the AllDifferent con- straint	CP ALEXANDER TESCH, Improving Energetic Propagations for Cumulative Scheduling

Room	Optimizatio	n under Uncertainty	v - Thursday 8:30 AN	M – 10:30 AM
DENIGES	New results in chance-constrained	optimization, Chair: Bismark Singh,	session 489	Stoch
Build C, Z 5	ABEBE GELETU, Smoothing Methods for	RENÉ HENRION, Dynamic chance con-	ARMIN HOFFMANN, Differentiability of joint	BISMARK SINGH, Approximating Chance
Ground Floor	Chance Constrained Optimization of Ellip-	straints under random distributiond	chance constraints under weakened LICQ	Constrained Programs using Classical In-
4x30 min	tic PDE Systems			equalities
Salle 32	Topics in multistage and integer sto	chastic optimization, Organizer: Jin	n Luedtke, session 490	Stoch
Build B, Z 5	OZGE SAFAK, Three-Stage Stochastic Air-	MEHDI KARIMI-NASAB, State space analysis	CONG HAN LIM, Partitioned Subgradient	JIM LUEDTKE, Lagrangian dual decision
Ground Floor	line Scheduling Problem	of a stochastic DP to deal with curse of di-	Methods for Stochastic Mixed Integer Pro-	rules for multistage stochastic integer pro-
4x30 min		mensionality	gram duals	grams
Salle 37	K-adaptability, Organizer: Anirudh	Subramanyam, session 1		Robust
Build B, Z 4	JANNIS KURTZ, Min-max-min Robust Opti-	MICHAEL Poss, Min-Max-Min Robustness	JONAS PRUENTE, K-Adaptibility in Stochas-	ANIRUDH SUBRAMANYAM, K-Adaptability in
Intermediate	mization for the Capacitated Vehicle Rout-	for Combinatorial Problems with Bud-	tic Programming	Two-Stage Mixed-Integer Robust Opti-
4x30 min	ing Problem	geted Uncertainty		mization
Salle 33	New applications of robust optimiz	ations, Chair: Mirjam Duer, session 4	461	Robust
Build B, Z 5		JORGE VERA, Condition and geometric	ALEC KOPPEL, Compositional Stochastic	MIRJAM DUER, Robust Approach for Strati-
Ground Floor		measures for consistency in intertemporal	Optimization with Kernels for Robust On-	fied Sampling Allocation Problems
3x30 min		optimization	line Learning	
Salle 30	Stackelberg Games, Chair: Stefano	Coniglio, session 374		Game
Build B, Z 5	JEAN-BERNARD EYTARD, Tropical geometry	STEFAN WALDHERR, Bilevel Programming	STEFANO CONIGLIO, Computing Pessimistic	FRANCESCO CARUSO, A learning approach
Ground Floor	applied to bilevel programming	for Combinatorial Exchanges with Budget	Leader-Follower Equilibria with Multiple	for selection of subgame perfect Nash
4x30 min		Constraints	Followers	equilibria

Room	Continuo	ous Optimization - T	hursday 8:30 AM -	10:30 AM
Salle ARNOZAN Build Q, Z 8 Ground Floor 4x30 min	First-order methods: advances and AXEL BOEHM, Incremental mirror descent with random sweeping and a proximal step	applications, Organizer: Immanuel I IMMANUEL BOMZE, Active-set identification in Frank-Wolfe variants on the standard simplex	M. Bomze, session 3 MICHAEL KAHR, Robust StQP, first-order methods, and applications in social net- work analysis	NLP MATHIAS STAUDIGL, On the convergence of projection free Hessian Barrier-Gradient Algorithms
GINTRAC Build Q, Z 8 Ground Floor 4x30 min	Recent advances in interior point m MICHAEL TODD, The ellipsoid method redux	ethods and NLP, Organizer: Michae E. ALPER YILDIRIM, MILP Formulations for Globally Solving Nonconvex Standard Quadratic Programs	el Todd, session 77 YINYU YE, A One-phase Interior Point Method For Nonconvex Optimization	NLP OLIVER HINDER, A polynomial time interior point method for problems with nonconvex constraints
Salle 05 Build Q, Z 11 1st floor 4x30 min	Machine learning for optimisation, ADILET OTEMISSOV, Dimensionality reduc- tion for global optimisation: adaptive ran- dom embeddings	Organizer: Coralia Cartis, session 170 CORALIA CARTIS, Stochastic trust-region with global rate to second-order criticality	6 RADU BALTEAN-LUGOJAN, Online generation via offline selection of strong linear cuts from QP SDP relax.	NLP Boris Houska, Global optimization in Hilbert Space
Salle KC7 Build K, Z 10 Intermediate 2 4x30 min	First Order Methods I, Chair: Sand SANDRA SANTOS, Accelerating block coor- dinate descent methods with identification strategies	ra A. Santos, session 436 FRANCESCO LOCATELLO, On Matching Pur- suit and Coordinate Descent	TIANYI LIN, A Unified Scheme to Accel- erate Adaptive Cubic Regularization and Gradient Method	NLP FELIX LIEDER, Performance Estimation for Fixed Point Iterations
Salle LC4 Build L, Z 9 Intermediate 1 4x30 min	Universal methods in non-smooth a ALEXANDER TYURIN, Universal Nesterov's gradient method in general model concep- tion	nalysis , Organizer: Alexander Gasnik SERGEY GUMINOV, Dual universal conjugate gradient type methods.	xov, session 53 ALEXANDER TYTOV, Universal Proximal Method for Variational Inequalities	NonSmooth DMITRY KAMZOLOV, Universal Intermedi- ate Gradient Method for Convex Problems with Inexact Oracle
Salle 8 Build N, Z 12 4th floor 4x30 min	First-order methods for nonconvex MILA NIKOLOVA, Alternating structure- adapted proximal gradient descent for non- convex problems	and pathological convex problems, WENBO GAO, ADMM for Multiaffine Con- strained Optimization	Organizer: Wotao Yin, session 183 ERNEST RYU, Douglas-Rachford Splitting for Pathological Convex Optimization	NonSmooth Wotno YIN, Polynomial-Time Run-and- Inspect Method for Certain Nonconvex Optimization
Salle 9 Build N, Z 12 4th floor 4x30 min	Non smooth optimization for lage so Yu Du, Selective Linearization for Multi- block Statistical Learning Problems	cale poblems, Organizer: Yu Du, sess DMITRY GRISHCHENKO, Randomized Proxi- mal Algorithm with Automatic Dimension Reduction.	sion 556 SHUMMIN NAKAYAMA, Inexact proximal memoryless spectral-scaling MBFGS method	NonSmooth MIN TAO, Decomposition methods for com- puting d-stationary solutions for noncon- vex problem
Salle 20 Build G, Z 6 1st floor 4x30 min	Computer-assisted analyses of optin YOEL DRORI, Efficient First-order Methods for Convex Minimization: A Constructive Approach	nization algorithms I , Organizer: Ac DONGHWAN KIM, Optimized first-order method for decreasing gradient of smooth convex functions	drien Taylor, session 19 BRYAN VAN Scoy, The Fastest Known First- Order Method for Smooth Strongly Con- vex Minimization	SDP LAURENT LESSARD, Analysis of First-Order Algorithms for Distributed Optimization
Salle LC5 Build L, Z 10 Intermediate 1 4x30 min	Geometry and duality in convex opt DAVID GUTMAN, Condition Numbers for Convex Functions with Polytope Domains	timization, Organizer: Javier F Pena, JAVIER PENA, Conditioning of conic systems via the Grassmannian manifold	session 160 JOURDAIN LAMPERSKI, Solving linear in- equalities via non-convex optimization	SDP GABOR PATAKI, On positive duality gaps in semidefinite programming
Salle 06 Build Q, Z 11 1st floor 4x30 min	Nonlinear Optimization and Variat YAXIANG YUAN, Theory and Application of p-regularized subproblem with $p > 2$	ional Inequalities I , <i>Organizer</i> : Xin I JINYAN FAN, A semidefinite relaxation algo- rithm for polynomial equations	Liu, session 140 Cong Sun, On a special robust optimiza- tion problem	Variat LIANG ZHAO, Limited memory algorithms with cubic regularization
Salle KC6 Build K, Z 10 Intermediate 1 4x30 min	Recent Advances on Stochastic Alg QIHANG LIN, Level-Set Methods for Finite- Sum Constrained Convex Optimization	Orithms and Machine Learning , Org XUDONG LI, Estimation of Markov Chain via Rank-constrained Likelihood	zanizer: Shiqian Ma, session 202 GUANGHUI LAN, Random gradient extrapo- lation for distributed and stochastic opti- mization	RandomM RENBO ZHAO, An Accelerated Algorithm for Stochastic Three-composite Optimiza- tion
Salle 21 Build G, Z 6 Intermediate 4x30 min	Bayesian and Randomized Optimiz MICKAEL BINOIS, Improving Bayesian opti- mization via random embeddings	ation I, Chair: Stefan M Wild, sessio SAUL TOSCANO-PALMERIN, Bayesian Opti- mization of Expensive Integrands	n 39 CLÉMENT ROYER, Using Models in Allocate and Partition Algorithms	DerFree Youssef Diouane, A Rigorous Framework for Efficient Global Optimization
Salle AURIAC	Optimal Control of Variational Ine	qualities and Complementarity Syste	ems,	Control
Build G, Z 6 1st floor 4x30 min	Chair: Alexandre Vieira, session 336 ALEXANDRE VIEIRA, Optimal control of Lin- ear Complementarity Systems	ANNE-THERESE RAULS, Computing a Sub- gradient for the Solution Operator of the Obstacle Problem	AILYN STÖTZNER, Optimal Control of Ther- moviscoplasticity	ANNA WALTER, Optimal Control of Elasto- plasticity Problems with Finite Deforma- tions

Room	Specific Models, A	Algorithms, and Soft	tware - Thursday 8:.	30 AM – 10:30 AM
FABRE Build J, Z 8 Ground Floor 4x30 min	First-order methods for large-scale STEPHEN VAVASIS, A single potential govern- ing convergence of CG, AG and Geometric Descent	CONVEX problems, Organizer: Stephe MERT GURBUZBALABAN, Robust Accelerated Gradient Method	n A Vavasis, session 316 PETER RICHTARIK, Randomized methods for convex feasibility problems and applica- tions to ML	Learning YAOLIANG YU, Bregman Divergence for Stochastic Variance Reduction
Salle DENUCE Build Q, Z 8 Ground Floor 4x30 min	Large-scale learning, Organizer: Lo MIKHAIL BELKIN, The power of interpola- tion: on the effectiveness of SGD in mod- ern learning	Precision to High-Precision for Machine Learning	GERGELY NEU, Iterate averaging as regular- ization for stochastic gradient descent	Learning LORENZO ROSASCO, CONVERGENCE VS stabil- ity: a regularization view on accelerated methods
Salle 16 Build I, Z 7 2nd floor 4x30 min	Dynamical systems, control and op FREDRIK BAGGE CARLSON, Tangent Space Regularization for Neural-Networks Mod- els of Dynamical Systems	timization, Chair: Benjamin Recht, so BENJAMIN RECHT, The sample complexity of iteratively learning to control	ession 470 NIKOLAI MATNI, Optimization-based adap- tive control using a system level approach.	Learning ASHIA WILSON, Lyapunov arguments in op- timization
Salle LA4 Build L, Z 8 Basement 4x30 min	Multi-commodity flows, Organizer: DANIEL GRANOT, Monotonicity and confor- mality in multicommodity network-flow problems	Ralf Borndörfer, session 358 EDUARDO MORENO, An exact method based on adaptive partitions for the Stochastic Fixed-Charge MCF	STEFANO GUALANDI, Approximate Wasser- stein Distances of order 1 between images	Network RALF BORNDÖRFER, Metric Inequalities for Routings on Direct Connections in Line Planning
PITRES Build O, Z 8 Ground Floor 3x30 min	Vehicle Routing I, Chair: Guy Desa	Ulniers, session 411 GUY DESAULNERS, The vehicle routing problem with stochastic and correlated travel times	BOLOR JARGALSAIKHAN, An exact formula- tion for pickup and delivery problem with divisible split-ups	Logistics MATHIAS KLAPP, Branch-and-Price for Probabilistic Vehicle Routing
Salle 23 Build G, Z 6 3rd floor 4x30 min	Unit Commitment Problem and Ap ALLEGRA DE FILIPPO, Off-line/on-line opti- mization under uncertainty on energy man- agement	plications, Organizer: Tiziano Parria DMITRI THOMOPULOS, A Constrained Short- est Path formulation for the Hydro Unit (Commitment Problem	ni, session 94 [RAFAEL LOBATO, Stochastic Hydrothermal Unit Commitment via Multi-level Scenario Trees	Energy TIZIANO PARRIANI, CHP Systems Optimiza- tion in Presence of Time Binding Con- straints
Salle 24 Build G, Z 6 3rd floor 4x30 min	Mining Applications, Organizer: A MARCOS GOYCOOLEA, Lane's Algorithm Re- visisted	exandra M Newman, session 172 PETER MALKIN, A MILP-based approach for loader assignment in open pit schedul- ing	LEVENTE SIPEKI, Optimal Selection of Sup- port Pillars in an Underground Mine	Energy ALEXANDRA NEWMAN, Mathematical Meth- ods for Complex Underground Design and Scheduling Problems
Salle 22	Numerically Efficient Methods for I	Piecewise Algorithmic Differentiatio	n II,	Algo
Build G, Z 6 2nd floor 4x30 min	LAURENT HASCOET, Pushing the Algorith- mic Differentiation tool Tapenade towards new languages	Peter Stechlinski, Generalized Sensitivity Analysis of Nonlinear Programs	KAMIL KHAN, Evaluating generalized derivatives efficiently for nonsmooth composite functions	LISA HEGERHORST, Optimality Conditions for Nonsmooth Constrained Optimization Problems
Salle 18 Build I, Z 7 1st floor 3x30 min	High-Performance Computing in O	ptimization I, Organizer: Kibaek Ki TED RALPHS, Performance Assessment for Parallel MILP Solvers	m, session 271 YUJI SHINANO, Ubiquity Generator Frame- work to parallelize state-of-the-art B and B based solvers	Algo KIBAEK KIM, Branching Strategies on De- composition Methods for Mixed-Integer Programming

Room	Inv	vited Talks - Thursd	ay 8:30 AM – 10:30	AM
SIGALAS	Energy, Chair: Kazem Abbaszadeh,	session 387		INTERFACE
Build C, Z 2	RISHI ADIGA, Optimization Models for	RODOLPHE GRISET, Static robustness for	GABRIELA MASCHIETTO, Optimization of dis-	MAHBUBEH HABIBIAN, Demand and reserve
2nd floor	Geothermal Energy	EDF nuclear long term production plan-	trict heating production operations	co-optimization for a price-making con-
4x30 min		ning		sumer of electricity

Room	Invited Talks - Thursday 11:00 AM – 12:00 AM			
Auditorium	The BARON software for MINLP,	Organizer: Claudia D Ambrosio, sess	ion 547	SEMI
Build Symph H, Z 0	NIKOLAOS SAHINIDIS, The BARON software	-		
Gambetta	for MINLP			
1x60 min				
BROCA	Cutting Planes in the Extended Spa	ce, Organizer: Adam N Letchford, se	ession 543	KEYNOTE
Build W, Z 0	OKTAY GUNLUK, Cutting Planes in the Ex-			
3rd floor	tended Space			
1x60 min				
DENIGES	Effective Scenarios and Scenario Ro	eduction for Risk-Averse Stochastic	Programs,	KEYNOTE
	Organizer: Jim Luedtke, session 544		-	
Build C, Z 5	TITO HOMEM-DE-MELLO, Effective Scenar-			
Ground Floor	ios and Scenario Reduction for Risk-			
1x60 min	Averse Stochastic Programs			

Room	Invited Talks - Thursday 1:30 PM – 2:3	0 PM
Auditorium	Randomness, risk and electricity prices, Organizer: Michael C Ferris, session 554	PLENARY
Build Symph H, Z 0	ANDY PHILPOTT, Randomness, risk and	
Gambetta	electricity prices	
1x60 min		

Room	Discrete Optimizat	tion & Integer Progr	amming - Thursday	3:15 PM – 4:45 PM
Salle 42	Non-Standard IP Methods, Chair:	Ulf Friedrich, session 513		IPtheory
Build C, Z 1	TRI-DUNG NGUYEN, Algebraic Geometry	WOLFGANG KELLER, A hierarchy of cutting	ULF FRIEDRICH, A power series algorithm	
3rd floor 3x30 min	and Integer Programmings in Cooperative	plane operators based on lineality spaces	for non-negative IP	
Salle 43	Polynomial Time Solvable Problem	s and Complete Descriptions Chair	· Andreas Bärmann session 520	IBtheory
Build C. Z 1	A-E FALO. Extreme points for scheduling	LARS ROHWEDDER. On Integer Program-	ANDREAS BÄRMANN, The Clique Problem	Irtheory
3rd floor	around a common due date	ming and Convolution	with Multiple-Choice Constraints and Two	
3x30 min			Polynomial Subcases	
Salle 44	Computational Issues in Integer Pr	ogramming, Organizer: Ricardo Fuk	asawa, session 289	IPpractice
Build C, Z 1	LAURENT POIRRIER, Implementation and	GIULIA ZARPELLON, Learning MILP resolu-	ALEKSANDR KAZACHKOV, Computational	
3rd floor 3x30 min	performance of the simplex method	tion outcomes before reaching time-fimit	Strengthening Approaches	
Salle 39	Convexification and more (I) Orga	nizer: Ion Lee session 62	Strengthening Approaches	MINI D
Build E, Z 1	MARCIA FAMPA, Treating indefinite	Amélie Lambert, Valid inequalities for	Luze Xu, More Virtuous Smoothing	
3rd floor	quadratic and bilinear forms in MINLP	QCQPs		
3x30 min				
Salle 34	Heuristics in MINLP, Chair: Bertra	nd Travacca, session 276		MINLP
Build B, Z 3	João Lauro Faco', MINLP solutions using	CHRISTOPH NEUMANN, Feasible rounding	BERTRAND TRAVACCA, Dual Hopfield Mod-	
3x30 min	a Generalized-OKASF solver	lems	gramming	
Salle 35	MINLP with quadratic terms. Cha	<i>ir</i> : Enrico Bettiol, session 282	B	MINLP
Build B, Z 4	FABRICIO OLIVEIRA, The p-Lagrangian	ETIENNE LECLERCQ, A dedicated version of	ENRICO BETTIOL, Simplicial Decomposition	
Intermediate	method for MIQCQPs	BiqCrunch for solving the Max-Stable Set	for quadratic convex 0-1 problems	
3x30 min		problem exactly		
LEYTEIRE	Approximation Algorithms for Clu	stering., Organizer: Deeparnab Chak	rabarty, session 32	APPROX
Build E, Z I 3rd floor	JAROSLAW BYRKA, COnstant-Factor Approx-	AMIT JAYANT DESHPANDE, Sampling-based	Center Problems with Outliers	
3x30 min	initiation for ordered k-wedian	argorithms and clustering with outliers	Center 1 roblems with Outliers	
Salle 36	Routing and Inventory, Organizer:	Dorit Hochbaum, session 343	1	APPROX
Build B, Z 4	ALEXANDER BIRX, Improved upper bound	JAN MARCINKOWSKI, A 4/5 - Approxima-	DORIT HOCHBAUM, The gap between the	
Intermediate	for online Dial-a-Ride on the line	tion Algorithm for the Maximum Traveling	continuous and discrete Replenishment	
3x30 min		Salesman Problem	Schedule problem	
SIGALAS Build C. 7.2	Algorithms for ISP, Organizer: Ola	Businesson, session 239	Or & Survision A Constant factor Approx	COMB
2nd floor	nath TSP	positions for Connectivity Problems	imation Algorithm for the Asymmetric	
3x30 min	r	F,	Traveling Salesman	
DURKHEIM	Applications of CP, Organizer: Lou	is-Martin Rousseau, session 284		СР
Build A, Z 1	OLIVIER BACHOLLET, A Constraint Program-	FLORIAN GRENOUILLEAU, A Decomposition	LOUIS-MARTIN ROUSSEAU, A CP Approach	
3rd floor	ming approach to a meal delivery problem	Approach for the Home Health Care Rout-	to the Traveling Salesman Problem in the	
5x30 min		ing and Scheduling Problem	Postal Services	

Room	Optimizatio	on under Uncertaint	y - Thursday 3:15 P	M – 4:45 PM
Salle 32	Theoreticals and practicals aspects	of decomposition algorithms for mu	ltistage stochastic problems: 1,	Stoch
	Organizer: Vincent Leclère, session 2	246		
Build B, Z 5	DAVID WOZABAL, Computing parameter	NILS LÖHNDORF, Modeling time-dependent	BENOÎT LEGAT, Computing ellipsoidal con-	
Ground Floor	sensitivities for discrete time Markov de-	randomness in stochastic dual dynamic	trolled invariant sets for stochastic pro-	
3x30 min	cision processes	programming	gramming	
DENIGES	Distributionally Robust Optimizati	on With Marginals and Cones,		Robust
	Organizer: Divya Padmanabhan, sess	ion 354		
Build C, Z 5	LOUIS CHEN, Distributionally Robust	GUANGLIN XU, A Copositive Approach for	DIVYA PADMANABHAN, Tractable Solutions	
Ground Floor	Linear and Discrete Optimization with	Decision Rule Approximations of Multi-	to Distributionally Robust Optimisation	
3x30 min	Marginals	Stage RO		
Salle 37	Non-linear robust optimization, Cl	nair: Laurent Alfandari, session 460		Robust
Build B, Z 4	DANIEL DE ROUX, Graph learning with the	LAURENT ALFANDARI, Robust optimization	SUH-WEN CHIOU, A mathematical program	
Intermediate	Wasserstein metric	for non-linear impact of data variation	for signal control with equilibrium con-	
3x30 min			straints	
Salle 30	Generation and Representation Alg	gorithms in Multiobjective Optimiza	tion,	Game
	Organizer: Michael Stiglmayr, sessio	n 267		
Build B, Z 5	BRITTA SCHULZE, On a Polynomial Bound	KATHRIN KLAMROTH, Efficient Representa-	MICHAEL STIGLMAYR, Representation of the	
Ground Floor	in Multiobjective Unconstrained Combina-	tion of the Search Region and Generic Al-	non-dominated set of multiobjective opti-	
3x30 min	torial Optimization	gorithms in MOCO	mization problems	

Room	Continu	ous Optimization - '	Thursday 3:15 PM -	- 4:45 PM
Salle 05	Methods of Optimization in Riema	nnian Manifolds, Organizer: Orizon	P Ferreira, session 21	NLP
Build Q, Z 11	PAULO OLIVEIRA, A two-phase proximal-	GLAYDSTON BENTO, Proximal point	ORIZON FERREIRA, Newton's Method for	
1st floor	like algorithm in domains of positivity	method in multiobjective optimization	Locally Lipschitz vector Fields on Rie-	
3x30 min		on Hadamard manifolds	mannian Manifolds	
Salle 8	Extending the Reach of First-Orde	r Methods, Part II, Organizer: Robe	rt M. Freund, session 286	NonSmooth
Build N, Z 12	MATUS TELGARSKY, Risk and parameter	ALP YURTSEVER, A conditional gradient	ROBERT FREUND, Accelerating Greedy Co-	
4th floor	convergence of logistic regression	framework for composite convex mini-	ordinate Descent Methods	
3x30 min		mization		
Salle LC5	Noncommutative polynomial optin	ization: semidefinite relaxations, fre	e convexity and applications to	SDP
	quantum information II. Organizer	: Monique Laurent, session 18		
Build L, Z 10	SANDER GRIBLING, Quantifying entangle-	ANTONIOS VARVITSIOTIS, Graph isomor-	FARID ALIZADEH, Optimization over uni-	
Intermediate 1	ment of a quantum correlation using poly-	phism: conic relaxations and physical in-	variate polynomials: Algorithms and ap-	
3x30 min	nomial optimization	terpretation	plications	
Salle 06	Nonlinear Optimization and Variat	ional Inequalities II, Organizer: Cor	ng Sun, session 141	Variat
Build Q, Z 11	XIN LIU, On the Lojasiewicz Exponent of	BIN GAO, A Parallelizable Algorithm for	YANFEI WANG, A Joint Matrix Minimization	
1st floor	Quadratic Minimization with Sphere Con-	Orthogonally Constrained Optimization	Approach for Seismic Wavefield Recovery	
3x30 min	straint	Problems		
Salle KC6	Asynchronous Parallel and Distrib	uted Optimization, Organizer: Wotad	o Yin, session 200	RandomM
Build K, Z 10	RÉMI LEBLOND, Improved asynchronous	ROBERT HANNAH, Why Asynchronous Al-	RENATO MONTEIRO, Complexity of a	
Intermediate 1	parallel optimization analysis for incre-	gorithms may Drastically Outperform Tra-	quadratic penalty accelerated inexact	
3x30 min	mental methods	ditional Ones	proximal point method	
Salle AURIAC	Theory and Methods for ODE- and	PDE-Constrained Optimization 2,	Chair: Johann Schmitt, session 333	Control
Build G, Z 6	JOHANN SCHMITT, Optimal boundary control	PALOMA SCHÄFER AGUILAR, Numerical ap-		
1st floor	of hyperbolic balance laws with state con-	proximation of optimal control problems		
2x30 min	straints	for conservation laws		

Room	Specific Models, Algorithms, and Softw	vare - Thursday 3:15 PM – 4:45 PM
FABRE Build J, Z 8 Ground Floor 3x30 min	Accelerating Learning, Organizer: Martin Takac, session 322 DAMEN SCIEUR, Nonlinear Acceleration of SAI PRANECTH KARIMIREDDY, Accelerated ANGE Stochastic Algorithms First Order Methods with Approximate Distri Subproblems	ELIA NEDICH, Optimal Algorithms for ributed Optimization
Salle 16 Build I, Z 7 2nd floor 3x30 min	Robust first order methods, Organizer: Fatma Kilinc-Karzan, session 332 DIMITRIS PAPAILIOPOULOS, Robust dis- SURIYA GUNASEKAR, Characterizing implicit NAM tributed learning in the face of adversity bias of optimization and its role in generalization for Reliation	I Ho-NGUYEN, First-order Framework Robust Convex Optimization
PITRES Build O, Z 8 Ground Floor 2x30 min	Path Problems, Chair: Yanchao Liu, session 453 EDWARD HE, Dynamic Discretization Dis- covery Algorithms for Time-Dependent Path Problems YANCHAO LIU, Drone Path Planning and Aerial Traffic Flow	Logistics
Salle 18 Build I, Z 7 1st floor 3x30 min	Production Planning, Chair: Michel Siemon, session 531 TOBLAS HOFMANN, ISO-PESP - A PESP JULIA LANGE, A matheuristic for the block- Variant for Minimizing the Cycle Time of ing job shop problem with a tardiness ob- Production Lines jective Indust	HEL SIEMON, Value-based End-to-End luction Planning in Non-Ferrous Metal Istry
Salle DENUCE Build Q, Z 8 Ground Floor 3x30 min	Optimization Models for Renewable Energy Integration 1, Organizer: Luis F PANAGIOTIS ANDRIANESIS, Optimal Grid Op- eration and DER Dispatch in Active Distri- bution Networks GALINA ORLINSKAVA, Bilevel Optimization Luis for Flexible Electricity Supply Tariff De- sign	F Zuluaga, session 120 Energy S ZULUAGA, Competitive equilibrium revenue adequate prices for robust en-
Salle 23 Build G, Z 6 3rd floor 3x30 min	Progress in Algorithms for Optimal Power Flow Problems II, Chair: Miguel ALVARO LORCA, Robust Optimization for KSENIA BESTUZHEVA, Global Optimization ANDR the Alternating Current Optimal Power for Alternating Current Optimal Power Flow Problem Flow	I F Anjos, session 509 REAS GROTHEY, Optimal Power Flow er based on HELM
Salle 24 Build G, Z 6 3rd floor 3x30 min	Electricity Generation Scheduling and Dispatch, Chair: Christophe Duhamel, BESTE BASCIFTCI, Data-Driven Generator DIEGO JIMENEZ, A Network Flow-Based CHRIS Maintenance and Operations Scheduling MILP Formulation for the Thermal Unit under Uncertainty Commitment Problem with D	I, session 511 Energy ISTOPHE DUHAMEL, solving the Short- a Hydrothermal Scheduling problem Linearizations
Salle LA4 Build L, Z 8 Basement 3x30 min	Inverse Problems in Physics, Chair: Leo Liberti, session 391 ANDREAS ALPERS, On the reconstruction of ABHAN KLEMM, Grain map reconstruction Leo I lattices from diffraction data by means of generalized Voronoi Diagrams tance	LIBERTI, Scientific applications of dis- e geometry
Salle 22 Build G, Z 6 2nd floor 3x30 min	High-Performance Computing in Optimization II, Chair: Joaquim Dias Garci TIMOTEJ HRGA, High-Performance Solver BRIAN DANDURAND, Bilevel optimization JOAQU for Binary Quadratic Problems BRIAN DANDURAND, Bilevel optimization JOAQU mapproaches for power system security MIPs	cia, session 466 Algo DUM DIAS GARCIA, Genesys: Simulat- Power Systems by Solving Millions of %

Room	Discrete Optimizat	ion & Integer Progr	amming - Thursday	5:00 PM - 6:30 PM
Salle 43 Build C, Z 1 3rd floor 4x20 min	Advances in Integer Programming, LAURA SANITÀ, On the diameter of the frac- tional matching polytope	Organizer: Robert Hildebrand, sessi GONZALO MUÑOZ, Treewidth-based Exten- sion Complexity Lower Bounds	on 227 IGOR MALINOVIC, On valid inequalities for knapsack polytopes	IPtheory ROBERT HILDEBRAND, Polynomial Integer Programming in Fixed Dimension and Ap- plications in FPT
Salle 42 Build C, Z 1 3rd floor 3x30 min	Cutting Planes for Special Problem RUSLAN SIMANCHEV, Separation problem for 2-partition inequalities	s, Chair: Eleazar Madriz, session 517 ΜΑκό Ησκνήτι, Polyhedral results for po- sition based scheduling of chains on a sin- gle machine	ELEAZAR MADRIZ, A Benders procedure for the b-complementary multisemigroup dual program.	IPtheory
Salle 36 Build B, Z 4 Intermediate 4x20 min	Matching Problems, Organizer: Set THANH NGUYEN, Stable Matching with Pro- portionality Constraints	gio García Quiles, session 175 MAXENCE DELORME, Mathematical models for stable marriage problems with ties	WILLIAM PETTERSSON, Improvements in Kidney Exchange Programme Models for Large-Scale Programmes	IPpractice PETER BIRO, Stable project allocation under distributional constraints
Salle 44 Build C, Z 1 3rd floor 4x20 min	Cutting Planes, <i>Chair</i> : Fabrizio Mai EDVIN ABLAD, A tighter ILP model and an improved branching for a load-balancing problem	rinelli, session 485 Sávio Dias, A Branch-and-Cut Approach for the Car Renter Salesman Problem	GEORGIA SOULI, On Lifted Cover Inequal- ities: A New Lifting Procedure with Un- usual Properties	IPpractice FABRIZIO MARINELLI, Exploiting star in- equalities for the maximum quasi-clique problem
DURKHEIM Build A, Z 1 3rd floor 3x30 min	Convexification and more (II), Org. CHRISTOPH BUCHHEIM, Binary Program- ming with Semilinear Elliptic PDE- constraints	anizer: Akshay Gupte, session 106 CHRISTOPHER COEY, Using algebraic struc- ture to accelerate polyhedral approxima- tion	ANDRES GOMEZ, Quadratic optimization with M-matrices and semi-continuous variables	MINLP
Salle 34 Build B, Z 3 1st floor 3x30 min	Relaxations in MINLP, Chair: Jan RALF LENZ, Tight Convex Relaxations for Expansion Planning of Potential Driven Networks	Kronqvist, session 280 JAN KRONQVIST, Using Regularization and Second Order Derivatives with Outer Ap- proximation	ANDREAS LUNDELL, The Supporting Hyperplane Optimization Toolkit for Convex MINLP	MINLP
Salle 35 Build B, Z 4 Intermediate 3x30 min	Applications in MINLP, Chair: Jus Do Duc LE, Modeling and optimization of traffic at traffic-light controlled intersec- tions	to Puerto, session 283 MAXIMILIAN MERKERT, Flow-based ex- tended formulations for feasible traffic light controls	JUSTO PUERTO, MINLP for pricing transac- tion costs in different models of portfolio selection	MINLP
LEYTEIRE Build E, Z 1 3rd floor 3x30 min	Approximation Algorithms for Opt THOMAS KESSELHEIM, Prophet Inequalities Made Easy: Stochastic Opt. by Pricing Non-Stochastic Inputs	imization under Uncertainty, Orgau MAX KLIMM, Hiring Secretaries over Time: The Benefit of Concurrent Employment	nizer: Marc Uetz, session 95 MARC UETZ, Greed is Good - Online Al- gorithms for Stochastic Unrelated Machine Scheduling	APPROX
Salle 41 Build C, Z 1 3rd floor 3x30 min	Approximation algorithms for com Organizer: Thomas Rothvoss, sessior Монт SixGH, Approximation Algorithms for Diverse Subset Selection Problems	binatorial optimization problems, 1265 Roy Schwarz, Local Guarantees in Graph Cuts and Clustering	ANUPAM GUPTA, Scheduling Stochastic Jobs on Unrelated Machines	СОМВ
Salle 39 Build E, Z 1 3rd floor 4x20 min	Heuristics for combinatorial optimi CID DE SOUZA, A Matheuristic to the Fire- fighter Problem on Graphs	Zation problems, <i>Chair</i> : Evren Gund SHINSAKU SAKAUE, Accelerated Best-first Search for Monotone Submodular Func- tion Maximization	y, session 428 KAZUYA FUKUOKA, A statistical stopping criterion for simulated annealing	COMB EVREN GUNEY, A Lagrangean Relaxation Based Heuristic For Efficient Influence Maximization

Room	Optimizatio	on under Uncertaint	y - Thursday 5:00 P	M – 6:30 PM
Salle 32	Theoreticals and practicals aspects	of decomposition algorithms for mu	ltistage stochastic problems: 2,	Stoch
	Organizer: Vincent Leclère, session 2	247	· ·	
Build B, Z 5	OSCAR DOWSON, The practitioners guide to	FRANÇOIS PACAUD, Decomposing Dynamic	VITOR DE MATOS, Energy portfolio opti-	LUIZ CARLOS DA COSTA JUNIOR, Stochastic
Ground Floor	SDDP: lessons from SDDP.jl	Programming equations: from global to	mization for Brazilian distribution compa-	programming framework for risk aversion
4x20 min		nodal value functions	nies: a multistage	representation with SDDP
Salle 30	Topics in multistage stochastic opti	mization, Chair: Felipe Beltrán, sessi	on 492	Stoch
Build B, Z 5	MIN ZHANG, Risk Minimization, Regret	DAVID HEMMI, Recursive Evaluate and Cut	FELIPE BELTRÁN, Stochastic dual dynamic	
Ground Floor	Minimization and the Progressive Hedging	for combinatorial Multistage Programs	programming with Chebyshev centers	
3x20 min	Algorithm			
DENIGES	Robust Optimization under Data U	ncertainty, Organizer: Omid Nohada	ani, session 98	Robust
Build C, Z 5	MATTHIAS EHRGOTT, Uncertain Data Envel-	SOROOSH SHAFIEEZADEH, Wasserstein Distri-	ZHENZHEN YAN, Appointment Scheduling	
Ground Floor	opment Analysis	butionally Robust Kalman Filtering	Under Time-Dependent Patient No-Show	
3x30 min	~		Behavior	
Salle 37	Combinatorial robust optimization	I, Organizer: Marc Goerigk, session	167	Robust
Build B, Z 4	ARTUR PESSOA, Solving the Robust Capac-	MARC GOERIGK, Approximating combi-	OYKU NAZ ATTILA, Reformulations for Ro-	CHRISTOPH HANSKNECHT, ast robust shortest
Intermediate	itated Vehicle Routing Problem Under De-	natorial optimization problems with the	bust Lot-Sizing Problem with Remanufac-	path computations
4x20 min	mand Uncertainty	OWA criterion	turing	
Salle 31	Approximation in dynamic program	mming, Chair: Philip C Placek, session	on 382	Markov
Build B, Z 5	WOLF KOHN, Dynamic Programming via a	PHILIP PLACEK, An Incremental Probability	BENOÎT TRAN, A Stochastic Min-plus Algo-	
Ground Floor	State Abstract Machine and Implementa-	Model for Dynamic Systems	rithm for Deterministic Optimal Control	
3x30 min	tion			

Sale 65 Polynomial and tensor optimization II. Organizer: Jiawang Nie, session 6 Numerical State	Room	Continu	ous Optimization - '	Thursday 5:00 PM -	· 6:30 PM
Build Q. 211 Doing Hussions, Computing Imvariant mea, Aswa, Ziou, Completely positive tensorre- strates with the Lasserre hierarchy Lobis Gouvera, Phaseless rank of a matrix Xizzuns, Ziuxon, A Complete Semidefinite Algorithm for Detecting Copositive Matri- Sale KC7 Build K, Z10 First Order Methods II, Chair: Guillaume Berger, session 437 Size KC7 Size KC7 Build K, Z10 Gluba Optimization 3, Chair: Jean-Baptist Hirart-Urruty, session 503 First Order Primal-Dual Method Instruction of propagation bound improvements for global optimization and output propagation bound improvements for global optimization and under population based global opti- solver using interval unions Theorem Montaneous MinLP Intervendiate 1 Build C, Z6 Efficient Size Herisan based Yawanso Zukao, An efficient agare Herisan Akawa Herisan Yawanso Zukao, An efficient agare Herisan Akawa Herisan Yawanso Zukao, An efficient agare Herisan Akawa Herisan Yawanso Zukao, An efficient agare Herisan Akawawa Herisan Yawanso Zukao, An efficient agare Herisan	Salle 05	Polynomial and tensor optimization	II, Organizer: Jiawang Nie, session	6	NLP
1st fborier sures with the Lassere hierarchy covery with minimal nuclear value Algorithm for Detecting Copositive Matri- ces and Tensors Sale KC7 First Order Methods II, Chair: Guillaume Berger, session 437 NF Sale KC7 First Order Methods II, Chair: Guillaume Berger, session 437 NF Sale R20 Global Optimization 3, Chair: Jean-Baptist Hiriart-Urruty, session 503 NF Sale C0 Global Optimization 3, Chair: Jean-Baptist Hiriart-Urruty, session 503 Massan, Nawa, Tighter McCornick re-Shows Boutauas, Nonlinear branch-and- laxations through subgradient propagation Massan, Sale 20 Clobal Optimization of Control teases and Sale 20 Sale C4 Efficient Semismooth Newton Methods for Large Scale Statistical Optimization of granizer: Deleng Sun, session 123 Massan, Lax, Efficient Session 123 Messan, Lax, Efficient Session 123 Messan, Sale 20 Sale 80 Different faces of nonsmoothnees in optimization. Organizer: Tim Hohe isel, session 212 Messan, Applications of the general- grobilem in and balf stranger stranger Soultage and the projector over the Birkhoff polytope problems Sale 80 Different faces of nonsmoothnees in optimization. Organizer: Tim Hohe isel, session 212 Messan Massan Massa	Build Q, Z 11	DIDIER HENRION, Computing invariant mea-	ANWA ZHOU, Completely positive tensor re-	JOÃO GOUVEIA, Phaseless rank of a matrix	XINZHEN ZHANG, A Complete Semidefinite
4x20 min [ces and Tensors 9x10 KC7 First Order Methods II, Chair: Guillaume Berger, session 437 NxP Build KZ 10 [GuLAAMB Beaces, Hölder-continuous] Assesses Ass, Accelerating Nonnegative Lar Zuso, First-Order Primal-Dual Method accuracy NxP Build GZ 6 [Gubad Optimization 3, Chair: Gean-Baptist Hiriart-Urruty, session 503 Mastir X-actorization 3, Chair: Gean-Baptist Hiriart-Urruty, session 503 Mastir X-actorization 3, Chair: Gean-Baptist Hiriart-Urruty, session 503 Insodular, population based global opti- a modular, population based global	1st floor	sures with the Lasserre hierarchy	covery with minimal nuclear value		Algorithm for Detecting Copositive Matri-
Sale KC7 Build X, 210 Intermediate 2 3:20 min First Order Methods II, Chair: Guillaume Berger, session 437 GUILAUME Backar, Holder-continuous J. Anosans NAN, Calcelerating Nonegative Lut Zuxo, First-Order Primal-Dual Method gradient and first-order approximation accuracy Num End Control Num End State Sale 20 Build C, 26 Sale CC2 Clobal Optimization 3. Chair: Jean-Baptist Hirart-Urruty, session 503 Jacoam. Nansks, Tipher Maconick re- laxations through subgradient propagation in a BaB Framework Clobal Optimization of Tixoo Mosrasstra, A. regrorous MINLP and State St	4x20 min		-		ces and Tensors
Build K.Z 10 GuiLALME Beaces, Holder-continuous Ascesses Asc, Accelerating Nonegative Lar Zuo, First-Order Primal-Dual Method gradient and first-order approximation Main's Factorization Algorithmus using Ex- for Nonlinear Convex Cone Programs accuracy accuracy accuracy in trapolation algorithmus using Ex- for Nonlinear Convex Cone Programs accuracy ac	Salle KC7	First Order Methods II, Chair: Gui	llaume Berger, session 437		NLP
Intermediate 2 s200 min gradient accuracy Interpolation Namise Excuracy for Nonlinear Convex Cone Programs accuracy Constraints Sale 200 Build G, 260 Clobal Optimization 3. Chair: Jean-Baptist Hiriart-Urruty, session 503 Global Optimization 3. Chair: Jean-Baptist Hiriart-Urruty, session 503 Global Optimization 3. Chair: Jean-Baptist Hiriart-Urruty, session 503 Global Optimization based global opti- in a BaB framework Global Optimization 3. Chair: Jean-Baptist Hiriart-Urruty, session 503 Global Optimization 2. Chair: Summotion Strates, Chaires 2. Chair	Build K, Z 10	GUILLAUME BERGER, Hölder-continuous	ANDERSEN ANG, Accelerating Nonnegative	LEI ZHAO, First-Order Primal-Dual Method	
3420 min accuracy [trapolation] Global Optimization 3, Chuir Jean Baptis Hiriart-Urruty, session 503 Global Optimization 3, Chuir Jean Baptis Hiriart-Urruty, session 503 Global Optimization 3, Ghuir Jean Baptis Hiriart-Urruty, session 503 Global Optimization 3, Ghuir Jean Baptis Hiriart-Urruty, session 503 Global Optimization 3, Ghuir Jean Baptis Hiriart-Urruty, session 503 Global Optimization 3, Ghuir Jean Baptis Hiriart-Urruty, session 503 Global Optimization 2, Ghuir Jean Baptis Hiriart-Urruty, session 503 Global Optimization 3, Ghuir Jean Baptis Hiriart-Urruty, session 503 Global Optimization of Laxo Morrashtes, A policity and more and the programming file, Organizer: Defeng Sun, session 123 NumSmod Morrashtes, A polications of the projector over the Birkhoff polytope problems NumSmodh Sale 8 Different faces of nonsmoothness in optimization, Organizer: Tim Hoheisel, session 212 NumSmodh NumSmodh Sale AURIC Recent Advances in Conic Programming GLO organizer: Maskazu Muramatsu, session 84 Sup Sup Sale 4012C Uvas Sras, Global optimization of hemes solving, Chair: Kurt Majewski, session 497 Yuzau Wasc, Acceleration of the a class of QOPs Yuzau Wasc, Acceleration of the classeration of the classeration of the classeration of the solved of the projector over global optimization of the solved of QOPs Sale LCC Using coning programming in problems solving, Chair: Kurt Majewski, session 437 Yuzau Wasc, Acceleration of the classeration of the classognoblem minitization of the moment systems	Intermediate 2	gradient and first-order approximation	Matrix Factorization Algorithms using Ex-	for Nonlinear Convex Cone Programs	
Sale 20 Baild G, 26 Global Optimization 3, Chair: Jean-Baptist Hiriart-Urruty, session 503 Constant	3x20 min	accuracy	trapolation		
Build G, Z 6 Ist floor hast door through subgradient propagation bound improvements for global optimiza- ion Misruk Audia, pAVA implementation of TiAco MorxANIER, A rigorous MINLP solver using interval unions interprocessor of the solver using interval unions Solver Autonom MorXANIER, A rigorous MINLP solver using interval unions Sale LC4 Efficient Semismooth Newton Methods for Large Scale Statistical Optimization Problems, Organizer: Defeng Sun, session 123 NumSmooth Build L, Z 9 Intermediate 1 Misruk LN. Efficient sparse Hessian based Sale S Yacmso Zitawo, An efficient algorithm algorithm problems Different faces of nonsmoothness in optimization, Organizer: Tim Hoheisel, session 212 NumSmooth Build N, Z 12 Ath floor Ourvas Stras, Global optimization of GSIPs using disjunctive programming SA30 min Amaguna Methods for Large Superinear Convert (Dampizer) The Hoursea, Applications of the general- composite Optimization NumSmooth Massaur Muramatsu, session 84 Build N, Z 12 Ath Moor Sale AURICE Recent Advances in Onic Programming SA10 without State condition in the dist condition in programming Ath for Linearly Constrained Convet, lens by Semidefinite and Copositive Pro- largangian-DNN method for a class gramming Yuzur Waxg, Acceleration of the programming Sale LCS Build D, Z 10 Mixma Fare D Sousa, Lanear Relaxation Assk Urrer, Feedback Controller and Az20 min Just A Lanear Relaxation Assk Urrer, Feedback Controller and programming Just Ausminu Necutive Micro Space for Solving Nonsmooth Opti- mization Problems Yuzure Waxg, Asceleration of acloss of QOPS <td< td=""><td>Salle 20</td><td>Global Optimization 3, Chair: Jean</td><td>-Baptist Hiriart-Urruty, session 503</td><td></td><td>Global</td></td<>	Salle 20	Global Optimization 3, Chair: Jean	-Baptist Hiriart-Urruty, session 503		Global
1st floor laxations through subgradient propagation in a BaB framework bound improvements for global optimization a modular, population based global optimization solver using interval unions Sale LC4 Efficient Semismooth Newton Methods for Large Scale Statistical Optimization of the projector over the Birkhoff polytope ass0 min Numescale sparse efficient algorithm algorithms for the clustered lasso problem for solving large scale sparse group Lass problems Deresso Sw, On the efficient computation of the projector over the Birkhoff polytope problems Numescale sparse for solving large scale sparse group Lass problems Sale 8 Build X, 210 Different faces of nonsmoothness in optimization of Asstatus Scale. Superlimization Organizer: Tim Hoheisel, session 212 Numescale problems Sale AURIAC Baild Gor Semidefinite programming Camposite Optimization (Composite Optimization programming Organizer: Maskazu Muramatsu, session 84 programming Superlimitation (Composite Optimization programming Superlimitation (Composite Optimization programming Superlimitation (Composite Optimization (Composite Optimization (Composite Optimization (Composite Optimization programming Superlimitation (Composite Optimization (Composite Optim	Build G, Z 6	JAROMIL NAJMAN, Tighter McCormick re-	SIMON BOULMIER, Nonlinear branch-and-	MESTER ABIGÉL, JAVA implementation of	TIAGO MONTANHER, A rigorous MINLP
4x20 min in a BaB framework tion mizer package Salle LC4 Efficient Semismooth Newton Methods for Large Scale Statistical Optimization Problems, Organizer: Defeng Sun, session 123 Nuestanooth Build L, 29 Imaxua Ln, Efficient sparse Hessian based Yaxourso Zhaxoa, An efficient algorithm intermediate 1 Different faces of nonsmoothness in optimization GSIPs using disjunctive programming Yaxourso Zhaxoa, An efficient algorithm problems Different faces of nonsmoothness in optimization of the projector over the Birkhoff polytope problems Nuestanooth Salle K Different faces of nonsmoothness in optimization GSIPs using disjunctive programming On Methods for PLQ Conver- Composite Optimization Sumamatus, session 84 Sumamatus, session 84 Salle AURAC Build G, Z6 Recent Advances in Conic Programming without Stater condition Nuestanooth Optimization Aux ore prese, A Majorized Newton-CG Yosano Emaxa, Analysis of Positive Sys- Watawa Fire Ds Sous, Linear Relaxation Anax Kurruck, Feedback Controller and Juue Suwak, Stabilization of the moment- Recent Advances in Conic Programming Nuestanooth Aux for Linearly Constrained Convex tems by Semidefinite and Copositive Fro- gramming Yuzuw Waxa, Acceleration of the copols Sup dialstraine Salle AURAC Build Q, Z10 Vianaxa Jier Db Sousa, Linear Relaxation Anax Kurruck, Feedback Controller and Juue Suwak, Stabilization of the moment- k20 min Vuzuw Waxa, Acceleration of the pased constraints Sup dialstracent Advanores in Conic Programsing for ouvertain mech	1st floor	laxations through subgradient propagation	bound improvements for global optimiza-	a modular, population based global opti-	solver using interval unions
Sale LC4 Efficient Semismooth Newton Methods for Large Scale Statistical Optimization Problems, Organizer: Defeng Sun, session 123 Numsmooth Organizer: Defeng Sun, session 123 Numsmooth Build L, Z9 Intermediate 1 3:30 min MiraNa Ln, Efficient sparse Hessian based agorithms for the clustered lasso problem by oblems Yasourso Zuase, An efficient algorithm problems DEFENG SUN, On the efficient computation algorithms for the clustered lasso problem problems Numsmooth Sale S Build N, Z10 Different faces of nonsmoothness in S30 min of primization, Organizer: Tim Hoheisel, session 212 Numsmooth Sale AURIAC 4th floor Recent Advances in Conic Programming S30 min Image Subjective programming sec of QN Methods for PLQ corves by method for semidefinite programming hat Moor Numstanesu, session 84 Spr Yuzaru Spr Yuzaru Numsthooth Auxon, Acceleration of the cluster optimization without Stater condition Spr Yuzaru Spr	4x20 min	in a BaB framework	tion	mizer package	
Build L, Zion Use Constraint Description Subsection Subsection <th< td=""><td>Salle LC4</td><td>Efficient Semismooth Newton Meth</td><td>ods for Large Scale Statistical Optin</td><td>nization Problems,</td><td>NonSmooth</td></th<>	Salle LC4	Efficient Semismooth Newton Meth	ods for Large Scale Statistical Optin	nization Problems,	NonSmooth
Build L, Z-9 Mixtx Lix, Eincreint sparse Hessian based algorithms for the clustered lasso problems Txx00iko ZiAxX6, An efficient algorithm Different SOK, On the efficient computation problems 3x00 min algorithms for the clustered lasso problems for solving large scale sparse group Lasso (of the projector over the Birkhoff polytope problems isseed for solving large scale sparse group Lasso (of the projector over the Birkhoff polytope problems isseed for solving large scale sparse group Lasso (of the projector over the Birkhoff polytope problems isseed for solving large scale sparse group Lasso (of the projector over the Birkhoff polytope gence of QN Methods for PLQ convex- ized matrix-fractional function isseed for solving large scale sparse group Lasso (of QN for plantization) Salle AURIAC Na20 min Recent Advances in Conic Programming ALM for Linearly Constrained Convex intends for semidefinite programming hor programming an problems solving. Chair: Kurt Majewski, session 497 Yuzuru Waxe, Acceleration of the programming sop gramming Salle LC5 Using coning programming in problems solving. Chair: Kurt Majewski, session 497 Yuzuru Waxe, Stabilization of the moment- for ACDFF Kurt Matewski, Maximum Volume In- programming Sop for ACDFF Salle 60 Vu-decomposition techniques for nonsmooth optimization, Organizer: Based Constraints Sop for onese for a class systems Sop for acces for Social Sagastizabal, session 158 Kurt Matewski, Maximum Volume In- for ACDFF Build Q, Z 11 Superlinear convergence David Sossa, sesss	D 111 70	Organizer: Defeng Sun, session 123			
Macmodule 1 algorithms for the clustered lass problems for solving lage scale space group Lasso in the projector over the Birkhon polytope Sale a Different faces of nonsmoothness in optimization. Organizer: Tim Hoheisel, session 212 Nonsmooth. Build N, Z 12 Ourwer, Strue, Global optimization of ArkAM Excut, Superlinear Conver-Tim Houriseux, Applications of the general-ized matrix-fractional function Nonsmooth. Sale AURIAC Recent Advances in Conic Programming IIII. Organizer: Maskazu Muramatsu, session 84 sop Sult do for semidefinite programming vithout Slater condition Twos Perret, A Majorized Newton-CG Yostnio Enthana, Analysis of Positive Sys- IYUznu Waws, Acceleration of the programming without Slater condition Sop Sulid L, Z 10 Using coning programming in problems solving, Chair: Kurt Majewski, session 497 Sop Sale 40C5 Using constraints Soptimization, Organizer: Claudia Sagastizabal, session 158 Vurter Maxewski, Maximum Volume In- Sale 406 VU-decomposition techniques for nonsmooth optimization, Organizer: Claudia Sagastizabal, session 158 Variat Sund Q, Z 11 Sinva Luc, An epsilon-VU algorithm with Claupon Sossa, session 371 Variat Build Q, Z 11 Fackersco Jaka-Mokost, A global-local ap- Moure, Jakastato Maka, Sossa, Sossion 371 Wariat Soure Convergence Build Q, Z 6 Recent Pro	Build L, Z 9	MEIXIA LIN, Efficient sparse Hessian based	YANGJING ZHANG, An emicient algorithm	DEFENG SUN, On the efficient computation	
SAMUAL Different faces of nonsmoothness in optimization, Organizer: Tim Hoheisel, session 212 Nonsmooth Build N, Z 12 Ouvers Strein, Global optimization of GIPs using disjunctive programming ABRAHAM ENGLE, Superlinear Convert-Tim Honeisel, session 212 Nonsmooth Sale A URIAC Recent Advances in Conic Programming Image: Constraint Const	$\frac{1}{2}$ $\frac{2}{2}$ $\frac{2}$	algorithms for the clustered lasso problem	nor solving large scale sparse group Lasso	of the projector over the Birkholl polytope	
Sale 6 Different faces of nonsmounders in optimization. Organizer: Init Hoffesti, session 212 Nonsmooth Build N, Z 12 Ourves Trues, Giola optimization of ARAMA Exole, Superlinear Conver-Tim Hoffesti, session 44 Nonesting Converting and the session 242 Nonsmooth Sale AURIAC Recent Advances in Conic Programming III, Organizer: Masakazu Muramatsu, session 84 Superlinear Converting and the session 242 Superlinear Converting and the session 242 Yuzhu Wasa, Acceleration of the session 242 Sale AURIAC Recent Advances in Conic Programming III, Organizer: Masakazu Muramatsu, session 84 Superlinear Convex tems by Semidefinite and Copositive Properlinear Convex tems by Semidefinite and Copositive Properlinear Convex tems by Semidefinite programming Yuzhu Wasa, Acceleration of the session 497 Sale LC5 Using coning programming in problems solving, Chair: Kurt Majewski, session 497 Superlinear Convex tems by Semidefinite programming for properlinear convex tems by Semidefinite programming for properlinear convex tems based approach to prove global optimizity setting for AcOPF Kurt Malewski, Maximum Volume Inscripted Ellipsoids for Specific Absorption Rate Bounds in MRI Sale AK02AN Sutu Lu, An epsilon-VU algorithm with Crauping for convex finite-max like Method for Solving Nonsmooth Optimization Problems Mariat Suture Superlinear convergence Vuriation Analysis 5, Organizer: David Sossa, session 371 Nariat Build Q, Z 8 Fraxersco Jaka-Moroxu, A global-local approablense intermediate 1 <td>SX30 IIIII</td> <td>D:@</td> <td>problems</td> <td></td> <td></td>	SX30 IIIII	D:@	problems		
Build N, Z 12 OUVER STEIN, Global optimization of ABRAMM Excle, Superimeter Convex- Gromosite Optimization of Composite Optimization of the general- Composite Optimization of Composite Optimization of Composite Optimization of Composite Optimization of the general- Composite Optimization of Composite Optimization of Composite Optimization of Composite Optimization of the general- text of Composite Optimization of Composite Optimization of Composite Optimization of the general- composite Optimization of Composite Optimization of Composite Optimization of Composite Optimization of the Composition State Condition Supervision State Condition Sale LCS Using coning programming in problems solving, Chair: Kurt Majewski, session 497 Supervision of the moment- for ACOPF Kurr Marewski, Maximum Volume In- lopology Design for uncertain mechanical systems Supervision of the moment- for ACOPF Kurr Marewski, Maximum Volume In- composition techniques for nonsmooth optimization, Organizer: Claudia Sagastizabal, session 158 Kurr Marewski, Maximum Volume In- mization Problems Salle 06 VU-decomposition techniques for nonsmooth optimization, organizer: Claudia Sagastizabal, session 158 Kurr Marewski, Relaxed Peracerhan- mization Problems Kurr Knake Relaxed Peracerh mariation Problems Salle ARNOZAN Build Q, Z 8 fround Floor 4x20 min Variational Analysis 5, Organizer: David Sossa, session 371 Francisco JarMoros, global-local ap- poblems Mutiobjective Optimization of Multiobjective Optimization Problems Chere KHIAN SIM, Relaxed Peracerman- machford Splititing Method: C	Salle 8	Different faces of nonsmoothness in	optimization, Organizer: 11m Hone	The Harmon Annia time of the second	NonSmooth
4un nool OSH'S using usguitetive programming gene of QN Methods for PLQ Convex- fize maintx-indictional function Salo min Composite Optimization Composite Optimization Superstance Superstanc	Build N, Z 12	CSIDe using disjunctive programming	ABRAHAM ENGLE, Superlinear Conver-	I'M HOHEISEL, Applications of the general-	
SABO MIRIN [Composite Optimization] [Composite Optimization] Soperation Salle AURIAC Recent Advances in Conic Programming III, Organizer: Masakazu Muramatsu, session 84 Soperation Build G, Z 6 Makoro YAMASHTA, A path-following method for semidefinite programming II, Taxo Penet, A Majorized Newton-CG Yostine EBRIARA, Analysis of Positive Systems by Semidefinite and Copositive Programming II ProgramiII Programming II ProgramiII Programming II Pr	4011001 3x30 min	Osirs using disjunctive programming	Composite Optimization	ized matrix-mactional function	
Sale AUKAC Recent Advances in Done Programming 11, Organizer: Masakalu Mutramatsu, session 84 Subplied G, Z 6 Maximum Karvan Aanalysis of Positive Systems of QPs Yuznu Waxe, Acceleration of the Lagrangian-DNN method for a class of QOPs Build G, Z 10 Using coning programming in problems solving. Chair: Kurt Majewski, session 497 submethod for semidefinite and Copositive Programming for Avaiantsu, Session 497 subplied Kurt Majewski, Session 497 Sale LC5 Using coning programming in problems solving. Chair: Kurt Majewski, session 497 submethod for semidefinite in Topology Design for uncertain mechanical based approach to prove global optimality is scribed Ellipsoids for Specific Absorption Rate Bounds in MRI Sale 06 VU-decomposition techniques for nonsmooth optimization, Organizer: Claudia Sagastizabal, session 158 Variat Sup of line arc convergence VU-decomposition techniques for nonsmooth optimization for convex finite-max like Method for Solving Nonsmooth Optimization Problems Daving Nonsmooth Optimization of Daving Nonsmooth Optimization Problems Sale ARNOZAN Variational Analysis 5, Organizer: David Sossa, session 371 FW-algorithm for convex finite-max like Method for Solving Nonsmooth Optimization Problems Chare KHAN SM, Relaxed Peaceman-Rachord Solving Nonsmooth Optimization Problems Sale KC6 Recent Programs with complementarity constraints Mater Solving Nonsmooth Optimization Problems Mutramatsu, Session 302 RamdomM Suid Q, Z 10 Churko	SAJO IIIII	Descrit Adverses in Conte Drammer	Composite Optimization		
Build Q, Z of At 20 min MAROTO TAMASHTA, A path-following without Slater condition IXG PEIPE, A Majorized Newton-CG Programming Toshio EbiHARA, Analysis of Positive Sys- programming Toshio EbiHARA, Analysis of Positive Pys- gramming Toshio EbiHARA, Analysis of Positive Pys- programming Toshio EbiHARA, Analysis of Positive Pys- gramming Lagrangian-DNN method for a class of QOPs Sale LC5 Using coning programming in problems solving. Chair: Kurt Majewski, session 497 Sop Build L, Z 10 Viu-Mark JEFFE DE Sousa, Linear Relaxation of Maximum k-Cut with Semidefinite- of Maximum k-Cut with Semidefinite- systems Avia KurtTich, Feedback Controller and systems JULE SLIWAK, Stabilization of the moment- based approach to prove global optimality systems Kurt Majewski, Maximum Volume In- based approach to prove global optimality systems Kurt Majewski, Kashiization of the moment- based approach to prove global optimality systems Kurt Majewski, Kashiization of the moment- based approach to prove global optimality superlinear convergence Kurt Majewski, A derivative- WU-algorithm for convex finite-max problems Claudia Sagastizabal, session 158 Variat Sale ARNOZAN Build Q, Z 8 Ground Floor Variational Analysis 5, Organizer: Proach for stochastic programs with com- plementarity constraints Micues Sawa, Conical Regularization of Multiobjective Optimization Problems Davis Sossa, Complementarity problems with respect to Loewnerian cones CHEE KHIAN SIM, Relaxed Peaceman- Rachford Splitting Method: Convergence Study ReadomM Build K, Z	Salle AURIAC	Recent Advances in Conic Program	Turning III, Organizer: Masakazu Mur	amatsu, session 84	SDP
Nation Interned tof semidentine programming programming ALW for Lineary Constrainted Convey lens by Semidentine and Copositive Pro- gramming of QOPs Interned tof a class of QOPs Salle LC5 Using coning programming in problems solving, Chair: Kurt Majewski, session 497 sup Suid L, Z 10 Intermediate 1 Maximum K-Cut with Semidefinite- Based Constraints Ava Kurrner, Feedback Controller and Julie Surwak, Stabilization of the moment- systems Kurr Malewski, Maximum Volume In- scribed Ellipsoids for Specific Absorption Rate Bounds in MRI Salle 06 VU-decomposition techniques for nonsmooth optimization, Organizer: Surgentinear convergence Claubia Agastrizabal, A derivative-free problems Claubia Agastrizabal, A derivative-free problems Lucas Sinões, A Fast Gradient Sampling- mization Problems Variat Salle ARNOZAN Build Q, Z 8 Build K, Z 10 Intermediate 1 Build Q, Z 6 Build Q, Z 10 Advances in DFO III, Chair: Juan C Meza, session 496 Build Q, Z 10 Intermediate 1 Build Q, Z 6 Build G, Z 6 Build G, Z 6 Build G, Z 6 Build C, Z 6 Builtermediate Build C, Z 6 Build C, Z 6 Build C, Z 6 Build	Build G, Z 0	MAKOTO YAMASHITA, A path-following	IANG PEIPEI, A Majorized Newton-CG	YOSHIO EBIHARA, Analysis of Positive Sys-	I UZHU WANG, Acceleration of the
FAZO Initial Window State Conduction Programming Programming Programming Programming Programming Programming Programming State LCS State LCS Using coning programming in problems solving, Chair: Kurt Majewski, Session 497 State LCS State LCS Using coning programming in problems solving, Chair: Kurt Majewski, Session 497 State LCS State LCS State LCS Using coning programming in problems solving, Chair: Kurt Majewski, Session 497 State LCS State LCS <th< td=""><td>$4x^{20}$ min</td><td>without Slater condition</td><td>Programming</td><td>aramming</td><td>of OOPs</td></th<>	$4x^{20}$ min	without Slater condition	Programming	aramming	of OOPs
Sale CCS Using coming programming in problems soring. Chair: Kurt Majewski, session 497 Support 100 (Max Byerre De Sousa, Linear Relaxation An Kurrneth, Feedback Controller and Jute Stuwak, Stabilization of the moment Az20 min Kurr Majewski, Maximum Volume In-Topology Design for uncertain mechanical systems based approach to prove global optimality based approach to prove global optimality and the Bounds in MRI Support Az20 min Vu-decomposition techniques for normooth optimization, Organizer: Claudia Sagastizabal, session 158 Vu-decomposition techniques for normooth optimization, Organizer: Claudia Sagastizabal, session 158 Variat Sule 06 VU-decomposition techniques for normooth optimization, Organizer: Claudia Sagastizabal, session 158 Variat Variat Suld 0, Z 11 Stud Lut, An epsilon-VU algorithm with Superlinear convergence CLAUDIA SAGASTIZABAL, A derivative-free Lucas SIMOEs, A Fast Gradient Sampling-W14-algorithm for convex finite-max inzation Problems Variat Salle ANOZAN Variational Analysis 5, Organizer: David Sossa, session 371 Variation Problems Variat Franctisco Jara-Moroni, A global-local approach for stochastic programs with complementarity constraints Multiobjective Optimization Problems David David Sossa, Complementarity problems CHEE KHIAN SIM, Relaxed Peaceman-Rachford Splitting Method: Convergence Study Salle KC6 Recent Progress on Second-order Type Optimization Methods, Organizer: Andre Milzarek, session 302 CHING-PEI LEE, Inexact Successive JIANG HU, Structured Quasi-Newton	S-U-LCE	Using coning programming in proh	loma colving Chain Kunt Majawali	accession 407	01 Q013
Build U, Z 10 VILMAR JEPTE DE 3005A, Lineal Relaxation AKA KOTHER, Feedback Controller and John Stawk, Stabilization of the Indirection Seribed Ellipsoids for Specific Absorption Rate Bounds in MRI Sale 06 VU-decomposition techniques for nonsmooth optimization, Organizer: Claudia Sagastizabal, session 158 variat Build Q, Z 11 SHUAL LU, An epsilon-VU algorithm with Subscription for convex finite-max systems CLAUDIA SAGASTIZABAL, A derivative-free LUCAS SIMÕES, A Fast Gradient Sampling-inzation Problems Variat Sale ARNOZAN Build Q, Z 8 Ground Floor of for stochastic programs with complementarity constraints David Sossa, session 371 Variat Sale KC6 Recent Progress on Second-order Type Optimization Methods, Organizer: Advented for Optimization Methods, Organizer: Advented for Optimization for Converse optimization for Optimization Methods, Organizer: Advented for optimization for Optimization Methods, Organizer: Advented for optimization for Convergence Study CHEE KHAN SIM, Relaxed Peaceman-Rachford Splitting Method: Convergence Study Sale KC6 Recent Progress on Second-order Type Optimization Methods, Organizer: Andre Milzarek, session 302 RandomM Build K, Z 10 Advances in DFO III, Chair: Juan C Meza, session 496 Nonconvex optimization of DI- JUAN Meza, Pattern Search Methods With Newton Advence advector optimization of Newton method for nonsmooth nonconvex optimization DerFree Build G, Z 6 Jan Filling, Uilizing Non-Commutative Richards advector optimization of DI- JUAN Meza, Pattern Search Methods Wi	Salle LC5	Using coming programming in prop	And Kurring, Chair: Kurt Majewski,	Session 497	SDP
Machine I Bit Machine I <td>Intermediate 1</td> <td>of Maximum k-Cut with Semidefinite-</td> <td>Topology Design for uncertain mechanical</td> <td>based approach to prove global optimality</td> <td>scribed Ellipsoids for Specific Absorption</td>	Intermediate 1	of Maximum k-Cut with Semidefinite-	Topology Design for uncertain mechanical	based approach to prove global optimality	scribed Ellipsoids for Specific Absorption
Salle 06 VU-decomposition techniques for nonsmooth optimization, Organizer: Claudia Sagastizabal, session 158 Variat Suid Q, Z 11 SHUAI LIU, An epsilon-VU algorithm with superlinear convergence CLAUDIA SAGASTIZABAL, A derivative-free UCAS SINGES, A Fast Gradient Sampling- like Method for Solving Nonsmooth Opti- mization Problems Variat Salle ARNOZAN Variational Analysis 5, Organizer: David Sossa, session 371 Variational Analysis 5, Organizer: David Sossa, session 371 Variat FRANCISCO JARA-MORONI, A global-local ap- proach for stochastic programs with com- plementarity constraints Mitoueu SAMA, Conical Regularization of Multiobjective Optimization Problems DAVID Sossa, Complementarity problems with respect to Loewnerian cones CHEE KHAN SIM, Relaxed Peaceman- Rachford Splitting Method: Convergence Study Salle KC6 Recent Progress on Second-order Type Optimization Methods, Organizer: Andre Milzarek, session 302 RandomM Build K, Z 10 Lues, Inexact Successive Optimization Jans Hu, Structured Quasi-Newton ality Constraints ANDRE MILZAREK, A stochastic semis- motoh Newton method for nonsmooth onconvex optimization More in Deriver and the province ontimization DerFree Build G, Z 6 Jan FEILING, Utilizing Non-Commutative New in Derivertion Richard CARTER, Generalization of DI- Juan MEZA, Pattern Search Methods With New in Derivertion DerFree	4x20 min	Based Constraints	systems	for ACOPF	Rate Bounds in MRI
Sale 00 VO-decomposition recomplexition pointing for industriation, or gainzer is the derivative-free Lucas States as resisting is a problem. Volat Lu, An epsilon-VU algorithm with superlinear convergence Volat Lu, An epsilon-VU algorithm is a problem. V	Salla 06	VIL decomposition techniques for n	onsmooth ontimization Organizar:	Claudia Sagastizabal session 158	Nucleo Bounds in Miler
Duild Q, Z II Show ELE, All clyshols VC algorithm will CLAMP A global-local approximation for convex finite-max Deckas Show ELE, All as Orlaudin Sampling- inization Problems Sale ARNOZAN Build Q, Z 8 Ground Floor Variational Analysis 5, Organizer: David Sossa, session 371 Ike Method for Solving Nonsmooth Opti- mization Problems Variat Ground Floor FRANCISCO JARA-MORONI, A global-local ap- proch for stochastic programs with com- plementarity constraints MiGuel SAMA, Conical Regularization of Multiobjective Optimization Problems David Sossa, Sossa, Complementarity problems with respect to Loewnerian cones CHEE KHAIN SIM, Relaxed Peaceman- Rachford Splitting Method: Convergence Study Salle KC6 Build K, Z 10 Ditrimization Recent Progress on Second-order Type Optimization Methods, Organizer: Andre Milzarek, session 302 CHING-PEI LEE, Inexact Successive JANG H U, Structured Quasi-Newton ANDRE MILZAREK, A stochastic semis- moth Newton method for nonsmooth nonconvex optimization RandomM Salle 21 Build G, Z 6 JAN FEILING, Utilizing Non-Commutative Recenter optimization Meza, session 496 JAN FEILING, Utilizing Non-Commutative Ricera Dotimization DerFree Build G, Z 6 JAN FEILING JAN FEILING, Utilizing Non-Commutative Ricera Dotimization Recenter Stoce Structure Daterminical Stoce optimization DerFree	Build O 7 11	Suuar Lui An ensilon VII algorithm with	CLAUDIA SACASTIZADAL A derivative free	Lucas Sugastizadai, Session 156	variat
State initial Convergence Put digmining for scondy mine for convex mine mix income on Sofying Romandon Option State ARNOZAN Build Q, Z.8 Ground Floor Variational Analysis 5, Organizer: David Sossa, session 371 initiation Problems initiation Problems Salle ARNOZAN Build Q, Z.8 Ground Floor FRANCISCO JARA-MORONI, A global-local ap- proach for stochastic programs with com- plementarity constraints Misure ISAMA, Conical Regularization of Multiobjective Optimization Problems Dwito Sossa, Complementarity problems with respect to Loewnerian cones CHEE KHIAN SIM, Relaxed Peaceman- Rachford Splitting Method: Convergence Study Salle KC6 Build K, Z10 Intermediate 1 3x20 min Recent Progress on Second-order Type Optimization Methods, Organizer: Andre Milzarek, session 302 CHING-PEI LEE, Inexact Successive Quadratic Approximation for Regularized inality Constraints Anobes Milzarek, session 302 method For Optimization with Orthogo- nonconvex optimization RandomM Salle 21 Build G, Z 6 Jan FEILING, Utilizing Non-Commutative Recenter optimization RicraRab CARTER, Generalization of DI- Juan Meza, Pattern Search Methods With Auroe in Decipation DerFree	1st floor	superlinear convergence	WIL-algorithm for convex finite-max	like Method for Solving Nonsmooth Onti-	
Salle ARNOZAN Build Q, Z 8 Ground Floor Variational Analysis 5, Organizer: David Sossa, session 371 Variational Analysis 5, Organizer: State Placeman- Rachford Splitting Method: Convergence Placeman- Rachford Splitting Method: Convergence Study Salle KC6 Recent Progress on Second-order Type Optimization Methods, Organizer: Andre Milzarek, session 302 RandomM Build K, Z 10 CHING-PEI LEE, Inexact Successive Juadratic Approximation for Regularized Juang Hu, Structured Quasi-Newton nality Constraints ANDRE MILZAREK, A stochastic semis- moth Newton method for nonsmooth nonconvex optimization RandomM Salle 21 Advances in DFO III, Chair: Juan C Meza, session 496 DerFree Juang Huc Richard CARTER, Generalization of DI- Juan Meza, Pattern Search Methods With protein daviation DerFree Build G, Z 6 Jan FEILING, Utilizing Non-Commutative Richard D CARTER, Generalization of DI- Juan Meza, Pattern Search Methods With DerFree	3x30 min	supermea convergence	problems	mization Problems	
Build Q, Z 8 FRANCISCO JARA-MONONI, A global-local approach for stochastic programs with complementarity constraints Miduel SAMA, Conical Regularization of Multiobjective Optimization Problems DAVID SossA, Complementarity problems CHEE KHIAN SIM, Relaxed Peaceman-Rachford Splitting Method: Convergence Study Salle KC6 Recent Progress on Second-order Type Optimization Methods, Organizer: Andre Milzarek, session 302 RandomM Build K, Z 10 CHING-PEI LEE, Inexact Successive Quadratic Approximation for Regularized JAING HU, Structured Quasi-Newton ANDRE MILZAREK, A stochastic semis-motoh Newton method for nonsmooth nonconvex optimization motoh Newton method for nonsmooth nonconvex optimization Salle 21 Advances in DFO III, Chair: Juan C Meza, session 496 DerFree Build G, Z 6 JAN FEILING, Utilizing Non-Commutative RICHARE, Generalization of DI-JUAN MEZA, Pattern Search Methods With Later and Optimization DerFree	Salle ARNOZAN	Variational Analysis 5, Organizer: 1	David Sossa, session 371		Variat
Ground Floor 4x20 min proach for stochastic programs with complementarity constraints Multiobjective Optimization Problems with respect to Loewnerian cones Rachford Splitting Method: Convergence Study Sale KC6 Build K, Z10 Intermediate 1 3x20 min Recent Progress on Second-order Type Optimization Methods, Organizer: Andre Milzarek, session 302 RandomM Sale 21 Build G, Z 6 Advances in DFO III, Chair: Juan C Meza, session 496 DerFree DerFree Build G, Z 6 JAN FEILING, Utilizing Non-Commutative Intermediate Recent Progress on Second-order Type Optimization of DI- ality Constraints JAN MEX MILZAREK, A stochastic semis- moth Newton method for nonsmooth onconvex optimization DerFree	Build Q, Z 8	FRANCISCO JARA-MORONI, A global-local ap-	MIGUEL SAMA, Conical Regularization of	DAVID Sossa, Complementarity problems	CHEE KHIAN SIM, Relaxed Peaceman-
4x20 min plementarity constraints Study Sale KC6 Recent Progress on Second-order Type Optimization Methods, Organizer: Andre Milzarek, session 302 RandomM Build K, Z10 Quadratic Approximation for Regularized Optimization JANG HU, Structured Quasi-Newton ANDRE MILZAREK, A stochastic semis- naity Constraints MILZAREK, A stochastic semis- noconvex optimization Build G For Optimization DerFree Sale 21 Advances in DFO III, Chair: Juan C Meza, session 496 DerFree DerFree DerFree Build G, Z 6 JAN FEILING, Utilizing Non-Commutative Intermediate RCHARD CARTER, Generalization of DI- Juan Meza, Pattern Search Methods With Surgenze for Surface Structure Detarmin DerFree	Ground Floor	proach for stochastic programs with com-	Multiobjective Optimization Problems	with respect to Loewnerian cones	Rachford Splitting Method: Convergence
Salle KC6 Recent Progress on Second-order Type Optimization Methods, Organizer: Andre Milzarek, session 302 RandomM Build K, Z10 CHING-PEI LEE, Inexact Successive JANG Hu, Structured Quasi-Newton ANDRE MILZAREK, A stochastic semis- mooth Newton method for nonsmooth nonconvex optimization Moother Milzarek, session 302 RandomM Salle 21 Advances in DFO III, Chair: Juan C Meza, session 496 DerFree DerFree Build G, Z 6 JAN FEILING, Utilizing Non-Commutative RCHARD, CARTER, Generalization of DI- JUAN MEZA, Pattern Search Methods With supporting interacting Surfaces for Surface Structure Datatoming DerFree	4x20 min	plementarity constraints			Study
Build K, Z 10 CHING-PEI LEE, Inexact Successive JIANG Hu, Structured Quasi-Newton ANDRE MILZAREK, A stochastic semis- mooth Intermediate 1 3x20 min Quadratic Approximation for Regularized Optimization Intermediate Intermediate More Milzarek, A stochastic semis- mooth More Milzarek, A stochastic semis- nonconvex optimization More Milzarek, A stochastic semis- mooth More Milzarek, A stochastic semis- More Milzarek, A stochastic semis- mooth More Milzarek, A stochast	Salle KC6	Recent Progress on Second-order T	ype Optimization Methods, Organiz	zer: Andre Milzarek, session 302	RandomM
Intermediate 1 3x20 min Quadratic Approximation for Regularized method For Optimization with Orthogo- Definization mooth Newton method for nonsmooth nonconvex optimization Salle 21 Advances in DFO III, Chair: Juan C Meza, session 496 DerFree Build G, Z 6 Jan FeiLing, Utilizing Non-Commutative Richard CARTER, Generalization of DI-JUAN MEZA, Pattern Search Methods With Intermediate DerFree	Build K, Z 10	CHING-PEI LEE, Inexact Successive	JIANG HU, Structured Quasi-Newton	ANDRE MILZAREK, A stochastic semis-	
3x20 min Optimization Inality Constraints nonconvex optimization Sale 21 Advances in DFO III, Chair: Juan C Meza, session 496 DerFree Build G, Z 6 Jan Feilung, Utilizing Non-Commutative Richard D CARTER, Generalization of DI-JUAN MEZA, Pattern Search Methods With DerFree Intermediate Marcin D are on Derivative Prese on Optimization DECT algorithm supporting interactive Supporting Supp	Intermediate 1	Quadratic Approximation for Regularized	method For Optimization with Orthogo-	mooth Newton method for nonsmooth	
Salle 21 Advances in DFO III, Chair: Juan C Meza, session 496 DerFree Build G, Z 6 JAN FEILING, Utilizing Non-Commutative Richards CARTER, Generalization of DI-JUAN MEZA, Pattern Search Methods With DerFree Intermediate More in Derivative Richards Control in the supporting interactive Surgeone for Surface Structure Determined DerFree	3x20 min	Optimization	nality Constraints	nonconvex optimization	
Build G, Z 6 JAN FEILING, Utilizing Non-Commutative RICHARD CARTER, Generalization of DI-JUAN MEZA, Pattern Search Methods With					
Intermediate Mans in Derivative Free Optimization (PECT) algorithm supporting interactive Surrogates for Surface Structure Determined	Salle 21	Advances in DFO III, Chair: Juan O	C Meza, session 496		DerFree
and and a set of the s	Salle 21 Build G, Z 6	Advances in DFO III, Chair: Juan C JAN FEILING, Utilizing Non-Commutative	C Meza, session 496 RICHARD CARTER, Generalization of DI-	JUAN MEZA, Pattern Search Methods With	DerFree

Room	Specific Models.	Algorithms, and So	ftware - Thursday 5	:00 PM – 6:30 PM
FABRE	First-order methods for large-scale	convey problems II Organizer: Ster	phen A Vavasis session 318	Looming
Build J. Z 8	MADELEINE UDELL, CONVEX LOW Rank	SIMON LACOSTE-JULIEN, Frank-Wolfe Split-	FRANCOIS GLINEUR, Extending performance	XUAN VINH DOAN, LOW-Storage Condi-
Ground Floor	Semidefinite Optimization	ting via Augmented Lagrangian Method	estimation beyond exact convex fixed-step	tional Gradient Method for Low-Rank and
4x20 min	1		methods	Sparse Optimization
Salle 16	Advances in Reinforcement Learni	ng Algorithms, Organizer: Lin Xiao,	session 329	Learning
Build I, Z 7	MENGDI WANG, Compressive Learning for	SHIPRA AGRAWAL, Posterior sampling for re-	LIHONG LI, SBEED learning: Convergent	ADITHYA M DEVRAJ, Zap Q-Learning:
2nd floor	Sequential Decision Process	inforcement learning	control with nonlinear function approxi-	Fastest Convergent Q-learning
4x20 min			mation	
Salle 22	Ranking and recommendation, Ch	air: Aleksandra Burashnikova, session	472	Learning
Build G, Z 6	ALEKSANDRA BURASHNIKOVA, Learning On-	IBRAHIM MUTER, Integrating Individual and	ENGIN TAS, A stochastic gradient descent	JOSE DULA, The Recommender Problem
2nd floor 4x20 min	line Ranking Models with a Sequential Op-	Aggregate Diversity in Top-N Recommen-	algorithm for learning to rank	with Convex Hulls
4x20 mm	Vahiala Dauting III Chaire Dagual	Demanding accession 412		
Salle 24 Build G. 7.6	PACIER BERNARDING A hybrid algorithm	Pochaven Hauzapen Snow removal:	VITOR NECELO, Column Generation Based	Logistics
3rd floor	for the family traveling salesman problem	Modeling and bounds by relaxation	Local Search for Pickup-and-Delivery	
3x20 min	for the family davening successian problem	heuristic and branch-and-bound	problems	
Salle 18	Supply Chain Chair: Daniel Ramó	n-Lumbierres, session 533	1	Scheduling
Build I, Z 7	WEI HUANG, Using SAP Integrated Busi-	FLORIAN FONTAN, Complexity of	ABDESSAMAD OUZIDAN, Modelization and	DANIEL RAMÓN-LUMBIERRES, A multistage
1st floor	ness Planning to Optimize Supply Chain	processing-time dependent profit maxi-	optimization of inventory management for	stochastic programming model for the
4x20 min		mization scheduling problems	palletization	strategic supply chain design
Salle DENUCE	Equilibrium and Optimization in E	Energy Markets, Organizer: Asgeir T	omasgard, session 151	Energy
Build Q, Z 8	STEVEN GABRIEL, Bilevel Linear Program-	ENDRE BJORNDAL, The Flow-Based Mar-	ASGEIR TOMASGARD, A European power	
Ground Floor	ming Investment Problems Lower-Level	ket Coupling Model and the Bidding Zone	market model with short- and long-term	
3x30 min	Primal and Dual Variables	Configuration	uncertainty	
Salle 23	Gas Network and Market Optimiza	ation, Organizer: Jonas Schweiger, se	ssion 293	Energy
Build G, Z 6	JONAS SCHWEIGER, Foresignted decision	FELIX HENNINGS, Controlling complex net-	JULIA GRUBEL, NONCONVEX Equilibrium	
3x30 min	support for gas network operation	work elements by target values	Models for Gas Market Analysis	
Salla L A A	Madicina and Matabalic anginaarir	Generic Mahdi Doostmohammadi k	passion 306	6.2
Build L. Z.8	MICHELLE BOECK Model Predictive Control	BIORN MOREN Improving a Dose-Volume	AMANDA SMITH New bilevel formulations	MAHDI DOOSTMOHAMMADI MOMO - Multi-
Basement	and Robust Optimization in Adaptive Ra-	Model for HDR Brachytherapy to Reduce	for optimizing flux bounds in metabolic	Objective Mixed integer Optimisation for
4x20 min	diation Therapy	Tumour Cold Spots	engineering	metabolic engineering
Salle 9	Large-scale combinatorial optimiza	ation implementations, Organizer: A	aron Archer, session 96	Algo
Build N, Z 12	ANDREW GOLDBERG, LOST in Translation:	KEVIN AYDIN, Distributed Balanced Parti-	CHRISTIAN SCHULZ, High Quality Graph and	HOSSEIN BATENI, Solving Coverage Prob-
4th floor	Production Code Efficiency	tioning via Linear Embedding	Hypergraph Partitioning	lems on Massive Data
4x20 min				
PITRES	Computational OR in Julia/JuMP,	Organizer: Miles Lubin, session 238		Algo
Build O, Z 8	MILES LUBIN, JuMP 0.19 and MathOptIn-	SEBASTIEN MARTIN, Optimizing Public Pol-	JARRETT REVELS, Capstan: Next-Generation	
Ground Floor	terface: new abstractions for mathematical	icy: School Transportation and Start Times	Automatic Differentiation for Julia	
5x30 min	opunnzauon	III DOSIOII.		

Room	Ir	wited Talks - Thurso	lay 5:(00	PM –	6:30	PM			
SIGALAS	Planning, Chair: Jeanjean Antoine,	session 389								INTERFACE
Build C, Z 2	JEANJEAN ANTOINE, Planning model for	BORIS GRIMM, A Propagation Approach for	Eric Bour	RREAU,	Real	Size Exan	MOHAMED	BENKIRANE,	An	Hypergraph
2nd floor	recommerce activities	Railway Rolling Stock Optimization	Timetabling	at	Montpellier	Universit	Model for	the Rolling St	ock Ro	tation Plan-
4x20 min			(France)				ning and T	rain Selection	ı	

Room	Discrete Optimiza	tion & Integer Prog	ramming - Friday 8:	:30 AM - 10:30 AM
Salle 43 Build C, Z 1 3rd floor 4x30 min	Recent advances in Integer Optimiz JEAN-PHILIPP RICHARD, Computational eval- uation of new MIP models for tree ensem- bles optimization	zation, Organizer: Alberto Del Pia, se Diego Moran, Strong duality for conic mixed-integer programs	ession 218 GUSTAVO ANGULO, An affine bounding method for two-stage stochastic integer programs	IPtheory MERVE BODUR, Aggregation-based cutting- planes for packing and covering integer programs
Salle 35 Build B, Z 4 Intermediate 4x30 min	Mixed Integer Programming Repre CHRIS RYAN, Mixed-integer linear repre- sentability, disjunctions, and Chvátal func- tions	sentability, Organizer: Juan Pablo V JOEY HUCHETTE, A mixed-integer branching approach for very small formulations	ielma, session 275 MARC PFETSCH, On the Size of Integer Pro- grams with Sparse Constraints or Bounded Coefficients	IPtheory JUAN PABLO VIELMA, Mixed-integer convex representability
Salle 44 Build C, Z 1 3rd floor 4x30 min	Integer Programming and Crew Sc FRANCOIS SOUMIS, Dynamic Constraints Aggregation for Crew Scheduling Problem	heduling, Organizer: Francois Soumi VAHID ZEIGHAMI, Integrated Crew Pairing and Personalized Crew Assignment Prob- lems	is, session 292 FRÉDÉRIC QUESNEL, Considering prefer- ences and language skills in the airline crew pairings problem	IPpractice MOHAMMED SADDOUNE, Alternate La- grangian Decomposition for Integrated Crew Scheduling Problem
Salle 34 Build B, Z 3 1st floor 3x30 min	Optimal Control Problems with Dis	screte Switches, Organizer: Christian ADRIAN BÜRGER, An Algorithm for Model- Predictive Control of Switched Nonlinear Dynamic Systems	Kirches, session 102 FELIX BESTEHORN, Approximation algo- rithms for MIOCPs with discontinuous switch costs	MINLP MATTHIAS SCHLOEDER, Numerical Modeling of Switched Systems with Jumps in Opti- mal Control Problems
LEYTEIRE Build E, Z 1 3rd floor 4x30 min	Data-Driven Revenue Management ANTOINE DESIR, COnstrained Assortment Optimization under the Markov Chain based Choice Model	with Customer Choice, Organizer: DANNY SEGEV, Near-Optimal Approxima- tions for Dynamic Assortment Planning under the MNL Model	Jacob Feldman, session 81 ALI AOUAD, Near-Optimal Approximations for Display Optimization Under MNL Preferences	APPROX JACOB FELDMAN, New Results for Assort- ment Optimization under the Exponomial Choice Model
Salle 36 Build B, Z 4 Intermediate 4x30 min	Clustering., Organizer: Zac Friggsta ARNAUD DE MESMAY, A Near-Linear Ap- proximation Scheme for Multicuts of Em- bedded Graphs	d, session 155 VINCENT COHEN-ADDAD, On local search for clustering	ZAC FRIGGSTAD, Approximation Schemes for Clustering With Outliers	APPROX ASHKAN NOROUZI FARD, Dynamic Facility Location via Exponential Clocks
SIGALAS Build C, Z 2 2nd floor 4x30 min	Matching and scheduling, Organize DAVID WAJC, Online Matching in Regular Graphs (and Beyond)	r: Seffi Naor, session 54 SAMIR KHULLER, Coflow Scheduling and beyond	GUY EVEN, Best of Two Local Models: Centralized local and Distributed local Al- gorithms	COMB SEFFI NAOR, Competitive Algorithms for Online Multi-level Aggregation
Salle 41 Build C, Z 1 3rd floor 4x30 min	Recent progress in graph cut proble TAMÁS KIRÁLY, Approximation of Linear 3- Cut and related problems	ems, Organizer: Karthekeyan Chandr EUIWOONG LEE, An FPT Algorithm Beat- ing 2-Approximation for k-Cut	asekaran, session 244 YURY MAKARYCHEV, An Integrality Gap for the Călinescu-Karloff-Rabani Relaxation for Multiway Cut	COMB KARTHEKEYAN CHANDRASEKARAN, Hyper- graph k-cut in randomized polynomial time
Salle 39 Build E, Z 1 3rd floor 4x30 min	Algorithmic aspects of connectivity BUNDIT LAEKHANUKIT, Beyond Metric Em- bedding: Approximating Group Steiner on Bounded Treewidth Graphs	in network design, Organizer: Neil MATEUSZ LEWANDOWSKI, Approximating Node-Weighted k-MST on Planar Graphs	Olver, session 264 ANDRE LINHARES, Improved Algorithms for MST and Metric-TSP Interdiction	COMB KANSTANTSIN PASHKOVICH, On the Integral- ity Gap of the Prize-Collecting Steiner For- est LP
DURKHEIM Build A, Z 1 3rd floor 4x30 min	Graphical Optimization Model 2, O SIMON DE GIVRY, Recent algorithmic ad- vances for combinatorial optimization in graphical models	Organizer: Maria I. Restrepo, session 2 THOMAS SCHIEX, Learning and using Graph- ical models to design new molecules	297 MARIA RESTREPO, Integrated staffing and scheduling for home healthcare	CP DANIEL KOWALCZYK, Solving parallel ma- chine scheduling problems with B and P and decision diagrams

Room	Optimizati	on under Uncertain	ty - Friday 8:30 AM	– 10:30 AM
DENIGES	Theoreticals and practicals aspects	of decomposition algorithms for mu	ltistage stochastic problems: 3,	Stoch
	Organizer: Vincent Leclère, session 2	45		
Build C, Z 5	DAVID MORTON, Distributionally Robust	ANDY SUN, Stochastic dual dynamic integer	REGAN BAUCKE, A deterministic algorithm	VINCENT LECLÈRE, Exact converging
Ground Floor	Dual Dynamic Programming	programming	for solving stochastic minimax dynamic	bounds for Stochastic Dual Dynamic
4x30 min			programmes	Programming
Salle 32	New methods for stochastic optimiz	ation and variational inequalities, (Chair: Yunxiao Deng, session 491	Stoch
Build B, Z 5	ALFREDO IUSEM, Extragradient method for	EDUARD GORBUNOV, An Accelerated Ran-	MIHAI ANITESCU, Stochastic Analogues to	YUNXIAO DENG, CONVEX Stochastic De-
Ground Floor	pseudomonotone stochastic variational in-	domized Method for Smooth Stochastic	Deterministic Optimization Methods	composition and Applications to Machine
4x30 min	equalities	Convex Optimization		Learning
Salle 33	New Horizons in Robust Optimizat	ion, Organizer: Angelos Georghiou, s	session 447	Robust
Build B, Z 5		ZHI CHEN, Data-driven Chance Constrained	KILIAN SCHINDLER, Cardinality-Constrained	Angelos Georghiou, A robust optimiza-
Ground Floor		Programs over Wasserstein Balls	Clustering and Outlier Detection via Conic	tion prospective to decentralized decision
3x30 min			Optimization	making
Salle 31	Advances in theory of dynamic pro	gramming, Chair: Stephane L Gaube	ert, session 385	Markov
Build B, Z 5	MAURICIO JUNCA, On controllability of	ANGELIKI KAMOUTSI, Stochastic Convex	NABIL KAHALE, Randomized Dimension	NIKOLAS STOTT, Dynamic programming
Ground Floor	Markov chains: A Markov Decision Pro-	Optimization and Regret Bounds for Ap-	Reduction for Monte Carlo Simulations	over noncommutative spaces applied to
4x30 min	cesses approach	prenticeship Learning		switched systems
Salle 30	Algorithmic Game Theory II, Chai	r: Margarida Carvalho, session 372		Game
Build B, Z 5	ANJA HUBER, Efficient Black-Box Reduc-	MARTON BENEDEK, Finding and verifying	CHUANGYIN DANG, Perfect d-Proper Equi-	MARGARIDA CARVALHO, Kidney Exchange
Ground Floor	tions for Separable Cost Sharing	the nucleolus of cooperative games	librium and Its Determination	Game
4x30 min				

Room	Continu	uous Optimization -	Friday 8:30 AM - 1	0:30 AM
Salle 05 Build Q, Z 11 1st floor 4x30 min	First order methods, Organizer: Ge SIMONE REBEGOLDI, Variable metric tech- niques for the inexact inertial forward- backward algorithm	rardo Toraldo, session 27 DANIELA DI SERAFINO, Combining IRN and gradient methods for TV-based Poisson image restoration	WILLIAM HAGER, An Active Set Algorithm for Polyhedral Constrained Optimization	NLP IGNACE LORIS, A line-search based proxi- mal gradient method for (non-)convex op- timization
GINTRAC Build Q, Z 8 Ground Floor 4x30 min	Stochastic and Nonlinear Optimiza MARK SCHMIDT, "Active-set complexity" of proximal-gradient: How long does it take to find the	tion II, Organizer: Jorge Nocedal, ses DANIEL ROBINSON, A Positive Outlook on Negative Curvature	ssion 48 ALBERT BERAHAS, Derivative-Free Opti- mization of Noisy Functions via Quasi- Newton Methods	NLP LIN XIAO, Randomized Primal-Dual Algo- rithms for Asynchronous Distributed Opti- mization
Salle KC7 Build K, Z 10 Intermediate 2 4x30 min	Regularization and Iterative Metho PAUL ARMAND, Local analysis of a regular- ized primal-dual algorithm for NLP with- out SOSC	ds in Large-Scale Optimization, Or DOMINIQUE ORBAN, Implementing a smooth exact penalty function for nonlinear opti- mization	ganizer: Jacek Gondzio, session 59 SPYRIDON POUGKAKIOTIS, Dynamic primal- dual regularization in interior point meth- ods	NLP MICHAEL SAUNDERS, Stabilized Optimiza- tion via an NCL Algorithm
Salle 9 Build N, Z 12 4th floor 4x30 min	Decomposition Methods, Chair: Ro ROGER BEHLING, Circumcentering the Dou- glas–Rachford method	ger Behling, session 431 LUIZ-RAFAEL SANTOS, On the linear con- vergence of the circumcentered–reflection method	YUAN SHEN, Alternating Direction Method of Multipliers for k-means Clustering	NLP LEONARDO GALLI, A Nonomonotone De- composition Framework: convergence analysis and applications
Salle LC4 Build L, Z 9 Intermediate 1 4x30 min	Geometry in complexity analysis of CHARLES DOSSAL, AN ODE associated to the Nesterov acceleration scheme	non-smooth optimization methods , GUILLAUME GARRIGOS, Structured sparsity in inverse problems and support recovery	Organizer: Jalal Fadili, session 199 ANTHONY So, Error Bound-Based Convergence Rate Analysis of Newton-Type Methods	NonSmooth JALAL FADILI, Finite Activity Identification: Geometry and Algorithms
Salle 8 Build N, Z 12 4th floor 4x30 min	Convergence analysis for non smoot ROBERT CSETNEK, ADMM for monotone operators: convergence analysis and rates	th optimization, Organizer: Robert C MATTIAS FÄLT, Optimal Convergence Rates for Generalized Alternating Projections	Csetnek, session 557 ALAIN ZEMKOHO, Newton method for bilevel optimization: Theory+extensive numerical experiments	NonSmooth DENNIS MEIER, Inducing strong conver- gence into the asymptotic behaviour of proximal splitting
Salle 20 Build G, Z 6 1st floor 4x30 min	Copositive and completely positive of PETER DICKINSON, A New Certificate For Copositivity	optimization, Organizer: Olga Kurya MARKUS GABL, Copositive Approach to ad- justable robust optimization	ttnikova, session 24 JUAN VERA, Using Binary Programming to solve Copositive Optimization Problems	SDP OLGA KURYATNIKOVA, Copositive certificates of non-negativity for polynomials on un- bounded sets
Salle LC5 Build L, Z 10 Intermediate 1 4x30 min	Stability and scaling in conic progra ROLAND HILDEBRAND, Scaling points and reach for non-self-scaled barriers	amming, Chair: Diego Cifuentes, ses HECTOR RAMIREZ, Stability Analysis for Pa- rameterized Conic Programs	sion 498 WEI ZHANG, An improved projection and rescaling algorithm for conic feasible prob- lems	SDP DIEGO CIFUENTES, On the local stability of semidefinite relaxations
Salle 06 Build Q, Z 11 1st floor 4x30 min	Stochastic Optimization and Variat HUIFU XU, Behavioural Function Equilibria and Approximation Schemes in Bayesian Games	ional Inequalites, Organizer: Hailin SHU LU, Inference of two stage stochastic programs using SVI techniques	Sun, session 149 XIAOJUN CHEN, Theory and algorithms for two-stage stochastic variational inequali- ties	Variat HAILIN SUN, Sample average approxima- tion of two-stage stochastic generalized equation
Salle ARNOZAN Build Q, Z 8 Ground Floor 4x30 min	Variational Analysis 3, Organizer: J JOHANNA BURTSCHEIDT, Stability and Small Application of a Risk Averse CP under Un- certainty	Ohanna Burtscheidt, session 369 HONGBO DONG, Variable selection with heredity principles by nonconvex opti- mization	GORAN LESAJA, Adaptive Full Newton-step Infeasible Interior-Point Method for Suffi- cient HLCP	Variat HENRI BONNEL, Application of Optimiza- tion over the Pareto set in Machine Learn- ing
Salle KC6 Build K, Z 10 Intermediate 1 3x30 min	Recent Advances in Coordinate Des	scent and Constrained Problems, O. NICOLAS LOIZOU, CONVERGENCE Analysis of Inexact Randomized Iterative Methods	rganizer: Ion Necoara, session 208 KONSTANTIN MISHCHENKO, A Stochastic Penalty Model for Optimization with Many Convex Constraints	RandomM Ion NECOARA, Random coordinate descent methods for linearly constrained convex optimization
Salle 21 Build G, Z 6 Intermediate 4x30 min	Challenging applications in DFO, C A ISMAEL VAZ, Global Direct Search and an application to Additive Manufacturing (3D Printing)	Chair: Francesco Rinaldi, session 38 STEFANO LUCIDI, Derivative-free methods for complex black-box problems	STEVEN GARDNER, Parallel Hybrid Multi- objective Derivative-Free Optimization for Machine Learning	DerFree LUKAS ADAM, Robust multi-objective opti- mization: Application to the recycling of plastics
Salle AURIAC Build G, Z 6 1st floor 3x30 min	Optimal Control in Engineering Ap	plications, Chair: Maxime Grangere: MASOUMEH MOHAMMADI, A Priori Error Es- timates for a Linearized Fracture Control Problem	au, session 310 MAXIME GRANGEREAU, Stochastic optimal control of a battery : resolution with McKean-FBSDE	Control JOHANNA BIEHL, Adaptive Multilevel Opti- mization of Fluid-Structure Interaction

Room	Specific Models	, Algorithms, and So	ftware - Friday 8:30	AM – 10:30 AM
FABRE Build J, Z 8 Ground Floor 3x30 min	Dimensionality reduction tools for l	earning: A sketchy session, Organiz NICOLAS KERIVEN, Sketched Learning with Random Feature Moments	er: Robert M Gower, session 313 ARTHUR MENSCH, Stochastic Subsampling for Factorizing Huge Matrices	Learning ALESSANDRO RUDI, Optimal kernel methods for large scale machine learning
Salle 16 Build I, Z 7 2nd floor 4x30 min	Dealing with non-convexity , <i>Chair</i> : LEONARD BERRADA, Smoothing Piecewise Linear Loss Functions for Deep Learning	Damek Davis, session 473 DAMEK DAVIS, Convergence rates of stochastic methods for nonsmooth non- convex problems	Cong MA, Implicit Regularization in Non- convex Statistical Estimation	Learning NAOKI MARUMO, Provable Convex Mini- mization under Non-convex Submodular- structured Sparsity
Salle 18 Build I, Z 7 1st floor 4x30 min	Telecommunications, Organizer: Ec MICHAL PIORO, An Optimization Model for Quadratic Flow Thinning	loardo Amaldi, session 361 MATTHAS ROST, Approximating the Virtual Network Embedding Problem: Theory and Practice	CHAFIQ TITOUNA, DDRA: Distributed De- tection and Recovery Algorithm for Wire- less Sensor Networks	Network EDOARDO AMALDI, On the Virtual Network Embedding problem with substrate net- work expansion
PITRES Build O, Z 8 Ground Floor 4x30 min	Hybrid Algorithms and Matheurist THIBAUT VIDAL, Heuristics for vehicle rout- ing problems: Sequence or set optimiza- tion?	ics for VRP, Organizer: Thibaut Vida DOMINIQUE FEILLET, Single Liner Service Design with Speed Optimization	al, session 181 JEAN BERTRAN GAUTHIER, Heuristic pricing for the shortest path problem with resource constraints	Logistics PEDRO DINIZ, Garbage Collection Routing With Heterogeneous Fleet
Salle 23 Build G, Z 6 3rd floor 3x30 min	Scheduling Applications, Chair: Ma	uricio C. de Souza, session 526 Arsuko Ikegam, Generating many optimal solutions in nurse scheduling	DAVAATSEREN BAATAR, Mixed Integer Pro- gramming Based Merge Search for Open Pit Block Scheduling	Scheduling MAURICIO DE SOUZA, Surgical scheduling under uncertainty by approximate dynamic programming
Salle 24 Build G, Z 6 3rd floor 3x30 min	Power Systems Models with Discret	e Decision Variables, Organizer: Ad KAI PAN, Co-optimizing Energy and Ancil- lary Services	olfo R Escobedo, session 26 HARSHA GANGAMMANAVAR, Stochastic Framework for Coordinated Operation of Multiple Microgrids	Energy Addlfo Escobedo, Generation of Angular Valid Inequalities for Transmission Expan- sion Planning
Salle DENUCE	Machine Learning in State Estimat	ion and Situational Awareness in Po	wer Grids,	Energy
Build Q, Z 8 Ground Floor 4x30 min	Organizer: Deepjyoti Deka, session 1 DEEPYOTI DEKA, Learning with end-users in distribution grids: Topology and parame- ter estimation	34 Marc Vuffray, Online Learning of Power Transmission Dynamics	MAURO ESCOBAR, Machine learning with PMU signals	DONGCHAN LEE, Convex polytope machine approach for transient stability assessment
Salle LA4 Build L, Z 8 Basement 3x30 min	Finance and Portfolio Optimization	, Organizer: Asaf Shupo, session 395 BENJAMIN HEYMANN, Auction under ROI constraints	GABRIELA KOVACOVA, Time Consistency of the Mean-Risk Problem	Sciences ASAF SHUPO, Building Optimal Strategies Using Multi-Objective Optimization
Salle 22 Build G, Z 6 2nd floor 4x30 min	New Developments in Optimization STEVEN DIRKSE, Enhanced Model Deploy- ment and Solution in GAMS	Modeling Software, Organizer: Rob David Gay, Adding Functions to AMPL	ert Fourer, session 101 PAUL KERR-DELWORTH, Optimization Mod- eling in MATLAB	Algo YOUNGDAE KIM, Efficient model generation for decomposition methods in modeling languages

Room	Invited Talks - Friday 11:00 AM – 12:00 AM			
Auditorium	Tseng Memorial Lectureship in Con	ntinuous Optimization, Organizer: Y	axiang Yuan, session 549	SEMI
Build Symph H, Z 0	-			
Gambetta				
1x60 min				
LEYTEIRE	Majority judgment, Organizer: Ma	rtine Labbé, session 535		KEYNOTE
Build E, Z 1	MICHEL BALINSKI, Majority judgment			
3rd floor				
1x60 min				
DENIGES	Submodularity in mixed-integer qu	adratic and conic quadratic optimiz	ation,	KEYNOTE
	Organizer: Daniel Bienstock, session	540		
Build C, Z 5	ALPER ATAMTURK, Submodularity in			
Ground Floor	mixed-integer quadratic and conic			
1x60 min	quadratic optimization			
BROCA	Modern Branch-and-Cut Implemen	ntation, Organizer: Marc E Pfetsch, se	ession 542	KEYNOTE
Build W, Z 0	MATTEO FISCHETTI, Modern Branch-and-			
3rd floor	Cut Implementation			
1x60 min				

Room	Invited Talks - Friday 1:30 PM – 2:30 PM	
Auditorium	Bounds for quantum graph parameters by conic and polynomial optimization,	PLENARY
	Organizer: Frank Vallentin, session 553	
Build Symph H, Z 0	Monque Laurent, Bounds for quantum	
Gambetta	graph parameters by conic and polynomial	
1x60 min	optimization	

Room	Discrete Optimiz	ation & Integer Prog	gramming - Friday 3	3:15 PM – 4:45 PM
Salle 34	Polyhedral theory in practice, Orga	anizer: Mourad Baiou, session 309		IPtheory
Build B, Z 3	RAFAEL COLARES, The Stop Number Mini-	FRANCISCO BARAHONA, On the nucleolus of	MOURAD BAIOU, On some network security	
1st floor	mization Problem: polyhedral analysis	shortest path and network disconnection	games	
3x30 min		games		
Salle 42	Extended Formulations, Chair: Ban	tosz Filipecki, session 514		IPtheory
Build C, Z 1	BERND PERSCHEID, An Extended Formula-	MIRJAM FRIESEN, Extended formulations	BARTOSZ FILIPECKI, Stronger Path-based	
3rd floor	tion for the 1-Wheels of the Stable Set	for higher-order spanning tree polytopes	Extended Formulation for the Steiner Tree	
3x30 min	Polytope		Problem	
Salle 44	Routing, Chair: Cole Smith, session	484		IPpractice
Build C, Z 1	IMKE JOORMANN, Solving the Time-	ANN-BRITH STRÖMBERG, Column genera-	COLE SMITH, The consistent path problem	
3rd floor	Dependent TSP using Machine Learning	tion for routing a fleet of plug-in hybrid ve-	and binary decision diagrams	
3x30 min	Guidance	Inicies		
Salle 36	IP Practice III , <i>Chair</i> : Samuel S Br	ito, session 507		IPpractice
Build B, Z 4	FRANCO QUEZADA, Valid inequalities for	SAMUEL BRITO, Improving COIN-OR CBC	MAXIMILIAN JOHN, Two Lower Bound Ap-	
Intermediate	solving a stochastic lot-sizing problem	MIP Solver Using Conflict Graphs	proaches for the Keyboard Layout Problem	
3x30 min	with returns			
Salle 39	Outer Convexification and Mixed-I	nteger Optimal Control, Organizer:	Sebastian Sager, session 103	MINLP
Build E, Z I	PAUL MANNS, Improved Regularity As-	CLEMENS ZEILE, Combinatorial Integral Ap-	OLIVER HABECK, Global optimization of	
3rd noor 2x20 min	sumptions for Partial Outer Convexinca-	Integer Control	ODE constrained network problems	
DURKHEIM	Intersection cuts, disjunctions, and	valid inequalities, Organizer: Ell 10	Wie, session 180	MINLP
Build A, Z I	DANIEL BIENSTOCK, Outer-product-free	EGON BALAS, Synthetizing branch-and-	ELI TOWLE, Intersection disjunctions for re-	
3x30 min	Sets for Porynomial Optimization	bound information into cutting planes	verse convex sets	
SA30 IIII	Branch and out tashniques Orean	Tandara Dan assign 277		
Salle 35 Duild D 7 4	Tranch-and-cut techniques, Organ	Louis Amproant Improving branching for	Tu Nouvry Learning with Cutting Planes	MINLP
Intermediate	gorithm for a bilevel location allocation	disjunctive models via approximate convex	TO NOOTEN, Learning with Cutting Tianes	
3x30 min	model	decompositions		
IEVTEIDE	Submodular Maximization Organ	izer: Justin Ward session 170		ABBROY
Build F 7 1	LUA BOGINOVIC Robust Maximization of	ALEREDO TORRICO Robust submodular	AMIN KARRASI Submodular Optimization:	APPROX
3rd floor	Submodular Obis in the Presence of Ad-	maximization under matroid constraints	From Discrete to Continuous and Back	
3x30 min	versarial Removals		From Districte to Committee and Diete	
Salle 43	Submodular and Incremental Maxi	mization Organizer: Martin Gross	session 340	APPROX
Build C. Z 1	RAJAN UDWANI, Multi-objective Maximiza-	TASUKU SOMA, A New Approximation	MARTIN GROSS, General Bounds for Incre-	
3rd floor	tion of Monotone Submodular Functions	Guarantee for Submodular Maximization	mental Maximization	
3x30 min		via Discrete Convexity		
SIGALAS	Combinatorial aspects of Linear Pr	ogramming, Organizer: Daniel Dadu	ish, session 259	COMB
Build C, Z 2	SOPHIE HUIBERTS, A Friendly Smoothed	GIACOMO ZAMBELLI, Geometric Rescaling	NEIL OLVER, A Simpler and Faster Strongly	
2nd floor	Analysis of the Simplex Method	Algorithms for Submodular Function Min-	Polynomial Algorithm for Generalized	
3x30 min		imization	Max-Flow	

Optimization under Uncertainty - Friday 3:15 PM – 4:45 PM Room Risk-aware decision making, Organizer: Minseok Ryu, session 251 Salle 32 Stock Нівелкі Nаклo, Medical Homecare Deliv- ZHANG, A stochastic programming |Мільеок Ryu, Nurse staffing under uncer ery with Time-dependent Stochastic Travel approach for optimization of latent disease | tain demand and absenteeism Build B, Z 5 Ground Floor 3x30 min Time detection Salle 33 Distributionally Robust Optimization: Models and Applications, Robus Organizer: Selin D Ahipasaoglu, session 355 Build B, Z 5 BIKRAMJIT DAS, Heavy tails in a moment-|HENRY LAM, Robust Extreme Event Analy-|SELIN AHIPASAOGLU, Concentration versus| Ground Floor 3x30 min Diversification in Portfolio Selection constrained robust newsvendor model sis Distributionally Robust Optimization, Organizer: Daniel Kuhn, session 446 DENIGES Robus Build C, Z 5 Ground Floor NAPAT RUJEERAPAIBOON, Chebyshev In-JOHANNES ROYSET, Variational Theory for DANIEL KUHN, Distributionally Robust In-equalities for Products of Random Vari-Optimization under Stochastic Ambiguity verse Covariance Estimation 3x30 min ables Discrete stochastic dynamic programming, Chair: Adam Narkiewicz, session 384 VICTOR COHEN, MILP formulations for dis-AXEL PARMENTER, LP relaxations for dis-ADAM NARKIEWICZ, A sequential decision crete stochastic optimization with varia-process with stochastic action sets Salle 31 Build B, Z 5 Marko Ground Floor crete stochastic optimization (LIMIDs) 3x30 min tional inference Salle 30 Scalarization, representation and the comparison of methods in Multiobjective Optimization, Game Chair: Tyler Perini, session 378 KENZA OUFASKA, New scalarization tech- Tyler Perini, Approximation of the fron- KATERYNA MUTS, Multi-Objective Opti-nique for solving multi-objective problems tier for a biobjective MIP: comparison be- mization for the Compiler of Hard Real-Build B, Z 5 Ground Floor 3x30 min tween methods Time Systems

Room	Continuous Optimization - Friday 3:15 PM – 4	:45 PM
GINTRAC Build Q, Z 8 Ground Floor 3x30 min	Interior Point Methods in Engineering Applications I, Organizer: Jacek Gondzio, session 60 SEBASTIAAN BREEDVELD, A (non)convex Lovisa ENGBERG, Refined planning tools for interior-point implementation tuned for ra- diotherapy optimisation external radiotherapy using interior point a Primal-Dual Penalty-Interior-Point Algo- rithm	NLP
Salle 05 Build Q, Z 11 1st floor 3x30 min	Nonlinear Optimization, Chair: Marc C Steinbach, session 429 ADEMIR RIBEIRO, On the Approximate So- lutions of Augmented Subproblems within Sequential Methods MARC STEINBACH, An Elastic Primal Active Updating Strategy for SQP Methods	NLP
Salle 20 Build G, Z 6 1st floor 3x30 min	Global Optimization 2, Chair: Mirjam Duer, session 502 CHRISTIAN FÜLLNER, Deterministic upper ANDREI ORLOV, NONCONVEX Optimization TATIANA GRUZDEVA, On Solving the General bounds in global minimization with equal- ity constraints Iems	Global
Salle 8 Build N, Z 12 4th floor 3x30 min	Advances in the first-order methods for convex optimization, Organizer: Angelia Nedich, session 73 Hoi To Wai, Accelerated curvature-aided TATIANA TATARENKO, Fast Incremental Gra- MARYAM YASHTINI, Efficient Methods For incremental aggregated gradient method dient Method for Optimization with Linear Edge-weighted TV Models with Sphere Constraints Constraints Constraints	NonSmooth
Salle LC5 Build L, Z 10 Intermediate 1 3x30 min	Relative Entropy Optimization I, Organizer: Venkat Chandrasekaran, session 111 RILEY MURRAY, Exactness of Relative En- tropy Relaxations for Signomial Programs HAMZA FAWZI, Certificates of nonnegativity via conic lifts MICHAL ADAMASZEK, Exponential cone in MOSEK: overview and applications	SDP
Salle 06 Build Q, Z 11	Algorithms for optimization and variational problems with possibly nonisolated solutions II, Organizer: Alexey F. Izmailov, session 153 MIRHAIL SOLODOV, A globally convergent DANIEL STECK, Some Developments on PAULO SILVA, On the second order aug-	Variat
3x30 min Salle ARNOZAN	Nash equilibrium and Games 2, Organizer: Giancarlo Bigi, session 366	Variat
Build Q, Z 8 Ground Floor 3x30 min	LORENZO LAMPARIELLO, Numerically VADIM SHMYREV, Polyhedral complemen- tractable optimistic bilevel problems tarity algorithms for equilibrium problems ming via two player generalized Nash games and saddlepoints	
Salle 21 Build G, Z 6 Intermediate 3x30 min	Advances in DFO IV, Chair: Katya Scheinberg, session 125 KRZYSZTOF CHOROMANSKI, New methods KATYA SCHEINBERG, Scaling up and Ran- for blackbox optimization via structured domizing Derivative Free Optimization for gradient estimation Machine Learning ger Variables	DerFree

Room	Specific Model	s, Algorithms, and S	oftware - Friday 3:1	5 PM – 4:45 PM
Salle 16 Build I, Z 7	Discrete methods for data centers a PHILIPP KELLER, Overcommitment in Cloud Services Bin Packing with Chance Con	AARON ARCHER, Cache-aware load balance	, session 477 SERGEY PUPYREV, Compressing Graphs and Indexes with Pacursive Graph Bigection	Learning
3x30 min	straints	partitioning	indexes with Recuisive Graph Disection	
FABRE Build J, Z 8 Ground Floor 3x30 min	Classification, regression and clusted DIMITRIS BERTSIMAS, Interpretable Machine Learning	ering, Chair: Dimitris Bertsimas, sess INÁCIO GUIMARÃES, Logistic Regression and Principal Curves Applied to Discriminant Analysis	ion 480 JAMES BROOKS, Sufficient Conditions for L1-Norm Best-Fit Lines	Learning
Salle 24 Build G, Z 6 3rd floor 3x30 min	Vehicle Routing II, <i>Chair</i> : Chris N EDUARDO UCHOA, A Branch-Cut-and-Price Algorithm for the TSP with Hotel Selec- tion	Potts, session 412 CIRUS POTTS, Models and Algorithms for Dynamic Workforce Scheduling and Rout- ing	STEFAN SCHAUDT, Delivery robots, a trans- port innovation for the last mile	Logistics
Salle 18 Build I, Z 7 1st floor 3x30 min	Machine Scheduling 1, <i>Chair</i> : Rena NOAM GOLDBERG, Maximum Probabilistic All-or-Nothing Paths and Critical Chains	an S. Trindade, session 527 VITALY STRUSEVICH, Max-Cost Scheduling with Controllable Processing Times and a Common Deadline	RENAN TRINDADE, An arc-flow formulation for minimizing makespan on a batch pro- cessing machine	Scheduling
Salle DENUCE Build Q, Z 8 Ground Floor 3x30 min	Estimation and Learning for Power Yu ZHANG, Performance Bound for Power System State Estimation via Conic Relax- ations	r Systems, Organizer: Javad Lavaei, s RICHARD ZHANG, Spurious Critical Points in Power System State Estimation	ession 25 MING JIN, Vulnerability analysis and robus- tification of power grid state estimation	Energy
Salle 22 Build G, Z 6 2nd floor 3x30 min	Optimization in Energy , <i>Chair</i> : An CHRISTIANO LYRA, Upstream-downstream dynamic programming for optimization of tree-shaped flows	drea Simonetto, session 515 МILENA РЕТКОVIС, Mathematical Program- iming for Forecasting Supplies and De- mands in Gas Networks	ANDREA SIMONETTO, Time-varying opti- mization: algorithms and engineering ap- plications	Energy
Salle 23 Build G, Z 6 3rd floor 3x30 min	Optimization for Energy System Pl LUIGI BOFFINO, Expansion Planning of a Small Size Electric Energy System	lanning, Chair: Andrew Lu Liu, sessi. MARION LEMERY, Regaining tractability in SDDP algorithms for large energy plan- ning problems	on 524 ANDREW LIU, Capacity Expansion through Decentralized Optimization	Energy
Salle LA4 Build L, Z 8 Basement 3x30 min	Industrial dynamics and Environm Adriana Piazza, Dynamics of Environ- mental Policy	ental policy, Organizer: Inmaculada NILS-HASSAN QUTTINEH, Challenges in Nu- trient Recycling and Biogas Plant Local- ization	Garcia Fernandez, session 392 INMACULADA GARCIA FERNANDEZ, Use of dy- namic programming in inventory control for perishable products	Sciences
PITRES Build O, Z 8 Ground Floor 3x30 min	Computational Integer Programmi TOBLAS ACHTERBERG, Exploiting Degener- acy in MIP	ing I, Organizer: Domenico Salvagnir PIERRE LE BODIC, Online Estimation of the Size of the Branch and Bound Tree in MIP Solvers	n, session 273 ALINSON XAVIER, Multi-Row Intersection Cuts based on the Infinity Norm	Algo

Room	Discrete Optimiza	ation & Integer Prog	gramming - Friday 5	5:00 PM - 6:30 PM
Salle 34	Machine Learning and Discrete Op	timization, Organizer: Sebastian Pol	cutta, session 308	IPtheory
Build B, Z 3	MATTEO FISCHETTI, Building adversarial ex-	ANIRBIT MUKHERJEE, Mathematics of Neu-	PAUL GRIGAS, Smart "Predict, then Opti-	SEBASTIAN POKUTTA, Lazy Conditional Gra-
1st floor	amples in Neural Networks by Mixed Inte-	ral Networks	mize"	dients through Simpler Oracles
4x20 min	ger Optimization			
Salle 44	Decomposition II, Chair: Natashia I	Boland, session 487		IPpractice
Build C, Z 1	ANDRE CIRE, Discrete Nonlinear Optimiza-	JENS CLAUSEN, Strengthening of mixed in-	CRISTIAM GIL, A column generation based	NATASHIA BOLAND, Decomposition Branch-
3rd floor	tion by State-Space Decompositions	teger linear program bounds using variable	model to pickup and delivery problems	ing for Mixed Integer Programming
4x20 min		splitting	with trans	
Salle 36	Dual Ascent, Chair: Sara Maqrot, se	ession 505		IPpractice
Build B, Z 4	STEFANIA PAN, A dual ascent procedure	SARA MAQROT, Improving Wedelin's		
Intermediate	for solving the generalized set partitioning	Heuristic with Sensitivity Analysis for Set		
2x20 min	model	Partitioning		
DURKHEIM	Mixed-Integer PDE-Constrained O	ptimization, Organizer: Sven Leyffe	er, session 63	MINLP
Build A, Z 1	MEENARLI SHARMA, Inversion of	MARTIN SIEBENBORN, Shape optimization	MIRKO HAHN, Set-valued steepest descent	
3rd floor	Convection-Diffusion PDE with Dis-	towards binary variables with PDE con-	for binary topology and control optimiza-	
3x30 min	crete Source	straints	tion	
Salle 39	Global Optimization for nonconvex	MINLPs, Organizer: Hassan Hijazi,	session 92	MINLP
Build E, Z 1	ANYA CASTILLO, Global Optimization for	HARSHA NAGARAJAN, Tight Piecewise For-	HASSAN HIJAZI, Semidefinite Programming	
3rd floor	AC Optimal Power Flow Applications	mulations and Algorithms for Global Op-	Cuts in Gravity	
3x30 min		timization of MINLPs		
Salle 35	Recent Advances and Applications	of MINLP, Organizer: Jose M Ucha,	session 139	MINLP
Build B, Z 4	VICTOR BLANCO, Duality and multidimen-	JOSE UCHA, An algebraic exact method for	JEFFREY ZHANG, On Testing Attainment of	
Intermediate	sional kernels in ℓ_p -Support Vector Ma-	multi-objective RAP in series-parallel sys-	the Optimal Value in Nonlinear Optimiza-	
3x30 min	chines	items.	tion	
LEYTEIRE	Algorithmic Fairness and Optimiza	tion, Organizer: Nisheeth K Vishnoi,	session 161	APPROX
Build E, Z I	KRISHNA GUMMADI, Measuring Algorithmic	ELISA CELIS, Controlling Bias in Bandit-	OMER REINGOLD, Calibration for the	NISHEETH VISHNOI, Fair and Diverse DPP-
3rd floor	(Un)Fairness via Inequality Indices	based Personalization	(Computationally-Identifiable) Masses	based Data Summarization
4x20 min				
Salle 43	Algorithmic Discrepancy, Organize	r: Nikhil Bansal, session 164		APPROX
Build C, Z I	ALEKSANDAR NIKOLOV, Balancing Vectors	DANIEL DADUSH, The Gram-Schmidt Walk:	REBECCA HOBERG, A Fourier-Analytic Ap-	
3rd floor	in Any Norm	A cure to the Banaszczyk Blues	proach For Random Set systems	
5350 1111				
SIGALAS	Packing Steiner Trees, Organizer: S	Stephan Held, session 260		COMB
Build C, $Z Z$	DIRK MULLER, Global Routing with Timing	PIETRO SACCARDI, Steiner Tree Packing in	TILMANN BIHLER, Reach- and Direction-	
2 nd floor	Constraints	Knomboldal Tiles	Restricted Rectilinear Steiner Trees	
5,50 mm				
Salle 41	Optimization problems in graphs a	na related, Chair: Claudio Arbib, ses	SSION 425	COMB
Build C, Z I	Alucui Guan, Critical node problem based	BINWU ZHANG, Inverse Obnoxious Span-	PING ZHAN, The random assignment prob-	MATTEO IONELLI, On uncapacitated metric
3rd floor	on connectivity index and properties of	ning free Problems under Hamming Dis-	tem on a full preference domain with sub-	location and pricing
4x20 min	components	tance	modular	

Room	Optimizat	tion under Uncertain	nty - Friday 5:00 PM	I – 6:30 PM	
Salle 30	Topics in stochastic optimization, (Chair: Quentin Mercier, session 494			Stoch
Build B, Z 5	SAKINA MELLOUL, Flexible Multi-choice	KERSTIN LUX, Optimal inflow control in	QUENTIN MERCIER, A descent algorithm	1	
Ground Floor	Goal Programming with Fuzzy Data	supply systems with uncertain demands	for stochastic multiobjective optimization		
3x20 min			problems		
Salle 37	Robust Combinatorial Optimization	n II, Organizer: Agostinho Agra, ses	sion 168		Robust
Build B, Z 4	AYSE ARSLAN, Robust Strategic Planning of	MARCO SILVA, Exact Solution Algorithms	AGOSTINHO AGRA, A Lagrangean dual	YASAMAN MOZAFARI, ROBUST	Expansion
Intermediate	Phytosanitary Treatments in Agriculture	for the Robust Total Tardiness Problem	model for the robust inventory problem	Planning of Interdependent	Electricity,
4x20 min				Gas, and Heat	
Salle 33	Wasserstein Distributionally Robus	t Optimization, Organizer: Peyman	Mohajerin Esfaha, session 448		Robust
Build B, Z 5	VIET ANH NGUYEN, Risk-Averse Optimiza-	JOSE BLANCHET, Wasserstein DRO: Mod-	PEYMAN MOHAJERIN ESFAHA, Data-driven	1	
Ground Floor	tion over Structured Wasserstein Ambigu-	eling and Optimal Choice of Uncertainty	Inverse Optimization with Imperfect Infor-		
3x30 min	ity Set	Size	mation		
Salle 31	Tractability and approximation alg	orithms in dynamic programming,			Markov
	Chair: Alexander V. Hopp, session 38	33			
Build B, Z 5	YANN DUJARDIN, Sample-Based Approx-	GIACOMO NANNICINI, An FPTAS for	ALEXANDER HOPP, On Friedmann's subex-	1	
Ground Floor	imate GMDP Solution with Theoretical	stochastic DPs with multidimensional	ponential lower bound for Zadeh's pivot		
3x30 min	Guarantees	action and scalar state	rule		

Room	Contin	uous Optimization	- Friday 5:00 PM – 6	5:30 PM
GINTRAC	Moment relaxations for polynomial	optimization with symmetries,		NLP
Build Q, Z 8 Ground Floor 3x30 min	Organizer: Markus Schweighofer, ses FRANK VALLENTIN, Coloring the Voronoi tessellation of lattices	sion 10 CORDIAN RIENER, Semidefinite optimization and arithmetic progressions	PHILIPPE MOUSTROU, The upper density of sets avoiding norm one in the real space of dimension n	
Salle KC7 Build K, Z 10 Intermediate 2 3x30 min	Subspace methods in NLP II, Orga PANOS PARPAS, Distributed Subspace De- composition	nizer: Panos Parpas, session 44 EMRE MENGI, Subspace Frameworks for Eigenvalue Optimization	JAROSLAV FOWKES, A block-coordinate Gauss-Newton method for nonlinear least squares	NLP
Salle 05	Primal-dual and ADMM algorithm	s for nonlinear programming,		NLP
Build Q, Z 11 1st floor 4x20 min	Organizer: Marco Sciandrone, session AHMET ALACAOGLU, Smooth Primal-Dual Coordinate Descent for Nonsmooth Con- vex Optimization	1 91 N. SERHAT AYBAT, A primal-dual algorithm for general convex-concave saddle point problems	MARIO FIGUEIREDO, ADMM with Plug-and- Play Regularizers: Convergence Guaran- tees and Applications	GIULIO GALVAN, Alternating minimization methods for constrained nonconvex opti- mization
Salle 9 Build N, Z 12 4th floor 3x20 min	Linear Optimization I, Chair: Jiann ZHIZE LI, A Fast Polynomial-time Primal- Dual Projection Algorithm for Linear Pro- gramming	ning Shi, session 415 JIANMING SHI, A polarity-based algorithm for solving linear programming problems	MAXIM DEMENKOV, An algorithm for linear programming based on the projection onto a zonotope	NLP
Salle 20 Build G, Z 6 1st floor 3x30 min	Global Optimization 1, <i>Chair</i> : Jean- FABIO SCHOEN, New clustering methods for large scale global optimization	Baptist Hiriart-Urruty, session 501 Seкgry Вителко, Continuous Approaches to Cluster-Detection Problems in Networks	JULIO GONZÁLEZ-DÍAZ, Computational ad- vances in the RLT algorithms: A freely available implementation	Global
Salle 8 Build N, Z 12 4th floor 3x30 min	Nonsmooth DC optimization with a Sona Taheri, PIECEWISE LINEAR RE- GRESSION VIA NONSMOOTH DC OP- TIMIZATION	pplications, <i>Chair</i> : Napsu Karmitsa, KAISA JOKI, Double Bundle Method for Nonsmooth DC Optimization	session 46 NAPSU KARMITSA, Support vector machines for clusterwise linear regression	NonSmooth
Salle LC4 Build L, Z 9 Intermediate 1 3x30 min	Nonconvex Optimization: Theory a ALEXANDER SHTOF, Globally Solving a Class of Optimal Power Flow Problems in Radial Networks	nd Methods - Part 3, Organizer: Ge: MATTHEW TAM, Algorithms based on unions of nonexpansive maps	naro Lopez, session 188 GENARO LOPEZ, What do 'convexities' im- ply on Hadamard manifolds?	NonSmooth
Salle AURIAC Build G, Z 6 1st floor 3x30 min	Computer-assisted analyses of optin ETIENNE DE KLERK, SDP performance anal- ysis of inexact Newton-type methods for self-concordant func	nization algorithms II, Organizer: A RILEY BADENBROEK, A Universal Interior Point Method Using Hit-and-Run Sam- pling	drien Taylor, session 16 ADRIEN TAYLOR, Worst-case analyses of stochastic gradient-based methods using SDPs	SDP
Salle LC5 Build L, Z 10 Intermediate 1 3x30 min	Sparse Semidefinite Programming, MARTIN ANDERSEN, Sparse Semidefinite Relaxations of Communicability-Based Graph Partition Problem	Organizer: Somayeh Sojoudi, sessior CEDRIC JOSZ, Lasserre hierarchy for large scale polynomial optimization	n 17 Somayeh Sojoudi, Fast Algorithms for Max-Det Matrix Completion and Graphi- cal Lasso	SDP
Salle 06 Build Q, Z 11 1st floor 3x30 min	Nonlinear Optimization and Variat JUNFENG YANG, A TVSCAD approach for image deblurring with impulsive noise	Inequalities IV , Organizer: Co CHENGJING WANG, A semismooth Newton based augmented Lagrangian method for solving SVM problems	ng Sun, session 144 Chao DING, Matrix optimization in data science: recent progress on algorithm foundation	Variat
Salle ARNOZAN Build Q, Z 8 Ground Floor 4x20 min	Variational Analysis 2, Organizer: I BA KHIET LE, Maximal Monotonicity Aris- ing in Nonsmooth Lur'e Dynamical sys- tems	David Salas, session 367 EMILIO VILCHES, Lyapunov pairs for per- turbed sweeping processes	PARIN CHAIPUNYA, Proximal Algorithms in Hadamard Spaces	Variat DAVID SALAS, Quasi-Variational Inequality problems over product sets
Salle KC6 Build K, Z 10 Intermediate 1 4x20 min	Algorithms for Structured Statistic: ILKER BIRBIL, A Differentially Private Stochastic Gradient Descent Algorithm with Smoothing	al Optimization, Chair: Ilker Birbil, LUUN DING, Leave-one-out approach for statistical optimization	session 349 GREG ONGIE, Adaptive Sampling for Online Subspace Estimation	RandomM SAEED GHADIMI, Approximation Methods for Bilevel Programming
Salle 21 Build G, Z 6 Intermediate 2x30 min	Derivative-free global optimization LIMENG LIU, Optimization with global surrogate and trust-region assisted local search	algorithms, Chair: Zaikun Zhang, se ANNE AUGER, Benchmarking Bayesian, Derivative-Free, and Stochastic Blackbox Algorithms	ession 41	DerFree

Room	Specific Models	s, Algorithms, and S	oftware - Friday 5:0	0 PM – 6:30 PM
FABRE	Spectral and Semidefinite Methods	for Learning, Organizer: Martin Jag	gi, session 321	Learning
Build J, Z 8	MARYAM FAZEL, Competitive Online Algo-	MICHAEL FANUEL, Positive semi-definite	KIMON FOUNTOULAKIS, Variational Perspec-	SAVERIO SALZO, Solving lp-norm regular-
Ground Floor	rithms with Application to Optimal Exper-	embedding for dimensionality reduction	tive on Local Graph Clustering	ization with tensor kernels
4x20 min	iment Design	c ,		
Salle 18	Transportation networks, Chair: B	ernard Gendron, session 359	•	Network
Build I, Z 7	PARISA CHARKHGARD, The network mainte-	YASUFUMI SARUWATARI, Airspace sectoriza-	BIN LI, Joint Transceiver Optimization for	BERNARD GENDRON, Node-Based La-
1st floor	nance problem	tion by set-partitioning approach	Wireless Information and Energy Transfer	grangian Relaxations for Multicommodity
4x20 min				Network Design
Salle 16	Logistics Networks, Chair: El Hassa	an Laaziz, session 468	•	Logistics
Build I, Z 7	YASUSHI NARUSHIMA, Robust supply chain	GUILLAUME MARQUES, Method Benchmark-		
2nd floor	network equilibrium model with random	ing for Two-Echelon Capacitated Vehicle		
2x20 min	demands	Routing		
Salle 23	Energy-aware planning and schedu	ling 2, Organizer: Christian Artigues	, session 178	Energy
Build G, Z 6	PAUL JAVAL, Modelling uncertainties in	AURÉLIEN FROGER, Solving an electric ve-	CHRISTIAN ARTIGUES, Polyhedral approach	
3rd floor	short-term operational planning optimiza-	hicle routing problem with capacitated	for a continuous energy-constrained	
3x30 min	tion	charging stations	scheduling problem	
Salle 24	Stochastic Methods for Energy Opt	imization, Chair: Tristan Rigaut, sess	sion 294	Energy
Build G, Z 6	CLARA LAGE, Stabilization of Price Signals	GUILHERME MATIUSSI RAMALHO, Stochas-	TRISTAN RIGAUT, Long term management of	1 -
3rd floor	in Energy Optimization	tic Unit Commitment Problem: an Exact	energy storage using stochastic optimiza-	
3x20 min		Probabilistic Constrained Approach	tion	
Salle LA4	Optimization and Game Theory , C	Organizer: Veerle Timmermans, session	n 402	Sciences
Build L, Z 8	MATTHIAS FELDOTTO, Computing Approx-	Cosimo Vinci, Dynamic taxes for polyno-	BJOERN TAUER, Competitive Packet Routing	VEERLE TIMMERMANS, Equilibrium Compu-
Basement	imate Pure Nash Equilibria in Shapley	mial congestion games		tation in Atomic Splittable Polymatroid
4x20 min	Value Weighted Congestion			Congestion Games
PITRES	Computational Integer Programmi	ng II, Organizer: Domenico Salvagni	n, session 274	Algo
Build O, Z 8	GREGOR HENDEL, Tighter LP relaxations for	DIMITRIOS LETSIOS, Lexicographic Opti-	ROLAND WUNDERLING, Dynamic Row Dis-	_
Ground Floor	configuration knapsacks using extended	mization and Recovery in Two-Stage Ro-	ablement: a practical Implementation of	
3x30 min	formulations	bust Scheduling	the Kernel Simplex Method	

Sessions with Abstracts

On the relationship between machine learning and optimization

INVITED TALKS

PLENARY - Mo 11:00am-12:00am, Format: 1x60 min Room: Auditorium Building: Symph H, Gambetta, Zone: 0

INVITED SESSION 552 Organizer: Michel Goemans, MIT, US

1 - On the relationship between machine learning and optimization

Speaker: Francis Bach, INRIA - ENS, FR, talk 1564

What's happening in nonconvex optimization? A couple of stories

INVITED TALKS

KEYNOTE - Mo 1:30pm-2:30pm, Format: 1x60 min Room: SIGALAS Building: C, 2nd floor, Zone: 2

INVITED SESSION 536

Organizer: Jean-Baptist Hiriart-Urruty, Paul Sabatier University, FR

1 - What's happening in nonconvex optimization? A couple of stories

Speaker: Emmanuel Candes, Stanford University, US, talk 1688

Co-Authors: Yuxin Chen,

Theoretical Analysis of Cutting-Planes in IP Solvers.

INVITED TALKS

KEYNOTE - Mo 1:30pm-2:30pm, Format: 1x60 min Room: DENIGES Building: C, Ground Floor, Zone: 5

INVITED SESSION 538

Organizer: Gerard Cornuejols, Carnegie Mellon University, US

1 - Theoretical Analysis of Cutting-Plane Selection in IP Solvers.

Speaker: Santanu Dey, GaTech, US, talk 1595 Co-Authors: *Marco Molinaro*,

Multiobjective Optimization with PDE Constraints

INVITED TALKS SEMI - Mo 1:30pm-2:30pm, Format: 1x60 min Room: Auditorium Building: Symph H, Gambetta, Zone:

INVITED SESSION 550 **Organizer:** Stephen Wright, U Wisconsin-Madison, US

1 - Multiobjective Optimization with PDE Constraints Speaker: Michael Hintermüller, WIAS Berlin, DE, talk 1687

Polynomial and tensor optimization I

CONTINUOUS OPTIMIZATION NLP - Mo 3:15pm-4:45pm, Format: 3x30 min Room: GINTRAC Building: Q, Ground Floor, Zone: 8 INVITED SESSION 5 **Organizer:** Jiawang Nie, Univ. of California San Diego, US

Sparse Polynomial Interpolation: Compressed Sensing, Super-resolution, or Prony?
 Speaker: Jean Lasserre, CNRS, FR, talk 309
 Co-Authors: Cedric Josz, Bernard Mourrain,
 Eigenvalues inequalities for nonnegative tensors and their tropical analogues
 Speaker: Stephane Gaubert, INRIA, FR, talk 1415
 Co-Authors: Shmuel Friedland,
 Signal Denoising, Tensors and Singular Values
 Speaker: Harm Derksen, University of Michigan, US, talk 318
 Co-Authors: Nariman Takaan

Co-Authors: Neriman Tokcan,

Progress in Algorithms for Optimal Power Flow Problems I

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle DENUCE Building: Q, Ground Floor, Zone: 8

INVITED SESSION 8 Organizer: Miguel Anjos, Polytechnique Montreal, CA

1 - Solving an Optimal Power Flow (OPF) problem with preventive security constraints

Speaker: Manuel Ruiz, RTE, FR, talk 1237 Co-Authors: Julie Sliwak, Miguel Anjos, Lucas Letocart, Emiliano Traversi,

2 - Tight-and-Cheap Conic Relaxation for the AC Optimal Power Flow Problem

Speaker: Miguel Anjos, Polytechnique Montreal, CA, talk 256

Co-Authors: Christian Bingane, Sébastien Le Digabel,

3 - Coordinated Planning and Operation of M-FACTS

and Transmission Switching

Speaker: Mostafa Sahraei Ardakani, University of Utah, US, talk 169 Co-Authors: *Yuanrui Sang*,

Exact Optimization Algorithms for Compressed Sensing

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 39 Building: E, 3rd floor, Zone: 1

INVITED SESSION 56 Organizer: Marc Pfetsch, TU Darmstadt, DE

1 - A primal-dual homotopy algorithm for sparse recovery with inf. norm constraints

Speaker: Christoph Brauer, TU Braunschweig, DE, talk 200 Co-Authors: *Dirk Lorenz, Andreas Tillmann*,

2 - SparkMIP: Mixed-Integer Programming for the (Vector) Matroid Girth Problem

Speaker: Andreas Tillmann, RWTH Aachen University, DE, talk 593

3 - Complex-valued ℓ_0 minimization problems with constant modulus constraints

Speaker: Frederic Matter, TU Darmstadt, DE, talk 380 Co-Authors: *Tobias Fischer*, *Ganapati Hegde*, *Marius Pesavento*, *Marc Pfetsch*, *Andreas Tillmann*,

Mixed-integer derivative-free optimization

CONTINUOUS OPTIMIZATION DERFREE - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 21 Building: G, Intermediate, Zone: 6

Contributed Session 80

Chair: Clément Royer, UW-Madison, US

1 - Underlying algorithms and theory to our approach to MINLP without derivatives

Speaker: Andrew Conn, IBM T. J. Watson Res. Center, US, talk 1134

Co-Authors: Delphine Sinoquet, Claudia D'Ambrosia, Leo Liberti,

2 - Benchmark of a trust region method for solving blackbox mixed-integer problems

Speaker: Delphine Sinoquet, IFPEN, FR, talk 610

Co-Authors: Andrew Conn, Claudia D Ambrosio, Leo Liberti,

3 - A unified approach for solving mixed integer Box-Constrained optimization

Speaker: Ubaldo Garcia Palomares, Universidade de Vigo, ES, talk 750

Geometry of Polynomials and Applications in Approximate Counting

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Mo 3:15pm-4:45pm, Format: 3x30 min Room: LEYTEIRE Building: E, 3rd floor, Zone: 1

INVITED SESSION 99

Organizer: Shayan Oveis Gharan, University of Washington, US

1 - On a conjecture of Sokal on the location of roots of the independence polynomial

Speaker: Guus Regts, University of Amsterdam, NL, talk 296 Co-Authors: *Han Peters, Viresh Patel*,

2 - Zeros of polynomials and Ising partition functions Speaker: Piyush Srivastava, TIFR Mumbai, IN, talk 949 Co-Authors: *Jingcheng Liu, Alistair Sinclair*,

3 - A Deterministic Approximation Algorithm for Counting Bases of Matroids

Speaker: Nima Anari, Stanford University, US, talk 791 Co-Authors: Shayan Oveis Gharan, Cynthia Vinzant,

Using SDP relaxations and solving them faster

CONTINUOUS OPTIMIZATION SDP - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 20 Building: G, 1st floor, Zone: 6 INVITED SESSION 113

Organizer: Elisabeth Gaar, AAU Klagenfurt, AT

1 - Exact SDPs for a Class of (Random and Non-Random) Nonconvex QCQPs

Speaker: Samuel Burer, University of Iowa, US, talk 98 Co-Authors: *Yinyu Ye*,

2 - SDP Based Solution Methods for Binary Quadratic Problems

Speaker: Nicolo Gusmeroli, AAU - Klagenfurt, AT, talk 378 Co-Authors: *Angelika Wiegele*, *Franz Rendl*,

3 - Sieve-SDP: A simple facial reduction algorithm to preprocess SDPs

Speaker: Yuzixuan Zhu, University of North Carolina, US, talk 317

Co-Authors: Gabor Pataki, Quoc Tran-Dinh,

Tight relaxations in nonconvex MINLP

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING

MINLP - Mo 3:15pm-4:45pm, Format: 3x30 min

Room: Salle 34 Building: B, 1st floor, Zone: 3

INVITED SESSION 128

Organizer: Ambros Gleixner, Zuse Institute Berlin, DE

1 - Using mixed volume theory to compute convex hull volume for trilinear monomials

Speaker: Emily Speakman, Otto von Guericke University, DE, talk 878

Co-Authors: Gennadiy Averkov,

2 - Revising the handling of nonlinear constraints in SCIP

Speaker: Stefan Vigerske, GAMS Software GmbH, DE, talk 1005

Co-Authors: Benjamin Müller, Felipe Serrano, Fabian Wegscheider,

3 - Two-dimensional Projections for Separation and Propagation of Bilinear Terms

Speaker: Ambros Gleixner, Zuse Institute Berlin, DE, talk 1248

Co-Authors: Benjamin Müller, Felipe Serrano,

Proximal Methods for Structured Problems

CONTINUOUS OPTIMIZATION VARIAT - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 06 Building: Q, 1st floor, Zone: 11

INVITED SESSION 147

Organizer: Ting Kei Pong, HK Polytechnic University, HK

1 - A successive DC approximation method for nonconvex nonsmooth optimization

Speaker: Tianxiang Liu, PolyU, HK, talk 75

Co-Authors: Ting Kei Pong, Akiko Takeda,

2 - Cubic Regularization Revisited: Faster (Local) Rates under Weaker Assumptions

Speaker: Man-Chung Yue, Imperial College London, GB, talk 48

Co-Authors: Zirui Zhou, Anthony So,

3 - Iteratively reweighted 11 algorithms with extrapolation Speaker: Ting Kei Pong, HK Polytechnic University, HK, talk 17

Co-Authors: Peiran Yu,

Algorithms for optimization and variational problems with possibly nonisolated solutions I

CONTINUOUS OPTIMIZATION

VARIAT - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle ARNOZAN Building: Q, Ground Floor, Zone: 8

INVITED SESSION 152 Organizer: Andreas Fischer, TU Dresden, DE

1 - A special complementarity function revisited

Speaker: Nico Strasdat, TU Dresden, DE, talk 229

Co-Authors: Roger Behling, Andreas Fischer, Klaus Schönefeld,

2 - Critical solutions of nonlinear equations: attraction for Newton-type methods

Speaker: Alexey Izmailov, Moscow State University, RU, talk 108

Co-Authors: Aleksey Kurennoy, Mikhail Solodov,

3 - Local attraction of Newton methods to critical solutions of constrained systems

Speaker: Andreas Fischer, TU Dresden, DE, talk 230 Co-Authors: *Alexey Izmailov*, *Mikhail Solodov*,

Approximate dynamic programming

Optimization under Uncertainty

MARKOV - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 31 Building: B, Ground Floor, Zone: 5 INVITED SESSION 159

Organizer: David Brown, Duke University, US

1 - Information Relaxation Bounds for Partially Observed Markov Decision Processes

Speaker: Martin Haugh, Imperial College London, GB, talk 314

Co-Authors: Octavio Ruiz-Lacedelli,

2 - Approximate Dynamic Programming for Dynamic Assortment Optimization

Speaker: Huseyin Topaloglu, Cornell Tech, US, talk 1280 Co-Authors: *Mika Sumida, Paat Rusmevichientong,*

3 - Approximations to Stochastic Dynamic Programs via Information Relaxation Duality

Speaker: David Brown, Duke University, US, talk 1284 Co-Authors: *Santiago Balseiro*,

MINLP methods in gas transport optimization (I)

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 35 Building: B, Intermediate, Zone: 4 INVITED SESSION 162 **Organizer:** Lars Schewe, FAU, DE

1 - MIP techniques for instationary gas transport optimization and gas market models

Speaker: Lars Schewe, FAU, DE, talk 1298

2 - Solving MINLPs by Simultaneous Convexification with Application to Gas Networks

Speaker: Nick Mertens, TU Dortmund, DE, talk 742 Co-Authors: *Maximilian Merkert, Dennis Michaels, Frauke Liers, Alexander Martin,*

3 - Complementarity-Based Nonlinear Programming Techniques for Optimal Mixing in Gas

Speaker: Falk Hante, FAU Erlangen-Nürnberg, DE, talk 1288 Co-Authors: *Martin Schmidt*,

Preference robust optimization

OPTIMIZATION UNDER UNCERTAINTY ROBUST - Mo 3:15pm-4:45pm, Format: 3x30 min Room: DENIGES Building: C, Ground Floor, Zone: 5

INVITED SESSION 166 Organizer: Erick Delage, HEC Montréal, CA

1 - Robust choice with multi-attribute quasi-concave choice functions

Speaker: William Haskell, National Univ. of Singapore, SG, talk 1168

Co-Authors: Wenjie Huang, Huifu Xu,

2 - Optimizing aspirational preferences when the choice of a measure is ambiguous

Speaker: Jonathan Li, Telfer School of Management, CA, talk 1409

Co-Authors: *Erick Delage*,

3 - Utility-based Shortfall Risk Models when Preference **Information is Incomplete**

Speaker: Erick Delage, HEC Montréal, CA, talk 1081 Co-Authors: Shaoyan Guo, Huifu Xu,

Nonconvex Optimization: Theory and Methods - Part 1

CONTINUOUS OPTIMIZATION

NonSmooth - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 8 Building: N, 4th floor, Zone: 12

INVITED SESSION 184

Organizer: Shoham Sabach, Technion - Israel Institute of, IL

1 - From error bounds to the complexity of first-order descent methods

Speaker: Jerome Bolte, TSE, FR, talk 463

2 - Globally Solving the Trust Region Subproblem Using **Simple First-Order Methods**

Speaker: Yakov Vaisbourd, TAU, IL, talk 493

Co-Authors: Amir Beck,

3 - Nonconvex Lagrangian-Based Optimization: Schemes and Global Convergence

Speaker: Shoham Sabach, Technion - Israel Institute of, IL, talk 165

Coordinate Descent and Randomized Direct Search Methods

CONTINUOUS OPTIMIZATION RANDOMM - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle KC6 Building: K, Intermediate 1, Zone: 10 **INVITED SESSION 211**

Organizer: Martin Takac, Lehigh University, US

1 - When Cyclic Coordinate Descent Outperforms Randomized Coordinate Descent

Speaker: Asu Ozdaglar, MIT, US, talk 1486

Co-Authors: Mert Gurbuzbalaban, Nuri Vanli, Pablo Parrilo.

2 - Random direct search method for unconstrained smooth minimization

Speaker: El houcine Bergou, KAUST-INRA, SA, talk 421 Co-Authors: Peter Richtarik, Eduard Gorbunov,

3 - Active Metric Learning for Supervised Classification Speaker: Dimitri Papageorgiou, ExxonMobil, US, talk 1275 Co-Authors: Krishnan Kumaran, Martin Takac,

Convex regularization and inverse Co-Authors: Samuel Fiorini, Martin Gross, Laura Sanità,

problems

CONTINUOUS OPTIMIZATION NLP - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 05 Building: Q, 1st floor, Zone: 11 **INVITED SESSION 216** Organizer: Pierre Weiss, CNRS, FR

1 - T-systems for super-resolution microscopy

Speaker: Vincent Duval, INRIA Paris, FR, talk 1023 Co-Authors: Gabriel Peyre, Emmanuel Soubies, Quentin Denovelle,

2 - Convex regularisation, sparsity and representation theorem

Speaker: Frederic De Gournay, IMT toulouse, FR, talk 1130 Co-Authors: Vincent Duval, Pierre Weiss, Claire Boyer, Antonin Chambolle, Yohann de Castro,

3 - Bounds on the size of polyedral cones

Speaker: Jonas Kahn, CNRS, FR, talk 1033

Provable guarantees for Cut Generating Functions

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 43 Building: C, 3rd floor, Zone: 1 **INVITED SESSION 220**

Organizer: Amitabh Basu, Johns Hopkins University, US

1 - Using the geometry of S-free sets to find mixed-integer cut-generating functions

Speaker: Joseph Paat, ETH Zurich, CH, talk 1131 Co-Authors: Amitabh Basu, Santanu Dev,

2 - Can cut generating functions be good and efficient? Speaker: Sriram Sankaranarayanan, Johns Hopkins University, US, talk 391

Co-Authors: Amitabh Basu,

3 - Optimal cutting planes from the group relaxations

Speaker: Amitabh Basu, Johns Hopkins University, US, talk 409

Co-Authors: Michele Conforti, Marco Di Summa, Giacomo Zambelli,

On the Tree Augmentation Problem

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Mo 3:15pm-4:45pm, Format: 3x30 min Room: SIGALAS Building: C, 2nd floor, Zone: 2 **INVITED SESSION 240**

Organizer: Laura Sanità, University of Waterloo, CA

1 - Beating Approximation Factor 2 For Weighted Tree **Augmentation With Bounded Costs**

Speaker: David Adjiashvili, ETH Zurich, CH, talk 272

2 - Improved Approximation for Tree Augmentation via **Chvatal Gomory Cuts**

Speaker: Jochen Koenemann, University of Waterloo, CA, talk 137

3 - Improved Approximation for Tree Augmentation: Saving by Rewiring

Speaker: Rico Zenklusen, ETH Zurich, CH, talk 407 Co-Authors: *Fabrizio Grandoni*, *Christos Kalaitzis*,

Combinatorial Optimization in Chip Design

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCHEDULING - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 23 Building: G, 3rd floor, Zone: 6

INVITED SESSION 257 **Organizer:** Stefan Hougardy, University of Bonn, DE

1 - Faster Adder Circuits for Inputs with Prescribed Arrival Times

Speaker: Ulrich Brenner, University of Bonn, DE, talk 387 Co-Authors: *Anna Hermann*,

2 - BonnCell: Automatic Cell Layout for 7nm Processors Speaker: Pascal Cremer, University of Bonn, DE, talk 450 Co-Authors: *Stefan Hougardy, Thekla Hamm, Benjamin Klotz, Robert Vicari, Simon Thomä,*

3 - Provably Fast and Near-Optimum Gate Sizing Speaker: Siad Daboul, University of Bonn, DE, talk 345 Co-Authors: *Nicolai Hähnle*, *Stephan Held*, *Ulrike Schorr*,

Scenario discretization techniques in stochastic optimization

OPTIMIZATION UNDER UNCERTAINTY STOCH - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 32 Building: B, Ground Floor, Zone: 5

INVITED SESSION 287 Organizer: Fabian Bastin, Université de Montréal, CA

1 - On a two-stage stochastic optimization problem with stochastic constraints

Speaker: Thuy Anh Ta, University of Montreal, CA, talk 1128 Co-Authors: *Fabian Bastin, Pierre L'Ecuyer*,

2 - Multistage stochastic optimization: discretization of probability distributions

Speaker: Julien Keutchayan, Polytechnique Montréal, CA, talk 1125

Co-Authors: David Munger, Fabian Bastin, Michel Gendreau,

3 - Effective Heuristics for the Short-Term Hydro-Generation Planning Problem

Speaker: Michel Gendreau, Polytechnique Montréal, CA, talk 670

Co-Authors: Alexia Marchand, Marko Blais, Grégory Emiel,

Global Optimization

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING

CP - Mo 3:15pm-4:45pm, Format: 3x30 min Room: DURKHEIM Building: A, 3rd floor, Zone: 1 INVITED SESSION 299

Organizer: Hassan Hijazi, Los Alamos National Laboratory, US

1 - A class of proximal algorithms based on Chebychev centers for nonsmooth convex o

Speaker: Adam Ouorou, Orange Labs Research, FR, talk 657 2 - Convex relaxations for Mixed-Integer Multilinear Functions

Speaker: Kaarthik Sundar, Los Alamos National Laboratory, US, talk 1402

Co-Authors: Harsha Nagarajan, Hassan Hijazi, Russell Bent,

3 - Sparse Certificates for Polynomial Optimization Speaker: Tillmann Weisser, LAAS-CNRS, FR, talk 860

Distributed Optimization

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - MO 3:15pm-4:45pm, Format: 3x30 min Room: FABRE Building: J, Ground Floor, Zone: 8 INVITED SESSION 325 **Organizer:** Franck Iutzeler, Univ. Grenoble Alpes, FR

1 - Distributed Optimization with Sparse Communications and Structure Identification

Speaker: Franck Iutzeler, Univ. Grenoble Alpes, FR, talk 452 Co-Authors: *Dmitry Grishchenko*, *Jerome Malick*, *Massih-Reza Amini*,

2 - Random gradient extrapolation for distributed and stochastic optimization

Speaker: Guanghui Lan, Georgia Institute of Technolog, US, talk 1584

3 - Distributed Computation of Wasserstein Barycenters over Networks

Speaker: Alexander Gasnikov, MIPT, RU, talk 315

Co-Authors: Cesar Uribe, Pavel Dvurechensky, Darina Dvinskikh, Angelia Nedich,

Theory and Methods for ODE- and PDE-Constrained Optimization 1

CONTINUOUS OPTIMIZATION CONTROL - MO 3:15pm-4:45pm, Format: 3x30 min Room: Salle AURIAC Building: G, 1st floor, Zone: 6

CONTRIBUTED SESSION 331 Chair: Carl Greiff, Lund Unversity, SE

1 - On the Barzilai-Borwein step-sizes in Hilbert spaces Speaker: Behzad Azmi, RICAM Linz, AT, talk 831 Co-Authors: *Karl Kunisch*,

2 - Shape Optimization with Stress Constraints for Frictional Contact Problems

Speaker: Benjamin Horn, TU Darmstadt, DE, talk 754 Co-Authors: *Stefan Ulbrich*,

3 - Quadratic programming for time-optimal control in

differentially flat systems

Speaker: Carl Greiff, Lund Unversity, SE, talk 1484 Co-Authors: *Anders Robertsson*,

Matching and Matroids

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 36 Building: B, Intermediate, Zone: 4 INVITED SESSION 341 **Organizer:** José Soto, Universidad de Chile, CL

1 - Maximizing Efficiency in Dynamic Matching Markets

Speaker: Maximilien Burq, MIT, US, talk 1309
Co-Authors: *Itai Ashlagi, Amin Saberi, Patrick Jaillet,*2 - Online Weighted Matching: Beating the 1/2 Barrier
Speaker: Morteza Zadimoghaddam, Google Inc., CH, talk
188

3 - Strong Algorithms for the Ordinal Matroid Secretary Problem

Speaker: José Soto, Universidad de Chile, CL, talk 1170 Co-Authors: *Victor Verdugo, Abner Turkieltaub*,

Implementation of interior-point methods for large-scale problems and applications I

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - MO 3:15pm-4:15pm, Format: 2x30 min Room: Salle 22 Building: G, 2nd floor, Zone: 6 INVITED SESSION 353

Organizer: Jordi Castro, Univ. Politècnica de Catalunya, ES

1 - A feasible direction interior point algorithm for linear programming

Speaker: Jose Herskovits, UFRJ, BR, talk 31

Co-Authors: Miluzca Victorio, Nelson Maculan,

2 - A specialized interior-point algorithm for very large minimum cost flows in bipa

Speaker: Stefano Nasini, IESEG School of Management, FR, talk 38

Co-Authors: Jordi Castro,

Distributionally Robust Optimization - New Theory and Applications

OPTIMIZATION UNDER UNCERTAINTY ROBUST - MO 3:15pm-4:45pm, Format: 3x30 min

Robert - Mo 5.15pii-4.5pii, Format: 5x50 mil Room: Salle 33 Building: B, Ground Floor, Zone: 5 INVITED SESSION 356

Organizer: Zhichao Zheng, Singapore Management Uni, SG

1 - Data-Driven Bounded Rationality in Games- A Robust Framework Speaker: Yini Gao, Singapore Management Universit, SG, talk 440

Co-Authors: Chung Piaw Teo,

2 - Distributionally Robust Mechanism Design

Speaker: Cagil Kocyigit, EPFL, CH, talk 405

Co-Authors: Garud Iyengar, Daniel Kuhn, Wolfram Wiesemann,

3 - Schedule Reliability in Liner Shipping by Distributionally Robust Optimization

Speaker: Zhichao Zheng, Singapore Management Uni, SG, talk 398

Co-Authors: Abraham Zhang, Chung Piaw Teo,

Risk and Energy Markets

OPTIMIZATION UNDER UNCERTAINTY GAME - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 30 Building: B, Ground Floor, Zone: 5 CONTRIBUTED SESSION 376

Chair: Julio Deride, Sandia National Laboratories, US

1 - On solving risk-averse equilibrium problems via reformulations

Speaker: Olivier Huber, UW-Madison, US, talk 1126 Co-Authors: *Michael Ferris*,

2 - On risk averse competitive equilibrium

Speaker: Henri Gerard, Ponts ParisTech, FR, talk 1407 Co-Authors: Vincent Leclère, Andy Philpott,

3 - Stochastic General Equilibrium Model with Application to Energy Markets

Speaker: Julio Deride, Sandia National Laboratories, US, talk 1606

Portfolio Optimization

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCIENCES - MO 3:15pm-4:45pm, Format: 3x30 min Room: Salle LA4 Building: L, Basement, Zone: 8

CONTRIBUTED SESSION 393

Chair: Bernardo Pagnoncelli, Universidad Adolfo Ibanez, CL

1 - A Multiplicative Weights Update Algorithm for Portfolio Selection Problems

Speaker: Luca Mencarelli, IFP Energies nouvelles, FR, talk 162

2 - Regularized portfolio optimization with risk measures Speaker: Bernardo Pagnoncelli, Universidad Adolfo Ibanez, CL, talk 523

Co-Authors: Felipe Del Canto, Arturo Cifuentes, **3 - Log-optimal portfolios under random horizon**Speaker: Sina Yansori, University of Alberta, CA, talk 312
Co-Authors: Tahir Choulli,

Advances in Linear, Non Linear and Mixed-Integer Optimization

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 18 Building: I, 1st floor, Zone: 7

CONTRIBUTED SESSION 400 Chair: Hiroshige Dan, Kansai University, JP

1 - Computational Experiments with Nested Dantzig-Wolfe Decompositions

Speaker: Erik Mühmer, RWTH Aachen University, DE, talk 1424

Co-Authors: Marco Lübbecke, Jonas Witt,

2 - Restrict-and-fix: a constructive heuristic for mixedinteger programs

Speaker: Xavier Schepler, Recommerce Lab, FR, talk 1573 Co-Authors: Julien Kritter, Sophie Michel, Cédric Joncour,

3 - Automatic Differentiation Software for Indexed Optimization Problems

Speaker: Hiroshige Dan, Kansai University, JP, talk 1049 Co-Authors: *Masashi Noguchi*, *Koei Sakiyama*,

Topics in power systems

Specific Models, Algorithms, and Software Energy - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 24 Building: G, 3rd floor, Zone: 6

INVITED SESSION 438

Organizer: Alberto Lamadrid, Lehigh University, US

1 - Consumers Flexibility Estimation at the TSO Level for Balancing Services

Speaker: Giulia De Zotti, DTU, DK, talk 1656

Co-Authors: Ali Pourmousavi, Juan Morales, Henrik Madsen, Niels Kjølstad Poulsen,

2 - Decentralized control of DC-segmented power systems
Speaker: Joshua Taylor, University of Toronto, CA, talk 683
3 - Response to Disruptions in Electricity with Stochastic Microgrids

Speaker: Alberto Lamadrid, Lehigh University, US, talk 684 Co-Authors: *Luis Zuluaga, Kwami Sedzro, Xin Chi*,

Scheduling with setup, uncertainty and precedences

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 41 Building: C, 3rd floor, Zone: 1

INVITED SESSION 419

Organizer: Monaldo Mastrolilli, IDSIA, CH

1 - Empowering the Configuration-IP

Speaker: Kim-Manuel Klein, EPFL, CH, talk 120 Co-Authors: *Klaus Jansen*, *Marten Maack*, *Malin Rau*, **2 - Scheduling under Explorable Uncertainty**

Speaker: Nicole Megow, University of Bremen, DE, talk 423 Co-Authors: Christoph Duerr, Thomas Erlebach, Julie Meißner,

3 - Min-sum scheduling under precedence constraints Speaker: Jose Verschae, P Univ Catolica, CL, talk 461 Co-Authors: *Andreas Schulz*,

Sparse Recovery

CONTINUOUS OPTIMIZATION NLP - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle KC7 Building: K, Intermediate 2, Zone: 10 CONTRIBUTED SESSION 432 Chair: Mustafa Pinar, Bilkent University, TR

1 - LP-based Sparse Solutions Revisited

Speaker: John Chinneck, Carleton University, CA, talk 630 **2 - Sparse Recovery and Convex Quadratic Splines** Speaker: Mustafa Pinar, Bilkent University, TR, talk 660 **3 - Efficient** ℓ_0 **Trend Filtering** Speaker: Olof Troeng, Lund University, SE, talk 1350 Co-Authors: *Mattias Fält*,

Facility Layout

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LOGISTICS - MO 3:15pm-4:45pm, Format: 3x30 min Room: PITRES Building: O, Ground Floor, Zone: 8

CONTRIBUTED SESSION 450 Chair: Anders Gullhav, NTNU, NO

1 - Combinatorial Bounds for the (extended) Double Row Facility Layout Problem

Speaker: Mirko Dahlbeck, Universität Göttingen, Dortmund, DE, talk 1304

Co-Authors: Anja Fischer, Frank Fischer,

2 - A Matheuristic Approach to the Hospital Facility Layout Problem

Speaker: Anders Gullhav, NTNU, NO, talk 1019

Co-Authors: Henrik Andersson, Bjørn Nygreen, Vilde Kvillum, Anne Marit Vigerust,

3 - A Multi task robot layout optimization with inventory lot-sizing problem

Speaker: Hanane Khamlichi, FST - Tangier, MA, talk 1328 Co-Authors: *Kenza Oufaska*, *Rachid Dkiouak*, *Tarik Zouadi*,

Algorithms for nonlinear conic problems

CONTINUOUS OPTIMIZATION

SDP - Mo 3:15pm-4:45pm, Format: 3x30 min

Room: Salle LC5 Building: L, Intermediate 1, Zone: 10

Contributed Session 463 Chair: Takayuki Okuno, RIKEN AIP, JP

1 - Augmented Lagrangian for nonlinear SDPs applied to the covering problem

Speaker: Leonardo Mito, IME-USP, BR, talk 1570

Co-Authors: Gabriel Haeser, Ernesto Birgin, Daiana Viana, Walter Bofill,

2 - Long-Step Path-Following Algorithm for Nonlinear Symmetric Programming Problems

Speaker: Cunlu Zhou, University of Notre Dame, US, talk 667

Co-Authors: Leonid Faybusovich,

3 - A primal-dual path following method for nonlinear semi-infinite SDPs

Speaker: Takayuki Okuno, RIKEN AIP, JP, talk 704 Co-Authors: *Masao Fukushima*,

Decisions and learning from data

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - MO 3:15pm-4:45pm, Format: 3x30 min Room: Salle 16 Building: I, 2nd floor, Zone: 7 CONTRIBUTED SESSION 481 **Chair:** Christopher McCord, MIT, US

1 - Gaussian mixture penalization for trajectory optimization problems

Speaker: Cédric Rommel, CMAP INRIA Safety Line, FR, talk 1082

Co-Authors: Frédéric Bonnans, Pierre Martinon, Baptiste Gregorutti,

2 - Optimization over Continuous Decisions with Observational Data

Speaker: Christopher McCord, MIT, US, talk 1468 Co-Authors: *Dimitris Bertsimas*,

3 - Combining Machine Learning and Optimization: Learning to emulate an expert

Speaker: Oskar Schneider, FAU, DE, talk 889 Co-Authors: Andreas Bärmann, Sebastian Pokutta,

IP Practice I

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - Mo 3:15pm-4:45pm, Format: 3x30 min Room: Salle 44 Building: C, 3rd floor, Zone: 1

CONTRIBUTED SESSION 506

Chair: Maurice Queyranne, UBC Sauder School of Business, CA

1 - IP models for dimensionality reduction and feature selection in categorical da

Speaker: Raphael Hauser, Oxford Mathematical Institute, GB, talk 1531

Co-Authors: Reka Agnes Kovacs, Oktay Gunluk,

2 - Network models for multiobjective discrete optimization

Speaker: Carlos Cardonha, IBM Research, BR, talk 558 Co-Authors: *Merve Bodur*, *Andre Cire*, *David Bergman*, **3 - Optimum Turn-Restricted Paths, Nested Compatibil-**

ity, and Optimum Convex Polygons

Speaker: Maurice Queyranne, UBC Sauder School of Business, CA, talk 646

Co-Authors: Laurence Wolsey,

Adaptivity in non smooth optimization

CONTINUOUS OPTIMIZATION

NonSmooth - Mo 3:15pm-4:15pm, Format: 2x30 min

Room: Salle 9 Building: N, 4th floor, Zone: 12

INVITED SESSION 558

Organizer: Masaru Ito, Nihon University, JP

1 - An adaptive first order method for weakly smooth and uniformly convex problems

Speaker: Masaru Ito, Nihon University, JP, talk 990 Co-Authors: *Mituhiro Fukuda*,

2 - A Subgradient Algorithm for solving variational Inequality Problem

Speaker: Somayya Komal, KMUTT, Bangkok, Thailand, TH, talk 732

Co-Authors: Poom Kumam,

Gradient Methods for Constrained Optimization Problems

CONTINUOUS OPTIMIZATION NLP - Mo 5:00pm-6:30pm, Format: 3x30 min Room: GINTRAC Building: Q, Ground Floor, Zone: 8

Invited Session 4

Organizer: Igor Konnov, Kazan Federal University, RU

1 - Simple Adaptive Versions of Iterative Optimization Methods

Speaker: Igor Konnov, Kazan Federal University, RU, talk 324

2 - Subgradient Projection Algorithm with Computational Errors

Speaker: Alexander Zaslavski, The Technion - IIT, IL, talk 474

3 - An active-set framework for minimizing nonconvex functions over the simplex

Speaker: Andrea Cristofari, University of Padua, IT, talk 584 Co-Authors: *Marianna De Santis, Stefano Lucidi, Francesco Rinaldi,*

Polynomial and tensor optimization III

CONTINUOUS OPTIMIZATION

NLP - Mo 5:00pm-6:30pm, Format: 4x20 min

Room: Salle 05 Building: Q, 1st floor, Zone: 11

INVITED SESSION 7

Organizer: Jiawang Nie, Univ. of California San Diego, US

1 - Higher order cone programming

Speaker: Lek-Heng Lim, University of Chicago, US, talk 368 Co-Authors: *Lijun Ding*,

2 - Ranks and decompositions of Hankel tensors

Speaker: Ke Ye, Chinese Academy of Sciences, CN, talk 13
Co-Authors: Jiawang Nie,

3 - Symmetric Sums of Squares over k-Subset Hypercubes Speaker: Annie Raymond, University of Massachusetts, US, talk 363

Co-Authors: James Saunderson, Mohit Singh, Rekha Thomas,

4 - Tight relaxations for polynomial optimization and lagrange multiplier expression

Speaker: Jiawang Nie, Univ. of California San Diego, US, talk 5

Advances in DFO I

CONTINUOUS OPTIMIZATION DERFREE - Mo 5:00pm-6:30pm, Format: 3x30 min Room: Salle 21 Building: G, Intermediate, Zone: 6

CONTRIBUTED SESSION 40

Chair: Sébastien Le Digabel, Polytechnique Montreal, CA

1 - Calculus Rules of the Simplex Gradient

Speaker: Warren Hare, University of British Columbia, CA, talk 517

Co-Authors: Gabriel Jarry-Bolduc,

2 - Derivative free global Optimization with categoricalcontinuous variables

Speaker: Miguel Munoz Zuniga, IFPEN, FR, talk 612 Co-Authors: *Delphine Sinoquet*,

3 - A Taxonomy of Constraints for Blackbox-Based Optimization

Speaker: Stefan Wild, Argonne National Laboratory, US, talk 1183

Co-Authors: Sébastien Le Digabel,

Novel data-driven OR techniques for power system operations and planning

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Mo 5:00pm-6:30pm, Format: 3x30 min Room: Salle 23 Building: G, 3rd floor, Zone: 6

INVITED SESSION 52

Organizer: Juan Morales, University of Malaga, ES

1 - Chronological Time-Period Clustering for Optimal Capacity Expansion Planning

Speaker: Salvador Pineda Morente, University of Málaga, ES, talk 270

Co-Authors: Juan Morales,

2 - Energy and Reserve Dispatch with Distributionally Robust Joint Chance Constraints

Speaker: Christos Ordoudis, DTU, DK, talk 731

Co-Authors: Viet Anh Nguyen, Daniel Kuhn, Pierre Pinson,

3 - Predicting the electricity demand response via datadriven inverse optimization

Speaker: Juan Morales, University of Malaga, ES, talk 267 Co-Authors: *Javier Saez-Gallego*,

Mixed-Integer Conic Optimization

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Mo 5:00pm-6:30pm, Format: 3x30 min Room: DURKHEIM Building: A, 3rd floor, Zone: 1

INVITED SESSION 57

Organizer: Sven Wiese, MOSEK ApS, DK

1 - Exact methods based on SDP for the k-item quadratic knapsack problem

Speaker: Lucas Letocart, LIPN, CNRS Universite Paris 13, FR, talk 721

Co-Authors: Frederic Roupin, Angelika Wiegele,

2 - Knapsack Constraints over the Positive Semidefinite Cone

Speaker: Tristan Gally, TU Darmstadt, DE, talk 712 Co-Authors: *Marc Pfetsch*,

3 - The Mixed-integer Conic Optimizer in MOSEK Speaker: Sven Wiese, MOSEK ApS, DK, talk 534

Polynomial optimization in binary variables

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Mo 5:00pm-6:30pm, Format: 3x30 min Room: Salle 39 Building: E, 3rd floor, Zone: 1

INVITED SESSION 58

Organizer: Elisabeth Rodriguez-Heck, University of Liege, BE

1 - Unconstrained 0-1 polynomial optimization through convex quadratic reformulation

Speaker: Arnaud Lazare, UMA-CEDRIC ENSTA, FR, talk 457

Co-Authors: Sourour Elloumi, Amélie Lambert,

2 - A study of specially structured polynomial matroid optimization problems

Speaker: Anja Fischer, TU Dortmund University, DE, talk 757

Co-Authors: Frank Fischer, Tom McCormick,

3 - Linear and quadratic reformulations of nonlinear 0-1 optimization problems

Speaker: Elisabeth Rodriguez-Heck, University of Liege, BE, talk 462

Co-Authors: Endre Boros, Yves Crama,

Lattice methods in Integer Optimisation

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - Mo 5:00pm-6:30pm, Format: 3x30 min Room: Salle 34 Building: B, 1st floor, Zone: 3 INVITED SESSION 78

Organizer: Iskander Aliev, Cardiff University, GB

1 - Approximation of corner polyhedra with intersection

cuts

Speaker: Gennadiy Averkov, OvGU Magdeburg, DE, talk 77
Co-Authors: Amitabh Basu, Joseph Paat,
2 - The Support of Integer Optimal Solutions
Speaker: Timm Oertel, Cardiff University, GB, talk 100
Co-Authors: J. De Loera, Iskander Aliev, Friedrich Eisenbrand, Robert Weismantel,
2 - Distributed States and States

3 - Distances to Lattice Points in Knapsack Polyhedra Speaker: Iskander Aliev, Cardiff University, GB, talk 211 Co-Authors: *Martin Henk*, *Timm Oertel*,

Solving large scale convex composite programming

CONTINUOUS OPTIMIZATION SDP - Mo 5:00pm-6:30pm, Format: 3x30 min

Room: Salle 20 Building: G, 1st floor, Zone: 6

INVITED SESSION 130

Organizer: Kim-Chuan Toh, National U. of Singapore, SG

${\bf 1}$ - A block symmetric Gauss-Seidel decomposition theorem for convex composite QP

Speaker: Kim-Chuan Toh, National U. of Singapore, SG, talk 174

Co-Authors: Xudong Li, Defeng Sun,

2 - Fast algorithms for large scale generalized distance weighted discrimination

Speaker: Xin Yee Lam, NUS, SG, talk 445

Co-Authors: J.S. Marron, Kim-Chuan Toh, Defeng Sun,

3 - An Efficient Semismooth Newton Based Algorithm for Convex Clustering

Speaker: Yancheng Yuan, NUS, SG, talk 446 Co-Authors: *Defeng Sun, Kim-Chuan Toh*,

Structure and Learning in Power Grid Optimization

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Mo 5:00pm-6:30pm, Format: 3x30 min Room: Salle 24 Building: G, 3rd floor, Zone: 6

INVITED SESSION 135 Organizer: Deepjyoti Deka, Los Alamos National Lab, US

1 - Chance-Constrained Outage Scheduling using a Machine Learning Proxy

Speaker: Gal Dalal, Technion, IL, talk 432
Co-Authors: *Elad Gilboa, Louis Wehenkel, Shie Mannor*, **2 - Statistical Learning For DC Optimal Power Flow**Speaker: Sidhant Misra, Los Alamos National Laboratory, US, talk 383
Co-Authors: *Line Roald, Yeesian Ng*,

3 - Non-Stationary Streaming PCA

Speaker: Apurv Shukla, Columbia University, US, talk 316 Co-Authors: *Seyoung Yun, Daniel Bienstock*,

Nonlinear Optimization and Variational Inequalities VI

CONTINUOUS OPTIMIZATION

VARIAT - Mo 5:00pm-6:30pm, Format: 4x20 min

Room: Salle 06 Building: Q, 1st floor, Zone: 11

INVITED SESSION 146

Organizer: Cong Sun, Beijing Univ. Post. Telecomm., CN

1 - Balance analysis of sparsity and robustness for portfolio adjustment problem

Speaker: Fengmin Xu, Xi'an Jiaotong University, CN, talk 797

Co-Authors: Zhihua Zhao,

2 - Two-stage stochastic program and stochastic variational inequalities

Speaker: Chao Zhang, Beijing Jiaotong University, CN, talk 1047

3 - Proximal Stochastic Quasi-Newton methods for Nonconvex Composite Optimization

Speaker: Xiao Wang, Chinese Academy of Sciences, CN, talk 465

Co-Authors: Xiaoyu Wang, Yaxiang Yuan,

4 - General inertial proximal gradient method for nonconvex nonsmooth optimization

Speaker: Zhongming Wu, Southeast University, CN, talk 583 Co-Authors: *Min Li*,

MINLP methods in gas transport optimization (II)

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Mo 5:00pm-6:30pm, Format: 3x30 min Room: Salle 35 Building: B, Intermediate, Zone: 4 INVITED SESSION 163 **Organizer:** Lars Schewe, FAU, DE

1 - Exploiting acyclic orientations to solve nonlinear potential-based flow problems

Speaker: Benjamin Hiller, Zuse Institute Berlin, DE, talk 905 Co-Authors: *Kai-Helge Becker*,

2 - ASTS-Orientations on Undirected Graphs - A tool for optimizing network flows

Speaker: Kai Becker, Zuse-Institute Berlin, DE, talk 1446 Co-Authors: *Benjamin Hiller*,

3 - Robust Optimal Discrete Arc Sizing for Tree-Shaped Potential Networks

Speaker: Johannes Thürauf, Universität Erlangen-Nürnberg, DE, talk 546

Co-Authors: Lars Schewe, Martin Schmidt, Martin Robinius, Detlef Stolten, Lara Welder,

Advances in optimization methods for time dependent problems: I

CONTINUOUS OPTIMIZATION

CONTROL - Mo 5:00pm-6:30pm, Format: 4x20 min Room: Salle AURIAC Building: G, 1st floor, Zone: 6 INVITED SESSION 223 Organizer: Matthias Heinkenschloss, Rice University, US

1 - Exponentially convergent receding horizon constrained optimal control

Speaker: Mihai Anitescu, Argonne National Laboratory, US, talk 529

Co-Authors: Wanting Xu,

2 - Parallel strategies for DAE optimization with direct Schur-complement decomp.

Speaker: Carl Laird, Sandia National Laboratories, US, talk 1356

Co-Authors: Santiago Rodriguez, Bethany Nicholson,

3 - Shape optimization for unsteady fluid-structure interaction

Speaker: Johannes Haubner, Technical University of Munich, DE, talk 1028

Co-Authors: Michael Ulbrich,

4 - A parallel-in-time gradient-type method for optimal control problems

Speaker: Matthias Heinkenschloss, Rice University, US, talk 512

Distributionally Robust Stochastic Programming: Theory and Applications

Optimization under Uncertainty

STOCH - Mo 5:00pm-6:30pm, Format: 3x30 min Room: Salle 32 Building: B, Ground Floor, Zone: 5

INVITED SESSION 250

Organizer: Ran Ji, George Mason University, US

1 - Ambiguous Chance-constrained Binary Programs Under Mean-covariance Information

Speaker: Yiling Zhang, University of Michigan, US, talk 43 Co-Authors: *Ruiwei Jiang*, *Siqian Shen*,

2 - Distributionally Robust Optimization with optimal transport (Wasserstein) costs

Speaker: Karthyek Murthy, SUTD, SG, talk 1007 Co-Authors: *Jose Blanchet, Fan Zhang*,

3 - Distributionally Robust Chance-Constrained Optimization with Wasserstein Metric

Speaker: Ran Ji, George Mason University, US, talk 255 Co-Authors: *Miguel Lejeune*,

Extending the Reach of First-Order Methods, Part I

CONTINUOUS OPTIMIZATION

NonSmooth - Mo 5:00pm-6:30pm, Format: 3x30 min Room: Salle 8 Building: N, 4th floor, Zone: 12

INVITED SESSION 285 Organizer: Haihao Lu, MIT, US

1 - Subgradient Method Convergence Rates without Lipschitz Continuity or Convexity

Speaker: Benjamin Grimmer, Cornell University, US, talk

1154

Co-Authors: Damek Davis,

2 - Relative smoothness condition and its application to third-order methods.

Speaker: Yurii Nesterov, UCL, BE, talk 720

3 - Generalized Stochastic Frank-Wolfe Method Speaker: Haihao Lu, MIT, US, talk 1430

Co-Authors: Robert Freund,

Riemannian geometry in optimization for learning

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - Mo 5:00pm-6:30pm, Format: 4x20 min Room: FABRE Building: J, Ground Floor, Zone: 8

INVITED SESSION 320

Organizer: Nicolas Boumal, Princeton University, US

1 - Global rates of convergence for nonconvex optimization on manifolds

Speaker: Nicolas Boumal, Princeton University, US, talk 625 Co-Authors: *Coralia Cartis, P.-A. Absil*,

2 - A parallel Douglas-Rachford algorithm for data on Hadamard manifolds

Speaker: Ronny Bergmann, TU Chemnitz, DE, talk 808 **3 - Riemannian optimization for the canonical tensor rank approximation problem**

Speaker: Paul Breiding, MPI MiS Leipzig, DE, talk 1227 Co-Authors: *Nick Vannieuwenhoven*,

4 - Primal-Dual Optimization Algorithms over Riemannian Manifolds

Speaker: Junyu Zhang, University of Minnesota, US, talk 663 Co-Authors: *Shiqian Ma*, *Shuzhong Zhang*,

Exploiting structure in constrained optimization

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE

LEARNING - Mo 5:00pm-6:30pm, Format: 4x20 min

Room: Salle DENUCE Building: Q, Ground Floor, Zone: 8

INVITED SESSION 334

Organizer: Mihai Cucuringu, Alan Turing Institute-Oxford, GB

${\bf 1}$ - Provably robust estimation of modulo 1 samples of a smooth function

Speaker: Hemant Tyagi, Alan Turing Institute, GB, talk 1121 Co-Authors: *Mihai Cucuringu*,

2 - Efficient DC Algorithm for constrained sparse optimization problems

Speaker: Akiko Takeda, The University of Tokyo, JP, talk 682 Co-Authors: *Katsuya Tono*, *Jun-ya Gotoh*, *Tianxiang Liu*, *Ting Kei Pong*,

3 - Distributionally Ambiguous Optimization Techniques for Batch Bayesian Optimizati

Speaker: Nikitas Rontsis, University of Oxford, GB, talk 1259

Co-Authors: Michael Osborne, Paul Goulart,

4 - On critical points of quadratic low-rank matrix optimization problems

Speaker: Andre Uschmajew, MPI MiS Leipzig, DE, talk 1377 Co-Authors: *Bart Vandereycken*,

Scheduling and File Migration

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Mo 5:00pm-6:30pm, Format: 3x30 min Room: LEYTEIRE Building: E, 3rd floor, Zone: 1

CONTRIBUTED SESSION 345 **Chair:** Asaf Levin, The Technion, IL

1 - Scheduling on Uniform Nonsimultaneous Parallel Machines

Speaker: Liliana Grigoriu, University of Siegen, DE, talk 1238

Co-Authors: Donald Friesen,

2 - On phase-based algorithms for online file migration

Speaker: Marcin Bienkowski, University of Wroclaw, PL, talk 1678

Co-Authors: Jaroslaw Byrka, Marcin Mucha,

3 - A unified framework for designing EPTAS's for load balancing on parallel machine

Speaker: Asaf Levin, The Technion, IL, talk 1255 Co-Authors: *Ishai Kones*,

Complexity of Randomized Algorithms

CONTINUOUS OPTIMIZATION RANDOMM - Mo 5:00pm-6:30pm, Format: 3x20 min Room: Salle KC6 Building: K, Intermediate 1, Zone: 10 INVITED SESSION 347

Organizer: Raghu Pasupathy, Purdue, US

1 - On the Convergence of SAGA-like Algorithms

Speaker: Martin Morin, Lund University, SE, talk 1285 Co-Authors: *Pontus Giselsson*,

2 - On the linear convergence of the projected stochastic gradient method

Speaker: Bang Vu, EPFL-Switzerland, CH, talk 264 Co-Authors: *Volkan Cevher*,

3 - The Complexity of Adaptive Sampling Accelerated Gradient Dsescent

Speaker: Raghu Pasupathy, Purdue, US, talk 247 Co-Authors: *David Newton*, *Farzad Yousefian*,

Advances in Adjustable Robust Optimization

OPTIMIZATION UNDER UNCERTAINTY ROBUST - MO 5:00pm-6:30pm, Format: 3x30 min Room: DENIGES Building: C, Ground Floor, Zone: 5 INVITED SESSION 350 Organizer: Do Young Yoon, Stanford University, US

1 - Robust optimization for models with uncertain SOC and SDP constraints

Speaker: Dick den Hertog, Tilburg University, NL, talk 706 Co-Authors: *Jianzhe Zhen, Frans de Ruiter*,

2 - Approximation of uncertain convex inequalities Speaker: Ernst Roos, Tilburg University, NL, talk 710

Co-Authors: Dick den Hertog, Aharon Ben-Tal,

3 - Monitoring with Limited Information

Speaker: Do Young Yoon, Stanford University, US, talk 954 Co-Authors: *Dan Iancu, Nikos Trichakis*,

Implementation of interior-point methods for large-scale problems and applications II

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - MO 5:00pm-6:30pm, Format: 3x30 min Room: PITRES Building: O, Ground Floor, Zone: 8

INVITED SESSION 352

Organizer: Jordi Castro, Univ. Politècnica de Catalunya, ES

1 - On the implementation of the crossover algorithm Speaker: Csaba Meszaros, FICO, GB, talk 992

2 - Interior point methods applied to context-free grammar parameter estimation

Speaker: Aurelio Oliveira, University of Campinas, BR, talk 1040

Co-Authors: Sofia Lopez,

3 - A new specialized interior-point method for support vector machines

Speaker: Jordi Castro, Univ. Politècnica de Catalunya, ES, talk 81

Variational Analysis 4

CONTINUOUS OPTIMIZATION VARIAT - Mo 5:00pm-6:30pm, Format: 4x20 min Room: Salle ARNOZAN Building: Q, Ground Floor, Zone: 8

INVITED SESSION 370 Organizer: Jo Brueggemann, Weierstrass Institute, DE

1 - Path-following method for a class of obstacle problems with integral constraints

Speaker: Jo Brueggemann, Weierstrass Institute, DE, talk 1397

Co-Authors: Michael Hintermüller, Carlos Rautenberg,

2 - Nonconvex integration using ϵ **-subdifferentials** Speaker: Yboon García Ramos, Universidad del Pacífico, PE,

talk 132 Co-Authors: *Abderrah Hantoute*, *Rafael Correa*, **3 - A family of two-point stepsize gradient methods** Speaker: Yakui Huang, Hebei University of Technology, CN, talk 397

Co-Authors: Yu-Hong Dai, Xin-Wei Liu,

4 - Proximal alternating direction method of multipliers in the nonconvex setting

Speaker: Khoa Nguyen, University of Vienna, AT, talk 622 Co-Authors: Radu Ioan Bot,

Learning and dynamic programming

OPTIMIZATION UNDER UNCERTAINTY MARKOV - Mo 5:00pm-6:00pm, Format: 2x30 min Room: Salle 31 Building: B, Ground Floor, Zone: 5

CONTRIBUTED SESSION 381 Chair: Boxiao Chen, University of Illinois Chicago, US

1 - A unifying computation of Whittle's Index for Markovian bandits

Speaker: Manu Gupta, IRIT, FR, talk 1355 Co-Authors: Urtzi Ayesta, Ina Maria Verloop,

2 - A verification theorem for indexability of real-state restless bandits

Speaker: Jose Nino-Mora, Carlos III University, Madrid, ES, talk 1070

Structure from evidence

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE Sciences - Mo 5:00pm-6:30pm, Format: 3x30 min Room: Salle LA4 Building: L, Basement, Zone: 8 **INVITED SESSION 386** Organizer: Peter Gritzmann, TU Munich, DE

1 - Mathematical Programming in Quantum Information and Computation

Speaker: Douglas Gonçalves, UFSC, BR, talk 786

2 - Detection of Uninformed Experts

Speaker: Jorge Barreras, University of Pennsylvania, US, talk 1444

3 - On constrained flow and multi assignment problems for plasma particle tracking Speaker: Peter Gritzmann, TU Munich, DE, talk 1252

Co-Authors: Andreas Alpers,

Combinatorial optimization and convexity

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Mo 5:00pm-6:30pm, Format: 4x20 min Room: SIGALAS Building: C, 2nd floor, Zone: 2

CONTRIBUTED SESSION 424

Chair: Yu Yokoi, National Inst. of Informatics, JP

1 - Discrete convexity in binary VCSPs

Speaker: Yuni Iwamasa, University of Tokyo, JP, talk 1017 Co-Authors: Kazuo Murota, Hiroshi Hirai, Standa Zivny, 2 - Low matrix completion by a majorized penalty approach

Speaker: Fei Wang, Royal Institute of Technology, SE, talk Specific Models, Algorithms, and Software

1400

Co-Authors: Anders Forsgren, Henry Wolkowicz, 3 - Abstract tropical linear programming Speaker: Georg Loho, EPFL, CH, talk 1479 4 - List Supermodular Coloring Speaker: Yu Yokoi, National Inst. of Informatics, JP, talk 973 Co-Authors: Satoru Iwata,

Practical aspects of network optimization

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Mo 5:00pm-6:30pm, Format: 4x20 min Room: Salle 41 Building: C, 3rd floor, Zone: 1 **CONTRIBUTED SESSION 427** Chair: Kai Hoppmann, Zuse Institute Berlin, DE

1 - Energy-Efficient in Multi-Hop Wireless Networks Problem

Speaker: Sonia Vanier, Université Panthéon-Sorbonne, FR, talk 1133

2 - Optimal division for the multi-member constituency system

Speaker: Keisuke Hotta, Bunkvo University, JP, talk 800 Co-Authors: Toshio Nemoto, Junichiro Wada,

3 - Maintenance Scheduling in a Railway Corridor Speaker: Saman Eskandarzadeh, University of Newcastle, AU, talk 936

Co-Authors: Thomas Kalinowski, Hamish Waterer, 4 - Pushing a Network to its Limits - Finding Maximum **Min-Cost-Flows**

Speaker: Kai Hoppmann, Zuse Institute Berlin, DE, talk 594

Modeling in NLP

CONTINUOUS OPTIMIZATION NLP - Mo 5:00pm-6:30pm, Format: 3x20 min Room: Salle 9 Building: N, 4th floor, Zone: 12 **CONTRIBUTED SESSION 433** Chair: Laura Balzano, Univ of Michigan, US

1 - Low Algebraic Dimension Matrix Completion

Speaker: Laura Balzano, Univ of Michigan, US, talk 1080 Co-Authors: Greg Ongie, Daniel Pimentel-Alarcon, Rebecca Willett, Robert Nowak,

2 - DC programming algorithm for fully convex bilevel optimization

Speaker: Mirai Tanaka, ISM, JP, talk 1460

Co-Authors: Alain Zemkoho,

3 - An inertial proximal point methods for solving minimization problems

Speaker: Nuttapol Pakkaranang, KMUTT, TH, talk 829 Co-Authors: Poom Kumam, Prasit Cholamjiak,

Packing and Capacity Management

Logistics - Mo 5:00pm-6:30pm, Format: 3x20 min Room: Salle 16 Building: I, 2nd floor, Zone: 7 CONTRIBUTED SESSION 452 Chair: Eugene Zak, Amazon, US

1 - Solving Irregular Strip Packing Problems with free rotations

Speaker: Marina Andretta, University of Sao Paulo, BR, talk 1326

Co-Authors: Jeinny Peralta, Jose Oliveira,

2 - A 3D-knapsack problem with truncated pyramids and static stability constraint

Speaker: Alexandre Le Jean, UGA Grenoble, Fives Syleps, FR, talk 1085

Co-Authors: Olivier Briant, Berenger David, Nadia Brauner, Mircea Cocan,

3 - Minimization of sum of inverse sawtooth functions Speaker: Eugene Zak, Amazon, US, talk 11

New models in robust optimization

OPTIMIZATION UNDER UNCERTAINTY ROBUST - MO 5:00pm-6:30pm, Format: 3x20 min Room: Salle 37 Building: B, Intermediate, Zone: 4 CONTRIBUTED SESSION 459 Chair: Juan Borrero, Oklahoma State University, US

1 - On using cardinality constrained uncertainty for objective coefficients

Speaker: Jaeyoong Lim, KAIST, KR, talk 1201 Co-Authors: *Sungsoo Park*,

2 - Robust optimization of PDE-constrained problems using second-order methods

Speaker: Philip Kolvenbach, TU Darmstadt, DE, talk 850 Co-Authors: *Stefan Ulbrich*,

3 - Robust optimization with non-convex uncertainty sets Speaker: Juan Borrero, Oklahoma State University, US, talk 758

Co-Authors: Leonardo Lozano,

Convergence and Approximation in Conic Programming

CONTINUOUS OPTIMIZATION SDP - Mo 5:00pm-6:30pm, Format: 3x30 min Room: Salle LC5 Building: L, Intermediate 1, Zone: 10 CONTRIBUTED SESSION 465 Chair: Tamás Terlaky, Lehigh University, US

1 - Convergence Rate of Block Coordinate Ascent for Nonconvex Burer-Monteiro Method

Speaker: Nuri Vanli, MIT, US, talk 1499 Co-Authors: Asu Ozdaglar, Pablo Parrilo, Murat Erdogdu,

2 - Towards efficient approximation of p-cones Speaker: Yuriy Zinchenko, U of Calgary and Gurobi LLC, CA, talk 919 Co-Authors: *Pooyan Shirvani*, *Liang Qihe*,

3 - Quadratic convergence to the optimal solution of second-order conic optimization

Speaker: Tamás Terlaky, Lehigh University, US, talk 952 Co-Authors: *Ali Mohammad-Nezhad*,

Algorithms for matching markets

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Mo 5:00pm-6:30pm, Format: 4x20 min Room: Salle 43 Building: C, 3rd floor, Zone: 1

INVITED SESSION 467

Organizer: Amin Saberi, Stanford University, US

1 - Concise Bidding Through Dependent Randomized Rounding

Speaker: Arash Asadpour, NYU Stern, US, talk 1670 Co-Authors: Hossein Bateni, Vahab Mirrokni, Kshipra

Bhawalkar, 2 - Robust Repeated Auctions under Heterogeneous Buyer Behavior

Speaker: Balasubraman Sivan, Google Research, US, talk 1672

Co-Authors: Shipra Agrawal, Constantinos Daskalakis, Vahab Mirrokni,

3 - Proportional Allocation: Simple, Distributed, and Diverse Matching w High Entropy

Speaker: Vahab Mirrokni, Google Research, US, talk 1675 Co-Authors: *Shipra Agrawal, Morteza Zadimoghaddam*, **4 - Matching in dynamic environments**

Speaker: Amin Saberi, Stanford University, US, talk 1669

Sparsity, variable selection and efficient algorithms

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - Mo 5:00pm-6:30pm, Format: 4x20 min Room: Salle 22 Building: G, 2nd floor, Zone: 6

Contributed Session 475 Chair: Alex Sholokhov, MIPT, RU

1 - Distributed algorithms for statistical learning with structured sparsity

Speaker: Sam Tajbakhsh, Ohio State University, US, talk 1626

Co-Authors: Dewei Zhang,

2 - Sparse regression: Scalable algorithms and empirical performance

Speaker: Jean Pauphilet, MIT, US, talk 1139

Co-Authors: Dimitris Bertsimas, Bart Van Parys,

3 - Sparsified Huge-Scale Optimization for Regularized Regression Problems

Speaker: Alex Sholokhov, MIPT, RU, talk 1523

Co-Authors: Yury Maximov,

4 - Forward stepwise variable selection based on relative weights

Speaker: Zixin Shen, National Taiwan University, TW, talk 995

Co-Authors: Argon Chen,

Differentiability, convexity, and modeling in stochastic optimization

Optimization under Uncertainty

STOCH - Mo 5:00pm-6:30pm, Format: 3x20 min Room: Salle 30 Building: B, Ground Floor, Zone: 5

CONTRIBUTED SESSION 493

Chair: Kai Spuerkel, University of Duisburg-Essen, DE

1 - Stochastic optimization with probabilistic/robust (probust) constraints

Speaker: Holger Heitsch, Weierstrass Institute, DE, talk 1554 2 - Subdifferential characterization of probability functions

Speaker: Pedro Perez-Aros, University of O'higgins, CL, talk 907

Co-Authors: René Henrion, Abderrah Hantoute,

3 - Strong Convexity in Stochastic Programming with Deviation Risk Measures

Speaker: Kai Spuerkel, University of Duisburg-Essen, DE, talk 1666

Co-Authors: Ruediger Schultz, Matthias Claus,

Data Mining

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - Mo 5:00pm-6:30pm, Format: 4x20 min Room: Salle 44 Building: C, 3rd floor, Zone: 1

CONTRIBUTED SESSION 504 Chair: Marcus Poggi, PUC-Rio Informatica, BR

1 - A weighting local search for huge assignment problems in item recommendation

Speaker: Takahiro Kan, Osaka University, JP, talk 810 Co-Authors: *Shunji Umetani*, *Hiroshi Morita*,

2 - Exact Clustering via Integer Programming and Maximum Satisfiability

Speaker: Atsushi Miyauchi, RIKEN AIP, JP, talk 1209 Co-Authors: *Tomohiro Sonobe*, *Noriyoshi Sukegawa*,

3 - The best subset selection problem in regression
Speaker: Dennis Kreber, Trier University, DE, talk 996
4 - Cut and Column Generation for Process Discovery
Speaker: Marcus Poggi, PUC-Rio Informatica, BR, talk 1475
Co-Authors: Georges Spyrides, Beatriz Santiago, Helio Lopes,

IP Practice II

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - Mo 5:00pm-6:30pm, Format: 4x20 min Room: Salle 36 Building: B, Intermediate, Zone: 4 CONTRIBUTED SESSION 508 **Chair:** Petra Bartmeyer, Unicamp, BR

1 - Application of the SSSDP method to combinatorial

optimisation problems

Speaker: Gaël Guillot, Université de Bordeaux, FR, talk 1617 Co-Authors: *François Clautiaux*, *Boris Detienne*,

2 - A Parallel Branch and Bound with DC Algorithm for Mixed Integer Optimization

Speaker: Yi-Shuai Niu, Shanghai Jiao Tong University, CN, talk 182

3 - Two-dimensional bin packing problem with defects on bins

Speaker: Quentin Viaud, Saint-Gobain Recherche, FR, talk 1538

Co-Authors: François Clautiaux, Ruslan Sadykov, Francois Vanderbeck,

4 - A new approach to relax the binary variables on binary quadratic problems

Speaker: Petra Bartmeyer, Unicamp, BR, talk 32 Co-Authors: *Christiano Lyra*,

Manufacturing

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCHEDULING - Mo 5:00pm-6:30pm, Format: 4x20 min Room: Salle 18 Building: I, 1st floor, Zone: 7

CONTRIBUTED SESSION 530 Chair: Younsoo Lee, Seoul National University, KR

1 - Detailed production planning models for semiconductor manufacturing with profit

Speaker: Sébastien Beraudy, Ecole des Mines de St Etienne, FR, talk 1335

Co-Authors: Nabil Absi, Stéphane Dauzère-Pérès,

2 - Scheduling in the Photolithography Bay

Speaker: Teun Janssen, TU Delft, NL, talk 1474

Co-Authors: Leo van Iersel, Jan Driessen, Thomas Bosman, Stéphane Dauzère-Pérès, Claude Yugma,

3 - Column generation and fix-and-optimize for the lotsizing with remanufacturing

Speaker: Hugo Harry Kramer, Universidade Federal Paraíba, BR, talk 616

Co-Authors: Jesus Cunha, Rafael Melo,

4 - On the discrete lot-sizing and scheduling problem with sequence-dependent setup

Speaker: Younsoo Lee, Seoul National University, KR, talk 803

Co-Authors: Kyungsik Lee,

Stochastic and Nonlinear Optimization I

CONTINUOUS OPTIMIZATION

NLP - Tu 8:30am-10:30am, Format: 4x30 min

Room: GINTRAC Building: Q, Ground Floor, Zone: 8 INVITED SESSION 47

Organizer: Jorge Nocedal, Northwestern University, US

1 - A Progressive Batching L-BFGS Method for Machine Learning

Speaker: Raghu Bollapragada, Northwestern University, US,

talk 564

Co-Authors: Jorge Nocedal, Hao-Jun Shi, Dheevatsa Mudigere, Ping Tak Tang,

2 - Convexity "à la carte"

Speaker: Leon Bottou, Facebook, US, talk 591

Co-Authors: Martin Arjovsky, David Lopez-Paz, Maxime Oquab,

3 - On variance reduction for stochastic optimization with multiplicative noise

Speaker: Philip Thompson, CREST-ENSAE, FR, talk 1147 Co-Authors: *Alejandro Jofre*,

4 - Characterizing Worst-Case Complexity of Algorithms for Nonconvex Optimization

Speaker: Frank Curtis, Lehigh University, US, talk 434 Co-Authors: *Daniel Robinson*,

Bayesian and Randomized Optimization II

CONTINUOUS OPTIMIZATION DERFREE - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle 21 Building: G, Intermediate, Zone: 6

CONTRIBUTED SESSION 79 Chair: Youssef Diouane, ISAE-SUPAERO, FR

1 - Adaptive modeling strategy for high-dimensional constrained global optimization

Speaker: Nathalie Bartoli, ONERA, FR, talk 1296
Co-Authors: *Thierry Lefebvre*, Sylvain Dubreuil, Rémy Priem, Joaquim Martins, Joseph Morlier,
2 - Modeling an Augmented Lagrangian for Blackbox

Constrained Optimization Speaker: Robert Gramacy, Virginia Tech, US, talk 276

3 - Bayesian optimization under mixed constraints Speaker: Victor Picheny, INRA, FR, talk 536 Co-Authors: *Robert Gramacy, Stefan Wild, Sébastien Le Digabel*.

4 - Bayesian Optimization Guided by Max-values Speaker: Zi Wang, MIT, US, talk 637 Co-Authors: *Stefanie Jegelka*,

Algebraic and geometric aspects of semidefinite programming

CONTINUOUS OPTIMIZATION SDP - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle 20 Building: G, 1st floor, Zone: 6

INVITED SESSION 85

Organizer: Hamza Fawzi, University of Cambridge, GB

1 - Certificates of polynomial nonnegativity via hyperbolic optimization

Speaker: James Saunderson, Monash University, AU, talk 1680

2 - Log-barrier interior point methods are not strongly polynomial

Speaker: Xavier Allamigeon, INRIA and Ecole Polytechnique, FR, talk 372 Co-Authors: Pascal Benchimol, Stephane Gaubert, Michael Joswig,

3 - Slack ideals of polytopes

Speaker: Amy Wiebe, University of Washington, US, talk 713

Co-Authors: João Gouveia, Antonio Macchia, Rekha Thomas,

4 - Measuring Optimality Gap in Conic Programming Approximations with Gaussian Width

Speaker: Dogyoon Song, MIT, US, talk 703 Co-Authors: Pablo Parrilo, Christos Thrampoulidis,

Theory and algorithms in conic linear programming 1

CONTINUOUS OPTIMIZATION

SDP - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle LC5 Building: L, Intermediate 1, Zone: 10 INVITED SESSION 88

Organizer: Gabor Pataki, UNC Chapel Hill, US

1 - Low-Rank Matrix Completion (LRMC) using Nuclear Norm (NN) with Facial Reduction

Speaker: Henry Wolkowicz, University of Waterloo, CA, talk 480

2 - Solving conic systems via projection and rescaling Speaker: Negar Soheili, Univ. of Illinois at Chicago, US, talk 744

Co-Authors: Javier Pena,

3 - Projection and presolve in MOSEK: exponential and power cones

Speaker: Henrik Friberg, MOSEK, DK, talk 508 4 - TOTAL DUAL INTEGRALITY FOR CONVEX, SEMIDEFINITE, AND EXTENDED FORMULATIONS Speaker: Levent Tuncel, University of Waterloo, CA, talk 707 Co-Authors: *Marcel de Carli Silva*,

Advances in Bundle Methods for Convex Optimization

CONTINUOUS OPTIMIZATION

NonSmooth - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle LC4 Building: L, Intermediate 1, Zone: 9 INVITED SESSION 93

Organizer: Christoph Helmberg, TU Chemnitz, DE

1 - An Asynchronous Parallel Bundle Method Based on Inexact Oracles

Speaker: Frank Fischer, Universität Kassel, DE, talk 715 2 - Fully Incremental Bundle Methods: (Un)cooperative (Un)faithful Oracles and Upper

Speaker: Antonio Frangioni, Università di Pisa, IT, talk 56 Co-Authors: *Wim van Ackooij*,

3 - The Bundle Method for Getting an Improved SDP Relaxation of the Stability Number

Speaker: Elisabeth Gaar, AAU Klagenfurt, AT, talk 269 Co-Authors: *Franz Rendl*,

4 - A Dynamic Scaling Approach for Bundle Methods in

Convex Optimization

Speaker: Christoph Helmberg, TU Chemnitz, DE, talk 145 Co-Authors: *Alois Pichler*,

Machine learning and sparse optimisation

CONTINUOUS OPTIMIZATION

NLP - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle 05 Building: Q, 1st floor, Zone: 11

INVITED SESSION 109

Organizer: Coralia Cartis, University of Oxford, GB

1 - Condition numbers and weak average-case complexity in optimization

Speaker: Martin Lotz, The University of Manchester, GB, talk 957

Co-Authors: Dennis Amelunxen, Jake Walvin,

2 - A Long (Random) Walk Solves All Your (Linear) Problems

Speaker: Armin Eftekhari, Alan Turing Institute, GB, talk 1199

Co-Authors: Martin Lotz, Peter Richtarik,

3 - Manifold lifting: problems and methods

Speaker: Florentin Goyens, Oxford University, GB, talk 1182 Co-Authors: Armin Eftekhari, Coralia Cartis, Greg Ongie,

4 - Sparse non-negative super-resolution: simplified and stabilized

Speaker: Jared Tanner, University of Oxford, GB, talk 1462 Co-Authors: Armin Eftekhari, Andrew Thompson, Bogdan Toader, Hemant Tyagi,

Nonlinear Optimization with Uncertain Constraints

Optimization under Uncertainty

Robust - Tu 9:00am-10:30am, Format: 3x30 min Room: Salle 37 Building: B, Intermediate, Zone: 4

INVITED SESSION 110

Organizer: Charlie Vanaret, Argonne National Laboratory, US

1 - Nonlinear programming reformulations of chance constraints (Part 2)

Speaker: Andreas Waechter, Northwestern University, US, talk 1427

Co-Authors: Alejandra Pena-Ordieres, Jim Luedtke,

2 - Nonlinear programming reformulations of chance constraints (Part 1)

Speaker: Alejandra Pena-Ordieres, Northwestern University, US, talk 1441

Co-Authors: Andreas Waechter, Jim Luedtke,

3 - Sequential Linearization for Nonlinear Robust Optimization

Speaker: Sven Leyffer, Argonne National Laboratory, US, talk 1071

Algorithms for stochastic games : new approaches

Optimization under Uncertainty

MARKOV - Tu 8:30am-10:30am, Format: 4x30 min

Room: Salle 31 Building: B, Ground Floor, Zone: 5

INVITED SESSION 137

Organizer: Hugo Gimbert, CNRS, LABRI, Universite de Bor, FR

1 - Quasi-polynomial algorithms for solving parity games Speaker: Marcin Jurdzinski, University of Warwick, GB, talk 1042

Co-Authors: Ranko Lazic,

2 - One-Counter Stochastic Games with Zero-Reachability Objectives

Speaker: Antonin Kucera, Masaryk University, CZ, talk 1330 **3 - Around tropically convex constraint satisfaction prob** lems.

Speaker: Marcello Mamino, Università di Pisa, IT, talk 1410 Co-Authors: *Manuel Bodirsky*,

4 - The condition number of stochastic mean payoff games Speaker: Mateusz Skomra, Ecole Polytechnique and INRIA, FR, talk 1371

Co-Authors: Xavier Allamigeon, Stephane Gaubert, Ricardo Katz,

Machine Learning for Optimization

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - TU 8:30am-10:30am, Format: 4x30 min Room: Salle 44 Building: C, 3rd floor, Zone: 1 INVITED SESSION 138 **Organizer:** Bistra Dilkina, Univ of Southern California, US

1 - Machine Learning for Branch and Bound

Speaker: Bistra Dilkina, Univ of Southern California, US, talk 1090

2 - Learning when to use a decomposition

Speaker: Markus Kruber, RWTH Aachen University, DE, talk 1142

Co-Authors: Marco Lübbecke, Axel Parmentier,

3 - Learning Combinatorial Optimization Algorithms Over Graphs

Speaker: Elias Khalil, Georgia Tech, US, talk 1083

Co-Authors: Hanjun Dai, Yuyu Zhang, Bistra Dilkina, Le Song,

4 - Learning Discrete Optimization

Speaker: Andrea Lodi, Polytechnique Montreal, CA, talk 1034

Nonlinear Optimization and Variational Inequalities V

CONTINUOUS OPTIMIZATION

VARIAT - Tu 8:30am-10:30am, Format: 4x30 min

Room: Salle 06 Building: Q, 1st floor, Zone: 11 INVITED SESSION 145 **Organizer:** Xin Liu, Chinese Academy of Sciences, CN

1 - Lower-order regularization method for group sparse optimization with application

Speaker: Yaohua Hu, Shenzhen University, CN, talk 84 Co-Authors: Chong Li, Kaiwen Meng, Jing Qin, Xiaoqi Yang,

2 - Solving Constrained TV2L1-L2 MRI Signal Reconstruction via an Efficient ADMM

Speaker: Tingting Wu, NJUPT, CN, talk 64

Co-Authors: Z.W. Wang, Z.M. Jin, J. Zhang,

3 - On solving saddle-point problems and non-linear monotone equations

Speaker: Oleg Burdakov, Linkoeping University, SE, talk 1258

4 - A first-order method for semidefinite stochastic variational inequality problems

Speaker: Javad Feizollahi, Georgia State University, US, talk 698

Co-Authors: Nahidsadat Majlesinasab, Farzad Yousefian,

Optmization Algorithms and Variational Inequalites I

CONTINUOUS OPTIMIZATION

VARIAT - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle ARNOZAN Building: Q, Ground Floor, Zone: 8

INVITED SESSION 148

Organizer: Bo Jiang, Nanjing Normal University, CN

1 - Smoothing quadratic regularization method for the hemivariational inequalities

Speaker: Yu-Hong Dai, Chinese Academy of Sciences, CN, talk 799

Co-Authors: Yanfang Zhang, Weimin Han,

2 - ADMM for Optimization Problems Involving Nonconvex Functions

Speaker: Deren Han, Nanjing Normal University, CN, talk 438

3 - ADMM-based methods for monotone inverse variational inequalities

Speaker: Xingju Cai, Nanjing Normal University, CN, talk 418

4 - Vector Transport-Free SVRG with General Retraction for Riemannian Optimization

Speaker: Bo Jiang, Nanjing Normal University, CN, talk 320 Co-Authors: *Shiqian Ma*, *Anthony So*, *Shuzhong Zhang*,

Larges Scale and Distributed Optimization

CONTINUOUS OPTIMIZATION

RANDOMM - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle KC6 Building: K, Intermediate 1, Zone: 10 INVITED SESSION 214 Organizer: Ermin Wei, Northwestern University, US

1 - On Linear Convergence for Douglas-Rachford splitting and ADMM

Speaker: Pontus Giselsson, Lund University, SE, talk 291 2 - Block-Iterative and Asynchronous Projective Splitting for Monotone Operators

Speaker: Jonathan Eckstein, Rutgers University, US, talk 240 Co-Authors: *Patrick Johnstone*, *Jean-Paul Watson*,

3 - Achieving Geometric Convergence for Distributed Asynchronous Optimization

Speaker: Gesualdo Scutari, Purdue University, US, talk 634 Co-Authors: *Ye Tian, Ying Sun,*

4 - Asynchronous Distributed Network Newton Method Speaker: Ermin Wei, Northwestern University, US, talk 209 Co-Authors: *Fatemeh Mansoori*,

Extended formulations

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - TU 8:30am-10:30am, Format: 4x30 min Room: Salle 43 Building: C, 3rd floor, Zone: 1

INVITED SESSION 219

Organizer: Stefan Weltge, Technical University of Munich, DE

1 - Balas formulation for the union of polytopes is optimal

Speaker: Michele Conforti, University of Padova, IT, talk 567 Co-Authors: *Marco Di Summa*, *Yuri Faenza*,

2 - Strengthening Convex Relaxations of 0/1-Sets Using Boolean Formulas

Speaker: Tony Huynh, Université Libre de Bruxelles, BE, talk 78

Co-Authors: Samuel Fiorini, Stefan Weltge,

3 - Lower Bounds for Approximating the Matching Polytope

Speaker: Makrand Sinha, University of Washington, US, talk 95

4 - Lifting Linear Extension Complexity Bounds to the Mixed-Integer Setting

Speaker: Stefan Weltge, Technical University of Munich, DE, talk 59

Co-Authors: Alfonso Cevallos, Rico Zenklusen,

Optimization Methods for PDE Constrained Problems

CONTINUOUS OPTIMIZATION

CONTROL - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle AURIAC Building: G, 1st floor, Zone: 6

INVITED SESSION 221 Organizer: Michael Ulbrich, Technical University of Munich, DE

1 - An affine covariant composite step method with inexact step computations

Speaker: Anton Schiela, Uni Bayreuth, DE, talk 1253

Co-Authors: Manuel Schaller,

2 - Optimal Control under Uncertainty: Adaptive Solution with Low-rank Tensors

Speaker: Sebastian Garreis, Technical University of Munich, DE, talk 1062

Co-Authors: Michael Ulbrich,

3 - On the optimal control of quasi-variational inequalities

Speaker: Carlos Rautenberg, HU Berlin - WIAS, DE, talk 980

Co-Authors: Amal Alphonse, Michael Hintermüller,

4 - Inexact bundle methods for nonconvex problems in Hilbert space with applications

Speaker: Michael Ulbrich, Technical University of Munich, DE, talk 1265

Co-Authors: Lukas Hertlein,

Streaming

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Tu 8:30am-10:30am, Format: 4x30 min Room: LEYTEIRE Building: E, 3rd floor, Zone: 1

INVITED SESSION 228 **Organizer:** Michael Kapralov, EPFL, CH

1 - Counting subgraphs in graph streams

Speaker: Eric Price, UT Austin, US, talk 1560

Co-Authors: John Kallaugher,

2 - Sublinear Time Low Rank Approximation of Positive Semidefinite Matrices

Speaker: David Woodruff, CMU, US, talk 1417

3 - Estimating Graph Parameters from Random Order Streams

Speaker: Pan Peng, The University of Sheffield, GB, talk 1247

Co-Authors: Christian Sohler,

4 - $(1+\Omega(1))\text{-}Approximation to MAX-CUT Requires Linear Space$

Speaker: Michael Kapralov, EPFL, CH, talk 1496

Co-Authors: Sanjeev Khanna, Madhu Sudan, Ameya Velingker,

Addressing problems with complex geometries

CONTINUOUS OPTIMIZATION NonSmooth - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle 8 Building: N, 4th floor, Zone: 12

INVITED SESSION 229 Organizer: Edouard Pauwels, Université Toulouse 3, FR

1 - Sensitivity analysis for mirror-stratifiable convex functions

Speaker: Jerome Malick, CNRS, FR, talk 562

2 - An accelerated proximal method for minimizing compositions of convex functions

Speaker: Courtney Paquette, Lehigh University, US, talk 903 Co-Authors: *Dmitriy Drusvyatskiy, Damek Davis*,

3 - How to perturb semi-algebraic problems to ensure constraint qualification?

Speaker: Antoine Hochart, Universidad Adolfo Ibáñez, CL, talk 554

Co-Authors: Jerome Bolte, Edouard Pauwels,

4 - The multiproximal linearization method for convex composite problems

Speaker: Edouard Pauwels, Université Toulouse 3, FR, talk 142

Co-Authors: Jerome Bolte, Zheng Zheng Chen,

MIP under Uncertainty 1

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - TU 9:00am-10:30am, Format: 3x30 min Room: Salle 34 Building: B, 1st floor, Zone: 3

INVITED SESSION 231

Organizer: Fatma Kilinc-Karzan, Carnegie Mellon University, US

1 - Distributionally Robust Combinatorial Optimization

Speaker: Shabbir Ahmed, Georgia Tech, US, talk 1562 Co-Authors: *Ruiwei Jiang*, *Mohit Singh*,

2 - Risk-Averse Set Covering Problems

Speaker: Simge Kucukyavuz, University of Washington, US, talk 927

Co-Authors: Hao-Hsiang Wu,

3 - Mixed-Integer Recourse via Prioritization

Speaker: Ruiwei Jiang, University of Michigan, US, talk 1189

Co-Authors: Yuanyuan Guo,

LP, Mixed Integer Convex Programming and Decomposition

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - TU 8:30am-10:30am, Format: 4x30 min Room: PITRES Building: O, Ground Floor, Zone: 8

Invited Session 236

Organizer: Thorsten Koch, ZIB and TU Berlin, DE

1 - Optimising over Gradient-Boosted Regression Trees with Convex Penalty Functions

Speaker: Miten Mistry, Imperial College London, GB, talk 643

Co-Authors: Ruth Misener, Robert Lee, Dimitrios Letsios, Gerhard Krennrich,

2 - An advanced initialization procedure for the simplex algorithm

Speaker: Nikolaos Ploskas, Carnegie Mellon University, US, talk 88

Co-Authors: Nikolaos Sahinidis, Nikolaos Samaras,

3 - Experiments with a general Benders' decomposition framework for SCIP

Speaker: Stephen Maher, Lancaster University, GB, talk 330 4 - Progress in the Branch-Price-and-Cut Solver GCG

Speaker: Christian Puchert, RWTH Aachen University, DE, talk 1349

Co-Authors: Marco Lübbecke, Michael Bastubbe, Jonas Witt, Stephen Maher,

Matching games and beyond

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Tu 8:30am-10:30am, Format: 4x30 min Room: SIGALAS Building: C, 2nd floor, Zone: 2 INVITED SESSION 241

Organizer: Jochen Koenemann, University of Waterloo, CA

1 - Stabilizing Weighted Graphs

Speaker: Zhuan Khye Koh, University of Waterloo, CA, talk 207

Co-Authors: Laura Sanità,

2 - Computing the Nucleolus of Weighted Cooperative Matching Games in Poly Time

Speaker: Justin Toth, University of Waterloo, CA, talk 135
Co-Authors: Jochen Koenemann, Kanstantsin Pashkovich, **3 - New and simple algorithms for stable flow problems**Speaker: Jannik Matuschke, Technische Universität
München, DE, talk 1493

Co-Authors: Agnes Cseh,

4 - The complexity of cake cutting with unequal shares Speaker: Agnes Cseh, Hungarian Academy of Sciences, HU, talk 217

Co-Authors: Tamás Fleiner,

Equilibrium Computation in Congestion Games

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle 41 Building: C, 3rd floor, Zone: 1 INVITED SESSION 242 **Organizer:** Umang Bhaskar, TIFR, IN

1 - Multiplicative Weights Update with Constant Step-Size in Congestion Games

Speaker: Ioannis Panageas, MIT, US, talk 675
Co-Authors: *Gerasimos Palaiopanos, Georgios Piliouras*,
2 - Equilibrium Computation in Resource Allocation Games

Speaker: Tobias Harks, Augsburg University, DE, talk 948 Co-Authors: *Veerle Timmermans*,

3 - Computing Efficient Nash Equilibria in Congestion Games

Speaker: Guido Schäfer, CWI, NL, talk 773

Co-Authors: *Pieter Kleer*,

4 - Equilibrium Computation in Atomic Splittable Routing Games with Convex Costs Speaker: Umang Bhaskar, TIFR, IN, talk 944

Co-Authors: *Phani Lolakapuri*,

Risk-averse stochastic programming

OPTIMIZATION UNDER UNCERTAINTY STOCH - TU 8:30am-10:30am, Format: 4x30 min Room: DENIGES Building: C, Ground Floor, Zone: 5

INVITED SESSION 252 Organizer: Andrzej Ruszczynski, Rutgers University, US

1 - Asymptotics of stochastic optimization problems with composite risk functionals

Speaker: Darinka Dentcheva, Stevens Institute of Technolog, US, talk 600

Co-Authors: Andrzej Ruszczynski, Gregory Stock,

2 - Multi-objective risk-averse two-stage stochastic programming problems

Speaker: Ozlem Cavus, Bilkent University, TR, talk 148 Co-Authors: *Cagin Ararat, Irfan Mahmutogullari,*

3 - Distributionally robust stochastic programming

Speaker: Alexander Shapiro, Ga Tech Institution, US, talk 1677

4 - Risk Disintegration with Application to Partially Observable Systems

Speaker: Andrzej Ruszczynski, Rutgers University, US, talk 249

Co-Authors: Darinka Dentcheva,

Approximation Algorithms for Clustering

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle 36 Building: B, Intermediate, Zone: 4

INVITED SESSION 256 Organizer: Chaitanya Swamy, University of Waterloo, CA

1 - Better Guarantees for k-Means Problem using Primal-Dual Algorithms

Speaker: Sara Ahmadian, University of Waterloo, CA, talk 1515

Co-Authors: Ola Svensson, Ashkan Norouzi Fard, Justin Ward,

2 - On the Local Structure of Stable Clustering Instances Speaker: Chris Schwiegelshohn, Sapienza, University of Rome, IT, talk 1325

Co-Authors: Vincent Cohen-Addad,

3 - Approximation Bounds for Hierarchical Clustering

Speaker: Benjamin Moseley, Carnegie Mellon University, US, talk 1648

Co-Authors: Joshua Wang,

4 - Unifying k-Median and k-Center: Approximation Algorithms for Ordered k-Median

Speaker: Chaitanya Swamy, University of Waterloo, CA, talk 1364

Co-Authors: Deeparnab Chakrabarty,

Graphical Optimization Model 1

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING CP - Tu 8:30am-10:30am, Format: 4x30 min Room: DURKHEIM Building: A, 3rd floor, Zone: 1 INVITED SESSION 295 **Organizer:** Joris Kinable, Eindhoven University, NL

1 - On the integrated last mile transportation problem

Speaker: David Bergman, University of Connecticut, US, talk 920

Co-Authors: Arvind Raghunathan, John Hooker, Shingo Kobori, Thiago Serra,

2 - Cut Generation for Integer (Non-)Linear Programming via Decision Diagrams

Speaker: Willem-Jan van Hoeve, Carnegie Mellon University, US, talk 1317

Co-Authors: Christian Tjandraatmadja, Danial Davarnia,

3 - Hybrid Optimization Methods for Time-Dependent Sequencing Problems

Speaker: Joris Kinable, Eindhoven University, NL, talk 1161 Co-Authors: *Andre Cire*, *Willem-Jan van Hoeve*,

4 - Compact Representation of Near-Optimal Integer Programming Solutions

Speaker: John Hooker, Carnegie Mellon Univ, US, talk 763 Co-Authors: *Thiago Serra*,

Algorithmic Game Theory I

Optimization under Uncertainty Game - Tu 8:30am-10:30am, Format: 4x30 min

Room: Salle 30 Building: B, Ground Floor, Zone: 5

INVITED SESSION 311

Organizer: Luce Brotcorne, inria, FR

1 - Solving Strong Stackelberg Equilibrium in Stochastic Games

Speaker: Victor Bucarey, Universidad de Chile, CL, talk 1611 Co-Authors: *Fernando Ordoñez*, *Alain Jean-Marie*, *Eugenio Della Vecchia*,

2 - Models for the single-minded bundle pricing problem Speaker: Fränk Plein, Université Libre de Bruxelles, BE, talk 515

Co-Authors: Sourour Elloumi, Martine Labbé,

3 - Branch-and-cut algorithm for the Rank Pricing problem

Speaker: Concepcion Dominguez, Inria, FR, talk 1643

Co-Authors: Martine Labbé, Alfredo Marín, Carmen Galé, Herminia Calvete,

4 - A matheuristic for the bilevel 0-1 public-private partnership problem

Speaker: Yury Kochetov, Institute of Mathematics, RU, talk 499

Co-Authors: Alexander Zyryanov, Sergey Lavlinskii,

Optimization in Statistical Learning

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - TU 8:30am-10:30am, Format: 4x30 min Room: FABRE Building: J, Ground Floor, Zone: 8 INVITED SESSION 326

Organizer: Quentin Berthet, University of Cambridge, GB

1 - Near-linear time approximation algorithms for optimal transport

Speaker: Jonathan Weed, MIT, US, talk 1602 Co-Authors: Jason Altschuler, Philippe Rigollet,

2 - Sharp Oracle Inequalities for nonconvex regularized M-estimators

Speaker: Andreas Elsener, ETH Zurich, CH, talk 1561 Co-Authors: *Sara van de Geer*,

3 - Sharpness, Restart and Compressed Sensing Performance

Speaker: Alexandre d Aspremont, CNRS - ENS, FR, talk 590 Co-Authors: *Vincent Roulet, Nicolas Boumal*,

4 - Towards a deeper understanding of generalization for kernel learning

Speaker: Fan Yang, UC Berkeley, US, talk 1597

Co-Authors: Martin Wainwright, Yuting Wei, Raaz Dwivedi,

Statistics meets optimization: going beyond convexity

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - TU 8:30am-10:30am, Format: 4x30 min Room: Salle DENUCE Building: Q, Ground Floor, Zone: 8

INVITED SESSION 337 Organizer: John Duchi, Stanford University, US

1 - Learning ReLUs and over-parameterized neural networks via gradient descent

Speaker: Mahdi Soltanolkotabi, USC, US, talk 1580

2 - When are nonconvex optimization problems not scary? Speaker: Ju Sun, Stanford University, US, talk 953

Co-Authors: Qing Qu, John Wright, Yu Bai, David Barmherzig, Emmanuel Candes,

3 - Solving composite optimization problems, with applications to phase retrieval an

Speaker: John Duchi, Stanford University, US, talk 1157 Co-Authors: *Feng Ruan*,

4 - Optimal iterative thresholding algorithms for sparse optimization

Speaker: Rina Barber, University of Chicago, US, talk 1644 Co-Authors: *Haoyang Liu*,

Interval Global Optimization

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCIENCES - TU 8:30am-10:30am, Format: 4x30 min Room: Salle LA4 Building: L, Basement, Zone: 8

INVITED SESSION 339

Organizer: Frederic Messine, LAPLACE-ENSEEIHT-INPT, FR

1 - Nonlinear Symbolic Transformations for Simplifying Functions – Interval Methods

Speaker: Tibor Csendes, University of Szeged, HU, talk 1420 Co-Authors: *Elvira Antal*,

2 - An Interval Branch and Bound Algorithm for Param-

eter Estimation

Speaker: Bertrand Neveu, Ecole des Ponts, FR, talk 1454

Co-Authors: Pascal Monasse, Martin de la Gorce, Gilles Trombettoni,

3 - Interval Branch-and-Bound Algorithm for semiinfinite programming

Speaker: Dominique Monnet, ENSTA Bretagne, FR, talk 1530

Co-Authors: Jordan Ninin, Benoit Clement,

4 - Reliable convex relaxation techniques for interval global optimization codes

Speaker: Frederic Messine, LAPLACE-ENSEEIHT-INPT, FR, talk 1374

Co-Authors: Gilles Trombettoni,

Path and tree problems

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE NETWORK - TU 8:30am-10:30am, Format: 4x30 min Room: Salle 18 Building: I, 1st floor, Zone: 7

CONTRIBUTED SESSION 360 Chair: Arthur Delarue, MIT, US

1 - Approximate Shortest Paths and Transshipment in Distributed and Streaming Models

Speaker: Andreas Karrenbauer, MPI for Informatics, DE, talk 1382

Co-Authors: Ruben Becker, Christoph Lenzen, Sebastian Krinninger,

2 - Exact IP-based approaches for the longest induced path problem.

Speaker: Dmytro Matsypura, The University of Sydney, AU, talk 290

Co-Authors: Alexander Veremyev, Oleg Prokopyev, Eduardo Pasiliao,

3 - Adding Edges of Short Lengths Incident with the Root to Complete K-ary Tree

Speaker: Kiyoshi Sawada, Univ. of Mktg. - Distr. Sci., JP, talk 1521

4 - Travel Time Estimation in the Age of Big Data

Speaker: Arthur Delarue, MIT, US, talk 784

Co-Authors: Dimitris Bertsimas, Patrick Jaillet, Sebastien Martin,

Unconstrained Optimization

CONTINUOUS OPTIMIZATION NLP - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle KC7 Building: K, Intermediate 2, Zone: 10 CONTRIBUTED SESSION 401

Chair: Ekkehard Sachs, Trier University, DE

1 - SYMMBK algorithm applied to Newton-Krylov methods for unconstrained optimization

Speaker: Andrea Caliciotti, University of Rome La Sapienza, IT, talk 1315

Co-Authors: Giovanni Fasano, Florian Potra, Massimo Roma,

2 - Regularizing trust-region methods for ill-posed nonlinear least-squares problems

Speaker: Elisa Riccietti, IRIT, FR, talk 557 Co-Authors: *Stefania Bellavia*, *Benedetta Morini*,

3 - Approximate Inverse Preconditioning for Newton-Krylov methods

Speaker: Massimo Roma, SAPIENZA Universita' di Roma, IT, talk 1164

Co-Authors: Mehiddin Al-Baali, Andrea Caliciotti, Giovanni Fasano,

4 - Second Order Adjoints

Speaker: Ekkehard Sachs, Trier University, DE, talk 1378 Co-Authors: *Noemi Petra*,

Robust Optimization and Operations Mangement

OPTIMIZATION UNDER UNCERTAINTY ROBUST - TU 9:00am-10:30am, Format: 3x30 min Room: Salle 33 Building: B, Ground Floor, Zone: 5

INVITED SESSION 410 Organizer: Chaithanya Bandi, Northwestern University, US

1 - Robustness of Static Pricing Policies in the Face of Strategic Customers

Speaker: Nikos Trichakis, MIT, US, talk 1186 Co-Authors: *Yiwei Chen*,

2 - Prior-Independent Optimal Auctions

Speaker: Omar Besbes, Columbia University, US, talk 1214 Co-Authors: *Amine Allouah*,

3 - Design and Control of Multi-class Queueing Networks via Robust Optimization

Speaker: Chaithanya Bandi, Northwestern University, US, talk 739

Co-Authors: Itai Gurvich,

Facility Location

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LOGISTICS - TU 9:00am-10:30am, Format: 3x30 min Room: Salle 16 Building: I, 2nd floor, Zone: 7

CONTRIBUTED SESSION 414 Chair: Ivan Contreras, Concordia University, CA

1 - Exact solution of single source quadratic capacitated location problems

Speaker: Ivan Contreras, Concordia University, CA, talk 1506 2 - Optimal multi-facility location for competing firms under quantity competition

Speaker: Blas Pelegrin, Universidad de Murcia, ES, talk 187 Co-Authors: *Pascual Fernández*, *M. Dolores García Pérez*, **3 - A new formulation for the Hamiltonian p-median prob**-

lem Speaker: Daniel Santos, CMAF-CIO, FCUL, PT, talk 822 Co-Authors: *Luís Gouveia*, *Tolga Bektas*,

Exact approaches for problems over Chair: Matthias Köppe, UC Davis, US lattices and graphs

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle 39 Building: E, 3rd floor, Zone: 1

CONTRIBUTED SESSION 425 Chair: Daniele Catanzaro, CORE - UCL, BE

1 - Why is maximum clique often easy in practice?

Speaker: Austin Buchanan, Oklahoma State University, US, talk 279

Co-Authors: Jose Walteros,

2 - Scheduling for Last-Mile Food Delivery Speaker: Matteo Cosmi, Roma Tre University, IT, talk 1408 Co-Authors: Gianpaolo Oriolo, Veronica Piccialli, Simone Terranova, Paolo Ventura,

3 - Optimizing over lattices of unrooted binary trees: Part I - Foundations

Speaker: Martin Frohn, CORE - UCL, BE, talk 1030 Co-Authors: Daniele Catanzaro, Raffaele Pesenti, 4 - Optimizing over lattices of unrooted binary trees: Part

II - On the BMEP

Speaker: Daniele Catanzaro, CORE - UCL, BE, talk 830 Co-Authors: Martin Frohn, Raffaele Pesenti,

Pricing

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle 22 Building: G, 2nd floor, Zone: 6

CONTRIBUTED SESSION 478 Chair: Anastasiya Ivanova, MIPT, RU

1 - Distributed price adjustment for the resource allocation problem

Speaker: Anastasiya Ivanova, MIPT, RU, talk 780 Co-Authors: Alexander Gasnikov,

2 - Price forecasting with machine learning algorithms for recommerce activities

Speaker: Yesmine Rouis, Recommerce Lab, FR, talk 1586 Co-Authors: Sara Calleja, Xavier Schepler, Jeanjean Antoine.

3 - Volume forecasting with machine learning algorithms for recommerce activities

Speaker: Sara Calleja, Recommerce Lab, FR, talk 1592 Co-Authors: Jeanjean Antoine, Yesmine Rouis, Xavier Schepler,

4 - Optimal Pricing and Introduction Timing of New Virtual Machines

Speaker: Spyros Zoumpoulis, INSEAD, FR, talk 1525 Co-Authors: Ian Kash, Peter Key,

Cutting Planes for Integer Programs

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle 35 Building: B, Intermediate, Zone: 4 **CONTRIBUTED SESSION 512**

1 - Characterization and Approximation of General Dual-**Feasible Functions**

Speaker: Jiawei Wang, UC Davis, US, talk 894 Co-Authors: Matthias Köppe,

2 - All finite group complexity injects

Speaker: Yuan Zhou, University of Kentucky, US, talk 1203 3 - Projective cutting-planes by projecting interior points onto polytope facets

Speaker: Daniel Porumbel, Cons. National Art et Metiers, FR, talk 1136

4 - cutgeneratingfunctionology: Python software for CGFs and superadditive duality

Speaker: Matthias Köppe, UC Davis, US, talk 1205 Co-Authors: Yuan Zhou, Jiawei Wang,

Electric Vehicles and Decarbonization

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle 23 Building: G, 3rd floor, Zone: 6

CONTRIBUTED SESSION 519 Chair: Martim Joyce-Moniz, Polytechnique Montreal -GERAD, CA

1 - A techno-economic analysis of the impact of decarbonization

Speaker: Paolo Pisciella, NTNU, NO, talk 1322

2 - Equilibrium Analysis of a Carbon Tax With Passthrough Restrictions

Speaker: Francisco Munoz, Universidad Adolfo Ibáñez, CL, talk 701

Co-Authors: Gabriel Diaz, Rodrigo Moreno,

3 - Management of EV Charging Stations under Advance **Reservations Schemes**

Speaker: Daniel Olivares, PUC-Chile, CL, talk 342

Co-Authors: Matias Negrete-Pincetic, Alvaro Lorca, Rodrigo Bernal,

4 - Increasing electric vehicle adoption via strategic siting of charging stations

Speaker: Martim Joyce-Moniz, Polytechnique Montreal -GERAD. CA. talk 179

Co-Authors: Miguel Anjos, Bernard Gendron,

Risk Models for Electricity Markets

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Tu 8:30am-10:30am, Format: 4x30 min Room: Salle 24 Building: G, 3rd floor, Zone: 6

CONTRIBUTED SESSION 521 Chair: Michael Ferris, University of Wisconsin, US

1 - Risky Capacity Equilibrium Models for risk averse investment equilibria

Speaker: Daniel Ralph, University of Cambridge, GB, talk 1681

Co-Authors: Gauthier de Maere, Andreas Ehrenmann, Yves Co-Authors: Chen Zhi, Peng Xiong, Smeers,

2 - Payment mechanisms, efficiency savings and riskaversion in electricity markets Speaker: Ryan Cory-Wright, MIT, US, talk 565

Co-Authors: Golbon Zakeri, Andy Philpott,

3 - Risk and Information Sharing in Peer-to-Peer Electricity Markets

Speaker: Fabio Moret, DTU, DK, talk 1052

Co-Authors: *Pierre Pinson, Athanasios Papakonstantinou*, **4 - Dynamic Risked Equilibrium for Energy Planning** Speaker: Michael Ferris, University of Wisconsin, US, talk 1455

Co-Authors: Andy Philpott,

Asymptotic Lagrangian duality for nonsmooth optimization

INVITED TALKS

KEYNOTE - Tu 11:00am-12:00am, Format: 1x60 min Room: DENIGES Building: C, Ground Floor, Zone: 5

INVITED SESSION 541

Organizer: Xiaojun Chen, Hong Kong Polytechnic Univ., HK

1 - Asymptotic Lagrangian duality for nonsmooth optimization

Speaker: Regina Burachik, UniSA, AU, talk 1635

Lower bounds on the size of linear programs

INVITED TALKS

KEYNOTE - Tu 11:00am-12:00am, Format: 1x60 min Room: BROCA Building: W, 3rd floor, Zone: 0

INVITED SESSION 545

Organizer: Volker Kaibel, OVGU Magdeburg, DE

1 - Lower Bounds on the Size of Linear Programs

Speaker: Thomas Rothvoss, University of Washington, US, talk 1578

Adaptive Robust Optimization with Scenario-wise Ambiguity Sets

INVITED TALKS

SEMI - Tu 11:00am-12:00am, Format: 1x60 min Room: Auditorium Building: Symph H, Gambetta, Zone: 0

INVITED SESSION 551 Organizer: Daniel Kuhn, EPFL, CH

1 - Adaptive Robust Optimization with Scenario-wise Ambiguity Sets Speaker: Melvyn Sim, NUS, SG, talk 1686

The Resurgence of Proximal Methods in Optimization

INVITED TALKS

PLENARY - Tu 1:30pm-2:30pm, Format: 1x60 min Room: Auditorium Building: Symph H, Gambetta, Zone:

INVITED SESSION 555 Organizer: Claudia Sagastizabal, Unicamp, BR

1 - The resurgence of proximal methods in optimization Speaker: Marc Teboulle, Tel Aviv University, IL, talk 1583

Sum-of-squares and moment problems: methods and applications

CONTINUOUS OPTIMIZATION

NLP - Tu 3:15pm-4:45pm, Format: 3x30 min Room: GINTRAC Building: Q, Ground Floor, Zone: 8 INVITED SESSION 2

Organizer: Etienne De Klerk, Tilburg University, NL

1 - LP, SOCP, and Optimization-Free Approaches to Polynomial Optimization

Speaker: Amir Ali Ahmadi, Princeton University, US, talk 350

Co-Authors: Anirudha Majumdar, Georgina Hall,

2 - Distributionally robust optimization with SOS polynomial density functions and m

Speaker: Krzysztof Postek, Erasmus University Rotterdam, NL, talk 14

Co-Authors: *Etienne De Klerk, Daniel Kuhn,* **3 - Nonnegative polynomials, and applications to learning** Speaker: Georgina Hall, Princeton University, US, talk 250 Co-Authors: *Amir Ali Ahmadi, Mihaela Curmei,*

Algorithms in the Sharing Economy

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Tu 3:15pm-4:45pm, Format: 3x30 min Room: LEYTEIRE Building: E, 3rd floor, Zone: 1 INVITED SESSION 22

Organizer: David Shmoys, Cornell University, US

1 - Minimizing Latency in Online Ride and Delivery Services

Speaker: Anthony Kim, Stanford University, US, talk 252 Co-Authors: *Abhimanyu Das, Sreenivas Gollapudi, Debmalya Panigrahi, Chaitanya Swamy,*

2 - Broken Bike Docks and the Prize-Collecting Traveling Salesman Problem

Speaker: Alice Paul, Brown University, US, talk 246 Co-Authors: Daniel Freund, David Shmoys, David Williamson, Aaron Ferber,

3 - Allocating capacity in bike-sharing systems

Speaker: David Shmoys, Cornell University, US, talk 242 Co-Authors: *Daniel Freund*, *Shane Henderson*,

Advances in DFO II

CONTINUOUS OPTIMIZATION DERFREE - TU 3:15pm-4:45pm, Format: 3x30 min Room: Salle 21 Building: G, Intermediate, Zone: 6 CONTRIBUTED SESSION 37

Chair: Warren Hare, University of British Columbia, CA

1 - Variable-fidelity derivative-free algorithms for road design

Speaker: Yves Lucet, University of British Columbia, CA, talk 648

Co-Authors: *Warren Hare*, *Mahdi Aziz*, *Majid Jaberipour*, 2 - Derivative-Free Robust Optimization by Outer Approximations

Speaker: Matt Menickelly, Argonne National Laboratory, US, talk 586

Co-Authors: Stefan Wild,

3 - The Mesh Adaptive Direct Search algorithm for granular and discrete variables

Speaker: Sébastien Le Digabel, Polytechnique Montreal, CA, talk 130

Co-Authors: Charles Audet, Christop Tribes,

Bridging NLP and Theoretical Computer Science

CONTINUOUS OPTIMIZATION

NLP - Tu 3:15pm-4:45pm, Format: 3x30 min Room: Salle KC7 Building: K, Intermediate 2, Zone: 10

INVITED SESSION 51

Organizer: Aleksander Madry, MIT, US

1 - Improved Max Flow and Bipartite Matching Algorithms via Interior Point Method

Speaker: Aleksander Madry, MIT, US, talk 1192

2 - First-order methods: from dynamical systems to discrete optimization

Speaker: Lorenzo Orecchia, Boston University, US, talk 1289 Co-Authors: *Jelena Diakonikolas*,

3 - A homotopy method for lp regression provably beyond self-concordance

Speaker: Yin Tat Lee, University of Washington, US, talk 334

Co-Authors: Sébastien Bubeck, Michael Cohen, Yuanzhi Li,

Interior Point Methods in Engineering Applications II

CONTINUOUS OPTIMIZATION

NLP - Tu 3:15pm-4:15pm, Format: 2x30 min

Room: Salle 05 Building: Q, 1st floor, Zone: 11 INVITED SESSION 61 **Organizer:** Jacek Gondzio, University of Edinburgh, GB

1 - A multigrid interior point method for large scale topology optimization

Speaker: Michal Kocvara, University of Birmingham, GB, talk 431

Co-Authors: Alexander Brune,

2 - Solving large-scale truss layout optimization problems by a primal-dual IPM

Speaker: Jacek Gondzio, University of Edinburgh, GB, talk 654

Co-Authors: Alemseged Weldeyesus,

Recent Advances in Conic Programming I

CONTINUOUS OPTIMIZATION SDP - Tu 3:15pm-4:45pm, Format: 3x30 min Room: Salle 20 Building: G, 1st floor, Zone: 6

INVITED SESSION 82

Organizer: Makoto Yamashita, Tokyo Institute of Technology, JP

1 - Strong and Cheap SDP and SOCP Hierarchies for Polynomial Optimization

Speaker: Bissan Ghaddar, Ivey Business School, CA, talk 180

2 - BP: a Matlab package based on the Bisection and Projection method for POPs

Speaker: Sunyoung Kim, Ewha W. University, KR, talk 444 Co-Authors: *Naoki Ito*, *Masakazu Kojima*, *Akiko Takeda*, *Kim-Chuan Toh*,

3 - Sum-of-squares optimization with and without semidefinite programming

Speaker: David Papp, NC State University, US, talk 471 Co-Authors: *Sercan Yildiz*,

Applications in Mixed-Integer Quadratic Programming

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Tu 3:15pm-4:45pm, Format: 3x30 min Room: DURKHEIM Building: A, 3rd floor, Zone: 1

Invited Session 107

Organizer: Boshi Yang, Clemson University, US

1 - Improved Representations of the Quadratic Linear Ordering Problem

Speaker: Boshi Yang, Clemson University, US, talk 669 Co-Authors: *Audrey DeVries, Warren Adams*,

2 - Robust QCQPs Under Mixed Integer Uncertainty Speaker: Areesh Mittal, University of Texas at Austin, US, talk 671

Co-Authors: Grani Hanasusanto, Can Gokalp,

3 - Machine Learning and Optimization for Neuroscience

Speaker: Chiara Liti, University of Rome Tor Vergata, IT, talk 873

Co-Authors: Luigi Bianchi, Veronica Piccialli, Matteo Cosmi, Giampaolo Liuzzi,

Relative Entropy Optimization II

CONTINUOUS OPTIMIZATION SDP - Tu 3:15pm-4:45pm, Format: 3x30 min Room: Salle LC5 Building: L, Intermediate 1, Zone: 10 INVITED SESSION 112

Organizer: Venkat Chandrasekaran, Caltech, US

1 - Newton Polytopes and Relative Entropy Optimization

Speaker: Venkat Chandrasekaran, Caltech, US, talk 97 2 - Optimization over the Hypercube via Sums of Nonnegative Circuit Polynomials

Speaker: Timo de Wolff, TU Berlin, DE, talk 156 Co-Authors: *Mareike Dressler*, *Adam Kurpisz*,

3 - The REPOP Toolbox: Polynomial Optimization Using Relative Entropy Relaxations

Speaker: Orcun Karaca, ETH Zurich, CH, talk 153 Co-Authors: Angelos Georghiou, John Lygeros, Paul Beuchat, Georgios Darivianakis,

Symmetry Handling in Integer Programs

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - TU 3:15pm-4:45pm, Format: 3x30 min Room: Salle 44 Building: C, 3rd floor, Zone: 1

INVITED SESSION 129 Organizer: Christopher Hojny, TU Darmstadt, DE

1 - Breaking full-orbitopal symmetries and subsymmetries

Speaker: Cecile Rottner, EDF, FR, talk 552

Co-Authors: Pascale Bendotti, Pierre Fouilhoux,

2 - Symmetry Breaking Inequalities from the Schreier-Sims table

Speaker: Domenico Salvagnin, University of Padova, IT, talk 151

3 - Symmetry Breaking Polytopes: A Framework for Symmetry Handling in Binary Program

Speaker: Christopher Hojny, TU Darmstadt, DE, talk 143 Co-Authors: *Marc Pfetsch*,

Nonlinear Optimization and Variational Inequalities III

CONTINUOUS OPTIMIZATION VARIAT - TU 3:15pm-4:45pm, Format: 3x30 min Room: Salle 06 Building: Q, 1st floor, Zone: 11

INVITED SESSION 143 Organizer: Xin Liu, Chinese Academy of Sciences, CN

1 - A primal-dual IPM with rapid detection on infeasibility for nonlinear programs

Speaker: Xinwei Liu, Hebei University of Technology, CN, talk 89

Co-Authors: Yu-Hong Dai, Jie Sun,

2 - Some discussion on nonsmooth convex regression with cardinality penalty

Speaker: Wei Bian, Harbin Institute of Technology, CN, talk 815

Co-Authors: Xiaojun Chen,

3 - Proximal Algorithms with Extrapolation for Nonconvex Nonsmooth Problems

Speaker: Bo Wen, Hebei University of Technology, CN, talk 243

Pricing Methods

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LOGISTICS - TU 3:15pm-4:45pm, Format: 3x30 min Room: PITRES Building: O, Ground Floor, Zone: 8

Invited Session 182 Organizer: Rafael Mat

Organizer: Rafael Martinelli, PUC-Rio, BR

1 - A branch-and-price algorithm for the Minimum Latency Problem

Speaker: Teobaldo Bulhões Júnior, UFPB, BR, talk 1273 Co-Authors: *Ruslan Sadykov, Eduardo Uchoa*, **2 - Pricing, cycles, and pivots**

Speaker: Jacques Desrosiers, HEC Montreal, CA, talk 1066

Co-Authors: Jean Bertran Gauthier, 3 - Branch-Cut-and-Price Solver for Vehicle Routing Problems

Speaker: Ruslan Sadykov, Inria Bordeaux - Sud-Ouest, FR, talk 1619

Co-Authors: Issam Tahiri, Francois Vanderbeck, Rémi Duclos, Artur Pessoa, Eduardo Uchoa,

Nonconvex Optimization: Theory and Methods - Part 2

CONTINUOUS OPTIMIZATION NonSmooth - Tu 3:15pm-4:45pm, Format: 3x30 min Room: Salle 8 Building: N, 4th floor, Zone: 12

INVITED SESSION 186 Organizer: Russell Luke, University of Göttingen, DE

1 - Splitting methods for nonconvex feasibility problems Speaker: Guoyin Li, University of New South Wales, AU, talk 1495

Co-Authors: Ting Kei Pong,

2 - Projective Splitting with Forward Steps Speaker: Patrick Johnstone, Rutgers, US, talk 82 Co-Authors: *Jonathan Eckstein*,

3 - Convergence Analysis for Nonconvex Optimization Made Easy

Speaker: Russell Luke, University of Göttingen, DE, talk 133 Co-Authors: *Nguyen Thao*, *Matthew Tam*,

MIP under Uncertainty 2

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - TU 3:15pm-4:45pm, Format: 3x30 min Room: Salle 43 Building: C, 3rd floor, Zone: 1 INVITED SESSION 232

Organizer: Simge Kucukyavuz, University of Washington, US

1 - Two-stage stochastic p-order conic mixed integer programs

Speaker: Manish Bansal, Virginia Tech, US, talk 154 Co-Authors: *Yingqiu Zhang*,

2 - Inexact cutting plane techniques for two-stage stochastic mixed-integer programs

Speaker: Ward Romeijnders, University of Groningen, NL, talk 228

Co-Authors: Niels van der Laan, Suvrajeet Sen,

3 - Solving Stochastic and Bilevel Mixed-Integer Programs via a Generalized Value F.

Speaker: Andrew Schaefer, Rice University, US, talk 560 Co-Authors: *Onur Tavaslioglu*, *Oleg Prokopyev*,

Optimal Control and PDE Constrained Optimization

CONTINUOUS OPTIMIZATION

Control - Tu 3:15pm-4:45pm, Format: 3x30 min Room: Salle AURIAC Building: G, 1st floor, Zone: 6

INVITED SESSION 233

Organizer: Hasnaa Zidani, ENSTA ParisTech, FR

1 - Control of semi discretized (in space) systems of parabolic equations.

Speaker: Damien Allonsius, Aix-Marseille Université, FR, talk 1340

Co-Authors: Franck Boyer, Morgan Morancey,

2 - Strong local optimality for generalised L^1 optimal control problems

Speaker: Francesca Chittaro, Université de Toulon, FR, talk 855

Co-Authors: Laura Poggiolini,

3 - Shortest Dubins Paths through Three Points Speaker: Zheng Chen, Technion, IL, talk 823 Co-Authors: *Tal Shima*,

Distributionally Robust and Stochastic Optimization: A Sampling/Scenario Perspective

OPTIMIZATION UNDER UNCERTAINTY STOCH - TU 3:15pm-4:45pm, Format: 3x30 min Room: Salle 32 Building: B, Ground Floor, Zone: 5 INVITED SESSION 249 **Organizer:** Guzin Bayraksan, Ohio State University, US 1 - Optimizing the Design of a Latin Hypercube Sampling Estimator for SAA

Speaker: Alexander Zolan, University of Texas-Austin, US, talk 1361

Co-Authors: John Hasenbein, David Morton,

2 - Out-of-sample analysis of distributionally robust optimization

Speaker: Jun-ya Gotoh, Chuo university, JP, talk 926

Co-Authors: Michael Kim, Andrew Lim,

3 - Effective Scenarios in Multistage Distributionally Robust Stochastic Programs

Speaker: Guzin Bayraksan, Ohio State University, US, talk 1547

Co-Authors: Hamed Rahimian, Tito Homem-de-Mello,

New developments in prophet inequalities and related settings

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Tu 3:15pm-4:45pm, Format: 3x30 min Room: Salle 41 Building: C, 3rd floor, Zone: 1 INVITED SESSION 258 **Organizer:** Ruben Hoeksma, Universität Bremen, DE

1 - Prophet Inequality and Prophet Secretary

Speaker: Ashish Chiplunkar, EPFL, CH, talk 171 Co-Authors: *Yossi Azar, Haim Kaplan,* **2 - Prophets, Secretaries, and Prices**

Speaker: Brendan Lucier, Microsoft, US, talk 518

3 - Posted Prices and Threshold Strategies for Random Arrivals

Speaker: Tim Oosterwijk, Universidad de Chile, CL, talk 68 Co-Authors: José Correa, Ruben Hoeksma, Tjark Vredeveld, Patricio Foncea,

Convex relaxations in MINLP

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Tu 3:15pm-4:45pm, Format: 3x30 min Room: Salle 34 Building: B, 1st floor, Zone: 3 INVITED SESSION 278

Organizer: Adam Letchford, Lancaster University, GB

1 - A convex reformulation and an outer approximation for a class of BQP

Speaker: Borzou Rostami, Polytechnique Montreal, CA, talk 1185

Co-Authors: Andrea Lodi, Fausto Errico,

2 - Separating over the convex hull of MINL constraints
Speaker: Felipe Serrano, Zuse Institute Berlin, DE, talk 1219
3 - Bi-Perspective Cuts for Mixed-Integer Fractional Pro-

grams Speaker: Adam Letchford, Lancaster University, GB, talk 94 Co-Authors: *Qiang Ni*, *Zhaoyu Zhong*,

Applications of MINLP

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Tu 3:15pm-4:45pm, Format: 3x30 min Room: Salle 35 Building: B, Intermediate, Zone: 4

INVITED SESSION 281

Organizer: Dolores Romero Morales, Copenhagen Business School, DK

1 - Packing problem as mixed integer non-linear model using formulation space search

Speaker: Claudia López, National University of Mexico, MX, talk 1472

Co-Authors: John Beasley,

2 - Piecewise Linear Function Fitting via Mixed-Integer Linear Programming

Speaker: Steffen Rebennack, KIT, DE, talk 313 Co-Authors: *Vitaliy Krasko*,

3 - Feature Selection for Benchmarking

Speaker: Dolores Romero Morales, Copenhagen Business School, DK, talk 1469 Co-Authors: Sandra Benítez-Peña, Peter Bogetoft,

Equilibrium Modelling in Energy

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - TU 3:15pm-4:45pm, Format: 3x30 min Room: Salle DENUCE Building: Q, Ground Floor, Zone: 8

INVITED SESSION 290

Organizer: Thomas Kallabis, University of Duisburg-Essen, DE

1 - Optimal Price Zones and Investment Incentives in Electricity Markets

Speaker: Mirjam Ambrosius, FAU, DE, talk 1482 Co-Authors: Veronika Grimm, Thomas Kleinert, Frauke Liers, Martin Schmidt, Gregor Zöttl,

2 - Strategic generation investment using a stochastic rollinghorizon MPEC approach

Speaker: Thomas Kallabis, University of Duisburg-Essen, DE, talk 879

Co-Authors: Steven Gabriel,

3 - Coordination Problems in the Coupling of Gas and Electricity Markets

Speaker: Christoph Weber, U Duisburg-Essen, DE, talk 1539

Recent Advances in Stochastic and Non-convex Optimization II

CONTINUOUS OPTIMIZATION

RANDOMM - TU 3:15pm-4:45pm, Format: 3x30 min Room: Salle KC6 Building: K, Intermediate 1, Zone: 10 INVITED SESSION 304

Organizer: Mingyi Hong, University of Minnesota, US

1 - First-order Stochastic Algorithms for Escaping From Saddle Points

Speaker: Tianbao Yang, University of Iowa, US, talk 549

Co-Authors: Yi Xu, Rong Jin,

2 - Markov chain Monte Carlo methods for Dynamic Stochastic Optimization

Speaker: John Birge, University of Chicago, US, talk 1447 3 - Composite Difference-Max Programs for Modern Sta-

tistical Estimation Problems Speaker: Jong-Shi Pang, Univ. Southern California, US, talk

1682

Co-Authors: Cui Ying, Bodhisattva Sen,

Distributed and Asynchronous Learning

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - TU 3:15pm-4:45pm, Format: 3x30 min Room: Salle 16 Building: I, 2nd floor, Zone: 7

INVITED SESSION 323

Organizer: Ion Necoara, Univ. Politehnica Bucharest, RO

1 - Avoiding communication in first-order methods for convex optimization

Speaker: Aditya Devarakonda, UC Berkeley, US, talk 1211 Co-Authors: *Kimon Fountoulakis, James Demmel, Michael Mahoney*,

2 - On the Expected Convergence of SGD with Large Stepsizes

Speaker: Marten van Dijk, University of Connecticut, US, talk 513

Co-Authors: Phuong Nguyen, Lam Nguyen,

3 - Asynchronous primal-dual proximal algorithms for large-scale optimization

Speaker: Puya Latafat, KU Leuven, BE, talk 1008 Co-Authors: *Panos Patrinos*,

Advances in large-scale machine learning

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - TU 3:15pm-4:45pm, Format: 3x30 min Room: FABRE Building: J, Ground Floor, Zone: 8

INVITED SESSION 327 Organizer: Mark Schmidt, UBC, CA

1 - Exponential convergence of testing error for stochastic gradient methods.

Speaker: Francis Bach, INRIA - ENS, FR, talk 964
Co-Authors: Loucas Pillaud-Vivien, Alessandro Rudi,
2 - Mirrored Langevin Dynamics
Speaker: Volkan Cevher, EPFL, CH, talk 332
Co-Authors: Ya-Ping Hsieh,
3 - Catalyst Acceleration for Gradient-based Optimization of Structured Models
Speaker: Zaid Harchaoui, UW, US, talk 1162
Co-Authors: Krishna Pillutla, Sham Kakade,

Local Search and Facility Location

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Tu 3:15pm-4:45pm, Format: 3x30 min Room: Salle 36 Building: B, Intermediate, Zone: 4 INVITED SESSION 342 **Organizer:** Felix Willamowski, RWTH Aachen University, DE

1 - Local Search based Approximation Algorithms for Capacitated k median problems.

Speaker: Neelima Gupta, University of Delhi, IN, talk 848 Co-Authors: *Aditya Pancholi*,

2 - Proportional Approval Voting, Harmonic k-median, and Negative Association

Speaker: Krzysztof Sornat, University of Wroclaw, PL, talk 851

Co-Authors: Jaroslaw Byrka, Piotr Skowron,

3 - Hard Instances for Local Search via Mixed Integer Programming

Speaker: Felix Willamowski, RWTH Aachen University, DE, talk 168

Co-Authors: Marco Lübbecke,

Game Theory and Energy Markets

OPTIMIZATION UNDER UNCERTAINTY GAME - TU 3:15pm-4:45pm, Format: 3x30 min Room: Salle 30 Building: B, Ground Floor, Zone: 5 CONTRIBUTED SESSION 375

Chair: Didier Aussel, University of Perpignan, FR

1 - Constraint quali cations for parametrized optimization problems and applications

Speaker: Anton Svensson, Universidad de Chile, CL, talk 1111

Co-Authors: Didier Aussel,

2 - TrEMa: A Trilevel Energy Market Model

Speaker: Léonard vonNiederhäusern, Inria, FR, talk 1100 Co-Authors: *Didier Aussel*, *Luce Brotcorne*, *Sébastien Lep-aul*,

3 - Electricity market model with elastic demand

Speaker: Didier Aussel, University of Perpignan, FR, talk 239

Co-Authors: Elisabetta Allevi, Rossana Riccardi,

Market places and dynamic programming

OPTIMIZATION UNDER UNCERTAINTY MARKOV - TU 3:15pm-4:45pm, Format: 3x30 min Room: Salle 31 Building: B, Ground Floor, Zone: 5

Contributed Session 380

Chair: Dan Iancu, Stanford University, US

1 - Revenue Management with Repeated Customer Interactions

Speaker: Gonzalo Romero, University of Toronto, CA, talk 1396

Co-Authors: Andre Calmon, Florin Ciocan,

2 - Dynamic Inventory Control with Stockout Substitution and Demand Learning

Speaker: Boxiao Chen, University of Illinois Chicago, US, talk 1180

Co-Authors: Xiuli Chao,

3 - Revenue Losses From Income Guarantees in Centralized Allocation Systems

Speaker: Dan Iancu, Stanford University, US, talk 379 Co-Authors: *Yonatan Gur, Xavier Warnes*,

Optimization in Medicine

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCIENCES - TU 3:15pm-4:45pm, Format: 3x30 min Room: Salle LA4 Building: L, Basement, Zone: 8

INVITED SESSION 394

Organizer: Sebastian Sager, University Magdeburg, DE

1 - Optimizing the individual treatment of patients with polycythemia vera

Speaker: Manuel Tetschke, OvGU Magdeburg, DE, talk 1307 Co-Authors: *Patrick Lilienthal, Sebastian Sager*,

2 - Combinatorial Problems and Models to Help Prevention and Combat Arboviruses

Speaker: Nelson Maculan, UFRJ, BR, talk 1276

Co-Authors: Marcos Negreiros, Bruno Chaves,

3 - Towards optimized consolidation (chemo)therapy for acute myeloid leukemia

Speaker: Sebastian Sager, University Magdeburg, DE, talk 735

Co-Authors: Felix Jost, Thomas Fischer, Enrico Schalk,

Optimization software and applications

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - TU 3:15pm-4:45pm, Format: 3x30 min Room: Salle 18 Building: I, 1st floor, Zone: 7

CONTRIBUTED SESSION 399 Chair: Bartolomeo Stellato, MIT, US

1 - OSQP: An Operator Splitting Solver for Quadratic Programs

Speaker: Bartolomeo Stellato, MIT, US, talk 1151

Co-Authors: Goran Banjac, Paul Goulart, Alberto Bemporad, Stephen Boyd,

2 - High-level abstractions for checkpointing in PDEconstrained optimisation

Speaker: Navjot Kukreja, Imperial College London, GB, talk 880

Co-Authors: Jan Hueckelheim, Simon Funke, Mathias Louboutin, Michael Lange, Andrea Walther, Gerard Gorman,

3 - A quadratic penalty algorithm for linear programming

Speaker: Ivet Galabova, University of Edinburgh, GB, talk 1351

Submodular optimization and bevond

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Tu 3:15pm-4:45pm, Format: 3x30 min Room: Salle 39 Building: E, 3rd floor, Zone: 1

Contributed Session 418 Chair: Satoru Iwata, University of Tokyo, JP

1 - Submodular Minimization Under Congruency Constraints

Speaker: Martin Nägele, ETH Zürich, CH, talk 1588
Co-Authors: *Benny Sudakov*, *Rico Zenklusen*,
2 - The *b*-bibranching Problem: TDI System, Packing, and Discrete Convexity

Speaker: Kenjiro Takazawa, Hosei University, JP, talk 55 **3 - Index Reduction via Unimodular Transformations** Speaker: Satoru Iwata, University of Tokyo, JP, talk 1177 Co-Authors: *Mizuyo Takamatsu*,

Linear Optimization III

CONTINUOUS OPTIMIZATION NLP - Tu 3:15pm-4:45pm, Format: 3x30 min Room: Salle 9 Building: N, 4th floor, Zone: 12

CONTRIBUTED SESSION 439

Chair: Rodrigo Mendoza Smith, University of Oxford, GB

1 - Neural constraint selection in Linear Programming

Speaker: Rodrigo Mendoza Smith, University of Oxford, GB, talk 1546

Co-Authors: Pawan Kumar,

2 - New station cone algorithm variant for linear programming and computing experiment

Speaker: Chu Nguyen, Viet Power Ltd Company, VN, talk 1665

Co-Authors: Hue Thanh,

3 - A predictor-corrector algorithm for lp problems using the mixed penalty approach

Speaker: Khalid El Yassini, Moulay Ismail University, MA, talk 1458

Co-Authors: Kenza Oufaska, Ahmed El Ghali,

Recent Advances in Robust Optimization I

OPTIMIZATION UNDER UNCERTAINTY ROBUST - TU 3:15pm-4:45pm, Format: 3x30 min Room: Salle 33 Building: B, Ground Floor, Zone: 5 INVITED SESSION 442 **Organizer:** Phebe Vayanos, USC, US

1 - Optimization in the Small-Data, Large-Scale Regime Speaker: Vishal Gupta, USC Marshall, US, talk 1516 Co-Authors: *Paat Rusmevichientong*,

2 - Interpretable Optimal Stopping

Speaker: Velibor Misic, UCLA, US, talk 1358

Co-Authors: Florin Ciocan,

3 - Fair, Efficient, and Interpretable Policies for Allocating Scarce Resources

Speaker: Phebe Vayanos, USC, US, talk 899

Co-Authors: Mohammad Azizi, Bryan Wilder, Eric Rice, Milind Tambe,

Recent Advances in Robust Optimization II

Optimization under Uncertainty

Robust - Tu 3:15pm-4:45pm, Format: 3x30 min

Room: DENIGES Building: C, Ground Floor, Zone: 5 INVITED SESSION 445

Organizer: Wolfram Wiesemann, Imperial College London, GB

1 - A Robust Optimization Perspective on Bilinear Programming

Speaker: Jianzhe Zhen, EPFL, CH, talk 827

Co-Authors: Ahmadreza Marandi, Dick den Hertog, Lieven Vandenberghe,

2 - Calibrating Optimization under Uncertainty

Speaker: Huajie Qian, Columbia University, US, talk 1600 Co-Authors: *Henry Lam*,

3 - The Distributionally Robust Chance Constrained Vehicle Routing Problem

Speaker: Wolfram Wiesemann, Imperial College London, GB, talk 817

Co-Authors: Shubhechyya Ghosal,

Learning for mixed integer optimization

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - TU 3:15pm-4:15pm, Format: 2x30 min Room: Salle 22 Building: G, 2nd floor, Zone: 6 CONTRIBUTED SESSION 482 **Chair:** Hari Bandi, MIT, US

1 - Learning a Mixture of Gaussians via Mixed Integer Optimization

Speaker: Hari Bandi, MIT, US, talk 1501

Co-Authors: Dimitris Bertsimas, Rahul Mazumder,

2 - Learning for Tuning Parameters of NUOPT MILP Solver

Speaker: Takanori Maehara, RIKEN AIP, JP, talk 1257 Co-Authors: *Kensuke Otsuki, Yasumi Ishibashi, Koichi Fujii, Tomohiro Takahashi,*

Optimization Models for Renewable Energy Integration 2

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE

ENERGY - Tu 3:15pm-4:45pm, Format: 3x30 min Room: Salle 24 Building: G, 3rd floor, Zone: 6 CONTRIBUTED SESSION 523 **Chair:** Michel Denault, HEC Montréal, CA

1 - A MIP formulation of a Hybrid AC-DC offshore wind power plant topology

Speaker: Cristina Corchero, IREC, ES, talk 1244 Co-Authors: *Josep Homs-Moreno*, *F.-Javier Heredia*, *Lucia Igualada*, *Mikel de Prada*,

2 - Optimal Design of a Decentralized Energy Network including Renewable Energies

Speaker: Kristina Janzen, TU Darmstadt, DE, talk 877
Co-Authors: *Stefan Ulbrich, Sven Leyffer*, **3 - Approximate dynamic programming for hydropower optimization**

Speaker: Michel Denault, HEC Montréal, CA, talk 1473 Co-Authors: Pascal CôTé, Jean-Guy Simonato, Nicolas Léveillé, Jean-Phil. Olivier-Meunier, Maël Veron,

Supply Chain and Lot Sizing

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCHEDULING - TU 3:15pm-4:45pm, Format: 3x30 min Room: Salle 23 Building: G, 3rd floor, Zone: 6

CONTRIBUTED SESSION 534 Chair: Simon Thevenin, HEC Montréal, CA

1 - Decision Rule-based Method for Flexible Multi-Facility Capacity Planning Problem

Speaker: Sixiang Zhao, ISEM, NUS, SG, talk 1272 Co-Authors: *William Haskell*, *Michel Cardin*,

2 - Two-Period Relaxations for Big-Bucket Lot-Sizing: Polyhedra and Algorithms

Speaker: Kerem Akartunali, University of Strathclyde, GB, talk 1149

Co-Authors: *Mahdi Doostmohammadi, Ioannis Fragkos,* **3 - Scenario based stochastic optimization for the multiechelon lot-sizing problem**

Speaker: Simon Thevenin, HEC Montréal, CA, talk 348 Co-Authors: *Yossiri Adulyasak, J.-F. Cordeau*,

A.W. Tucker Prize Session

INVITED TALKS INTERFACE - Tu 3:15pm-4:45pm, Format: Room: SIGALAS Building: C, 2nd floor, Zone: 2

Contributed Session 559

Chair: Simge Kucukyavuz, University of Washington, US

Approximation Algorithms for the Traveling Salesman Problem

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - We 8:30am-10:30am, Format: 4x30 min Room: LEYTEIRE Building: E, 3rd floor, Zone: 1 INVITED SESSION 23 **Organizer:** Anke van Zuylen, College of William Mary, US

Vehicle Routing with Subtours
 Speaker: Stephan Held, University of Bonn, DE, talk 212
 Co-Authors: Jochen Koenemann, Jens Vygen,
 2 - Fast Approximations for Metric TSP Speaker: Kent Quanrud, UIUC, US, talk 487
 Co-Authors: Chandra Chekuri,
 3 - The s-t-path **TSP:** past, present, and future
 Speaker: Jens Vygen, University of Bonn, DE, talk 210
 Co-Authors: Vera Traub,
 4 - The Salesman's Paths: Layered Christofides' Trees, Deletion and Matroids Speaker: Anke van Zuylen, College of William Mary, US, talk 177

Co-Authors: Andras Sebo, Frans Schalekamp, Vera Traub,

Stochastic and Nonlinear Optimization III

CONTINUOUS OPTIMIZATION

NLP - We 8:30am-10:30am, Format: 4x30 min Room: GINTRAC Building: Q, Ground Floor, Zone: 8 INVITED SESSION 31

Organizer: Jorge Nocedal, Northwestern University, US

1 - Efficient Newton-type methods for non-convex machine learning problems

Speaker: Fred Roosta, University of Queensland, AU, talk 486

Co-Authors: Michael Mahoney, Peng Xu,

2 - Optimization Methods for Training Neural Networks Speaker: Jorge Nocedal, Northwestern University, US, talk 563

3 - A Newton-CG Method with Complexity Guarantees Speaker: Stephen Wright, U Wisconsin-Madison, US, talk 422

Co-Authors: Clément Royer, Michael ONeill,

4 - Smoothed Variable Sample-size Acc. Prox. Methods for Stoch. Convex Optimization

Speaker: Uday Shanbhag, Pennsylvania State University, US, talk 427

Co-Authors: Afrooz Jalilzadeh, Jose Blanchet, Peter Glynn,

New derivative-free algorithms

CONTINUOUS OPTIMIZATION DERFREE - We 8:30am-10:30am, Format: 4x30 min Room: Salle 21 Building: G, Intermediate, Zone: 6

Contributed Session 34

Chair: Margherita Porcelli, University of Florence, IT

1 - Gray-box optimization of structured problems and other new developments in BFO

Speaker: Margherita Porcelli, University of Florence, IT, talk

609

Co-Authors: *Philippe Toint*,

2 - Model-based derivative-free methods for nonsmooth black-box functions

Speaker: Francesco Rinaldi, University of Padova, IT, talk 825

Co-Authors: Giampaolo Liuzzi, Stefano Lucidi, Luis Nunes Vicente,

3 - A flexible, robust and efficient derivative-free solver for least squares

Speaker: Lindon Roberts, University of Oxford, GB, talk 864 Co-Authors: *Coralia Cartis, Benjamin Marteau, Jan Fiala*,

4 - MultiGLODS: Clever Multistart in Multiobjective Directional Direct Search

Speaker: Ana Custodio, Universidade Nova de Lisboa, PT, talk 1480

Co-Authors: Jose Madeira,

Optimality conditions in NLP and conic problems

CONTINUOUS OPTIMIZATION NLP - We 8:30am-10:30am, Format: 4x30 min Room: Salle 05 Building: Q, 1st floor, Zone: 11

INVITED SESSION 43 Organizer: Roberto Andreani, UNICAMP, BR

1 - A SEQUENTIAL OPTIMALITY CONDITION RE-LATED TO THE QUASINORMALITY CQ

Speaker: Roberto Andreani, UNICAMP, BR, talk 522 Co-Authors: *Nadia Fazio*, *Maria Schuverdt*, *Leonardo Secchin*,

2 - An extension of Yuan's Lemma and its applications in optimization

Speaker: Gabriel Haeser, University of Sao Paulo, BR, talk 205

3 - Optimality Conditions for Generalized Nash Equilibrium Problems

Speaker: Luis Felipe Bueno, UNIFESP, BR, talk 194 Co-Authors: *Gabriel Haeser*, *Frank Rojas*,

4 - On Optimality Conditions for Linear Copositive Programming

Speaker: Tatiana Tchemisova, University of AVeiro, PT, talk 526

Co-Authors: Olga Kostyukova,

Energy markets

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCIENCES - We 9:00am-10:30am, Format: 3x30 min Room: Salle LA4 Building: L, Basement, Zone: 8

INVITED SESSION 50

Organizer: Martine Labbé, Université Libre de Bruxelles, BE

1 - Unit Commitment under Market Equilibrium Constraints

Speaker: Bernard Fortz, ULB, BE, talk 575

Co-Authors: Luce Brotcorne, Fabio D Andreagiovanni, Jérôme De Boeck,

2 - The Impact of Physics on Market Equilibria in Energy Networks

Speaker: Martin Schmidt, FAU Erlangen-Nürnberg, DE, talk 470

Co-Authors: Vanessa Krebs, Lars Schewe, Veronika Grimm, Gregor Zöttl, Julia Grübel,

3 - Dynamic programming approach for bidding problems on day-ahead markets

Speaker: Martine Labbé, Université Libre de Bruxelles, BE, talk 305

Co-Authors: Jérôme De Boeck, Etienne Marcotte, Patrice Marcotte, Gilles Savard,

MINLP (I)

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - We 9:00am-10:30am, Format: 3x30 min Room: Salle 34 Building: B, 1st floor, Zone: 3

Invited Session 65

Organizer: Daniel Bienstock, Columbia University, US

1 - Time-Varying Semidefinite Programs

Speaker: Bachir El Khadir, Princeton University, US, talk 1194

Co-Authors: Amir Ali Ahmadi,

2 - Strengthened Relaxations for Quadratic Optimization with Switching Variables

Speaker: Kurt Anstreicher, University of Iowa, US, talk 147 3 - A Simple Nearly-Optimal Restart Scheme For Speeding-Up First Order Methods

Speaker: James Renegar, Cornell University, US, talk 117 Co-Authors: *Benjamin Grimmer*,

Approximation Algorithms for Scheduling Problems

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - We 8:30am-10:30am, Format: 4x30 min Room: Salle 36 Building: B, Intermediate, Zone: 4

INVITED SESSION 72

Organizer: Nicole Megow, University of Bremen, DE

1 - The general scheduling problem with uniform release dates is not APX-hard

Speaker: Ruben Hoeksma, Universität Bremen, DE, talk 144 Co-Authors: Antonios Antoniadis, Julie Meißner, Jose Verschae, Andreas Wiese,

2 - Minimizing Maximum Flow Time on Related Machines via Dynamic Pricing

Speaker: Clifford Stein, Columbia University, US, talk 695 Co-Authors: Sungjin Im, Benjamin Moseley, Kirk Pruhs,

3 - Generalizing the Kawaguchi-Kyan Bound to Stochastic Parallel Machine Scheduling

Speaker: Sven Jäger, TU Berlin, DE, talk 661 Co-Authors: *Martin Skutella*, Speaker: Julian Mestre, Facebook, US, talk 92 Co-Authors: *Anthony Wirth, Jessica McClintock*,

Recent Advances in Conic Programming II

CONTINUOUS OPTIMIZATION

SDP - We 8:30am-10:30am, Format: 4x30 min Room: Salle AURIAC Building: G, 1st floor, Zone: 6

INVITED SESSION 83

Organizer: Sena Safarina, Tokyo Institute of Technology, JP

1 - Convex Relaxations for Nonconvex Quadratically Constrained Quadratic Program

Speaker: Rujun Jiang, Fudan University, CN, talk 131 Co-Authors: *Duan Li*,

2 - Cone Decomposition Method for Mixed-Integer SOCP arising from tree breeding

Speaker: Sena Safarina, Tokyo Institute of Technology, JP, talk 606

Co-Authors: Makoto Yamashita,

3 - Infeasibility detection in ADMM for convex optimization

Speaker: Goran Banjac, University of Oxford, GB, talk 746 Co-Authors: *Paul Goulart, Bartolomeo Stellato, Stephen Boyd*,

4 - A Simplex-like algorithm for the infimum point w.r.t. the second order cone

Speaker: Marta Cavaleiro, Rutgers University, US, talk 406 Co-Authors: *Farid Alizadeh*,

Theory and algorithms in conic linear programming 2

CONTINUOUS OPTIMIZATION SDP - We 8:30am-10:30am, Format: 4x30 min

Room: Salle 20 Building: G, 1st floor, Zone: 6

INVITED SESSION 89

Organizer: Gabor Pataki, UNC Chapel Hill, US

1 - An extension of Chubanov's algorithm to symmetric cone programming

Speaker: Masakazu Muramatsu, UEC, JP, talk 530

Co-Authors: Bruno Lourenco, Tomonari Kitahara, Takashi Tsuchiya,

2 - Extending MOSEK with exponential cones

Speaker: Joachim Dahl, MOSEK, DK, talk 327

3 - Primal Facial Reduction in Semidefinite Programming and Matrix Completions

Speaker: Stefan Sremac, University of Waterloo, CA, talk 747

Co-Authors: Hugo Woerdeman, Henry Wolkowicz,

4 - Amenable cones: bridging error bounds and facial reduction

Speaker: Bruno Lourenco, University of Tokyo, JP, talk 532

Determinantal structures of IPs

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - We 8:30am-10:30am, Format: 4x30 min Room: Salle 43 Building: C, 3rd floor, Zone: 1 INVITED SESSION 131 **Organizer:** Martin Henk, TU Berlin, DE

Width in congruency-constrained TU-systems.
 Speaker: Stephan Artmann, ETH Zurich, CH, talk 723
 Co-Authors: Christoph Glanzer, Robert Weismantel,
 Faster algorithms for Integer Programming using the Steinitz Lemma
 Speaker: Friedrich Eisenbrand, EPFL, CH, talk 52
 Co-Authors: Robert Weismantel,
 On the number of distinct rows of a matrix with bounded sub-determinants
 Speaker: Christoph Glanzer, ETH Zürich, CH, talk 722
 Co-Authors: Robert Weismantel, Rico Zenklusen,
 Distances between LPs, IPs and MIPs
 Speaker: Robert Weismantel, ETH Zurich, CH, talk 717
 Co-Authors: Stefan Weltge, Joseph Paat,

Decomposition Techniques to Solve Large-Scale Optimization Problems for Electricity and Natural Gas Systems Specific Models, Algorithms, and Software

ENERGY - We 8:30am-10:30am, Format: 4x30 min Room: Salle DENUCE Building: Q, Ground Floor, Zone: 8

INVITED SESSION 136

Organizer: Ramteen Sioshansi, The Ohio State University, US

1 - Toward Scalable Stochastic Economic Dispatch on an Industrial-Scale Model

Speaker: Jean-Paul Watson, Sandia National Laboratories, US, talk 1556

Co-Authors: Bernard Knueven,

2 - Distributionally Robust Transmission Expansion Planning

Speaker: David Pozo, Skoltech, RU, talk 950

Co-Authors: Alexandre Velloso, Alexandre Street,

3 - Structures and algorithms for nomination validation in steady-state gas networks

Speaker: Gerrit Slevogt, Universität Duisburg-Essen, DE, talk 621

Co-Authors: Sabrina Nitsche, Ruediger Schultz,

4 - A bilevel model for the waste-to-energy supply chain in a circular economy

Speaker: Giorgia Oggioni, University of Brescia, IT, talk 521 Co-Authors: *Elisabetta Allevi, Luigi Boffino, Maria Elena De Giuli,*

Stochastic Optimization and Varia-

tional Inequalities II

CONTINUOUS OPTIMIZATION VARIAT - We 9:30am-10:30am, Format: 2x30 min Room: Salle 06 Building: Q, 1st floor, Zone: 11

INVITED SESSION 156

Organizer: Alejandro Jofre, Universidad de Chile, CL

1 - How does uncertainty of demand propagate to flows under network equilibrium

Speaker: Yueyue Fan, University of California Davis, US, talk 1115

Co-Authors: Ning Liu,

2 - Variance-based stochastic extragradient methods with linear search for Stoch. VI

Speaker: Alejandro Jofre, Universidad de Chile, CL, talk 1116

Co-Authors: Philip Thompson, Alfredo Iusem,

Benders Decomposition for Combinatorial and Bilevel Optimization

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - We 8:30am-10:30am, Format: 4x30 min Room: Salle 44 Building: C, 3rd floor, Zone: 1

INVITED SESSION 171 Organizer: Fabio Furini, LAMSADE–Paris-Dauphine, FR

1 - A Framework for Benders with Integer Sub-Problem Speaker: Arthur Mahéo, ANU, AU, talk 1210

Co-Authors: Yossiri Adulyasak, J.-F. Cordeau,

2 - New ILP formulations for the k-Vertex Cut Problem Speaker: Paolo Paronuzzi, University of Bologna, IT, talk 1527

Co-Authors: Fabio Furini, Ivana Ljubic, Enrico Malaguti, 3 - Decomposition Approaches to Covering Location Problems

Speaker: Ivana Ljubic, ESSEC Business School, FR, talk 1439

Co-Authors: JeanFrancois Cordeau, Fabio Furini,

4 - The Maximum Clique Interdiction Game

Speaker: Fabio Furini, LAMSADE–Paris-Dauphine, FR, talk 126

Co-Authors: Ivana Ljubic, Pablo San Segundo, Sebastie Martin,

Energy-aware planning and scheduling 1

Specific Models, Algorithms, and Software

ENERGY - We 8:30am-10:30am, Format: 4x30 min Room: Salle 23 Building: G, 3rd floor, Zone: 6

Koom. Sanc 25 Dunung. G

INVITED SESSION 177

Organizer: Sandra U. Ngueveu, Univ de Toulouse, INP, LAAS, FR

1 - Robust optimisation of storage in a power generation expansion planning problem

Speaker: Sophie Demassey, CMA Mines ParisTech, FR, talk 1270

Co-Authors: Edi Assoumou, Welnigton de Oliveira,

2 - Microgrid Energy Flexibility Optimization – 3 use cases

Speaker: Peter Pflaum, Schneider Electric, FR, talk 1520 Co-Authors: *Claude Le Pape*,

3 - ILP models for the job-shop scheduling problem with energy consideration

Speaker: Paolo Gianessi, Mines Saint-Étienne, FR, talk 1452 Co-Authors: *Oussama Masmoudi, Xavier Delorme*,

4 - Decomposition method in a scheduling problem with energy storage and costs

Speaker: Sandra U. Ngueveu, Univ de Toulouse, INP, LAAS, FR, talk 1405

Co-Authors: Nabil Absi, Christian Artigues, Safia Kedad-Sidhoum, Félix Goupil,

Recent advances in first-order algorithms for non-smooth optimization

CONTINUOUS OPTIMIZATION

NonSmooth - We 8:30am-10:30am, Format: 4x30 min Room: Salle LC4 Building: L, Intermediate 1, Zone: 9 INVITED SESSION 198

Organizer: Thomas Pock, Graz University of Technology, AT

1 - Non-smooth Non-convex Bregman Minimization: Unification and new Algorithms

Speaker: Peter Ochs, Saarland University, DE, talk 134 Co-Authors: *Jalal Fadili*,

2 - Primal-dual algorithm for linearly constrained optimization problem

Speaker: Yura Malitsky, University of Göttingen, DE, talk 155

3 - Stochastic PDHG with Arbitrary Sampling and Applications to Medical Imaging

Speaker: Matthias Ehrhardt, University of Cambridge, GB, talk 127

Co-Authors: Carola Schoenlieb, Peter Richtarik, Antonin Chambolle,

4 - Acceleration and global convergence of the NL-PDHGM

Speaker: Stanislav Mazurenko, University of Liverpool, GB, talk 1655

Co-Authors: Tuomo Valkonen, C. Clason,

Advances in Integer Programming

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - We 8:30am-10:30am, Format: 4x30 min Room: Salle 35 Building: B, Intermediate, Zone: 4 INVITED SESSION 230 **Organizer:** Santanu Dey, GaTech, US

1 - A generalization of Gomory-Chvatal cuts

Speaker: Sanjeeb Dash, IBM Research, US, talk 940

Co-Authors:Oktay Gunluk, Dabeen Lee,Co2 - Integer Programming Techniques for Optimal Transmission Switching ProblemsMuSpeaker: Burak Kocuk, Sabanci University, TR, talk 853Co-Authors: Santanu Dey, Andy Sun,3 - Time-indexed Relaxations for the Online BipartiteMatching ProblemSpeaker: Alejandro Toriello, Georgia Tech, US, talk 1101Co-Authors: Alfredo Torrico,4 - Constant Capacity Flow Cover Inequalities on a Path
or a Variant of Lot-SizingSpeaker: Laurence Wolsey, Univ. cath. de Louvain, BE, talk1222Nor

Co-Authors: Hande Yaman,

Progress in MIP Solvers I

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - WE 9:00am-10:30am, Format: 3x30 min Room: PITRES Building: O, Ground Floor, Zone: 8 INVITED SESSION 235 **Organizer:** Michael Winkler, Gurobi, DE

1 - New features and improvements in the SAS/OR optimization package

Speaker: Imre Polik, SAS Institute, US, talk 898

2 - MIPLIB 2017+1

Speaker: Thorsten Koch, ZIB and TU Berlin, DE, talk 370 Co-Authors: *The MIPLIB-team*,

3 - Benchmarks of commercial and noncommercial optimization software

Speaker: Hans Mittelmann, Arizona State University, US, talk 41

Discrete Convex Analysis

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - We 8:30am-10:30am, Format: 4x30 min Room: Salle 41 Building: C, 3rd floor, Zone: 1 INVITED SESSION 243

Organizer: Akiyoshi Shioura, Tokyo Institute of Technology, JP

1 - M-convex Function Minimization under L1-distance Constraint

Speaker: Akiyoshi Shioura, Tokyo Institute of Technology, JP, talk 495

2 - On the Construction of Substitutes

Speaker: Eric Balkanski, Harvard, US, talk 647 Co-Authors: *Renato Paes Leme*,

3 - Discrete Midpoint Convexity

Speaker: Fabio Tardella, Sapienza University of Rome, IT, talk 538

Co-Authors: Kazuo Murota, Akihisa Tamura, Satoko Moriguchi,

4 - Scaling, proximity, and optimization of integrally convex functions

Speaker: Satoko Moriguchi, Tokyo Metropolitan University, JP, talk 700

Co-Authors: Akihisa Tamura, Fabio Tardella, Kazuo Murota,

Chance Constraint and Its Applications

OPTIMIZATION UNDER UNCERTAINTY STOCH - We 8:30am-10:30am, Format: 4x30 min Room: DENIGES Building: C, Ground Floor, Zone: 5 INVITED SESSION 253

Organizer: Jianqiang Cheng, University of Arizona, US

1 - Joint chance constrained general sum games

Speaker: Abdel Lisser, Université Paris Sud, FR, talk 688 Co-Authors: *Shen Peng*, *Vikas Singh*,

2 - Distributionally robust geometric programs with chance constraints

Speaker: Jia Liu, Xi'an Jiaotong university, CN, talk 366 Co-Authors: *Zhiping Chen*, *Abdel Lisser*,

3 - Bounds for probabilistic constrained problems Speaker: Francesca Maggioni, University of Bergamo, IT, talk 328

Co-Authors: Abdel Lisser, Shen Peng,

4 - Partial Sample Average Approximation Method for Chance Constrained Problems

Speaker: Jianqiang Cheng, University of Arizona, US, talk 793

Co-Authors: Celine Gicquel, Abdel Lisser,

Optimization under uncertainty

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - We 8:30am-10:30am, Format: 4x30 min Room: Salle 39 Building: E, 3rd floor, Zone: 1

INVITED SESSION 261 **Organizer:** Marco Molinaro, PUC-Rio, BR

1 - Online Probabilistic Metric Embedding and its Applications

Speaker: William Umboh, University of Sydney, AU, talk 138

Co-Authors: Yair Bartal, Nova Fandina,

2 - Online and Dynamic Algorithms for Set Cover Speaker: Ravishankar Krishnaswamy, Microsoft Research,

IN, talk 358

3 - Algorithms and Adaptivity Gaps for Stochastic Probing

Speaker: Sahil Singla, Carnegie Mellon University, US, talk 115

Co-Authors: Anupam Gupta, Viswanath Nagarajan,

4 - Online and Random-order Load Balancing Simultaneously

Speaker: Marco Molinaro, PUC-Rio, BR, talk 116

Numerically Efficient Methods for

Piecewise Algorithmic Differentiation I

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - We 8:30am-10:30am, Format: 4x30 min Room: Salle 22 Building: G, 2nd floor, Zone: 6

INVITED SESSION 269 Organizer: Torsten Bosse, FSU Jena, DE

1 - Study of the numerical efficiency of structured absnormal forms

Speaker: Sri Hari Narayanan, Argonne National Laboratory, US, talk 1505

Co-Authors: Torsten Bosse,

2 - (Almost) Matrix-free solver for piecewise linear functions in Abs-Normal form

Speaker: Torsten Bosse, FSU Jena, DE, talk 962 3 - An active signature method for piecewise differen-

tiable/linear optimization.

Speaker: Andreas Griewank, Yachay Tech, EC, talk 1545
Co-Authors: Andrea Walther, Lisa Hegerhorst,
4 - Solving l₁ regularized minimax problems by successive

4 - Solving t_1 regularized minimax problems by successive piecewise linearization

Speaker: Angel Rojas, Yachay Tech, EC, talk 1549 Co-Authors: *Andreas Griewank*,

Learning in CP

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING CP - We 8:30am-10:30am, Format: 4x30 min Room: DURKHEIM Building: A, 3rd floor, Zone: 1

Invited Session 301

Organizer: Arnaud Lallouet, Huawei Technologies France, FR

1 - Constraint acquisition

Speaker: Nadjib Lazaar, LIRMM - U. of Montpellier, FR, talk 539

2 - Reasoning with Learned Constraints

Speaker: Arnaud Lallouet, Huawei Technologies France, FR, talk 814

3 - Boundary Estimation: Learning Boundaries for Constraint Optimization Problems

Speaker: Arnaud Gotlieb, Simula Research Lab., NO, talk 1663

Co-Authors: Helge Spieker,

4 - Empirical Model Learning: boosting optimization through machine learning

Speaker: Michela Milano, Università di Bologna, IT, talk 1664

First Order Methods for Non-Smooth Constrained Optimization

CONTINUOUS OPTIMIZATION

RANDOMM - We 8:30am-10:30am, Format: 4x30 min Room: Salle KC6 Building: K, Intermediate 1, Zone: 10 INVITED SESSION 305

Organizer: Qihang Lin, University of Iowa, US

On the Non-Ergodic Convergence Rate of an Inexact Augmented Lagrangian Framework
 Speaker: Shiqian Ma, UC Davis, US, talk 805
 Co-Authors: *Ya-Feng Liu*, *Xin Liu*,
 A level-set method for stochastic optimization with expectation constraints
 Speaker: Selvaprabu Nadarajah, Univ. of Illinois and Chicago, US, talk 743
 Co-Authors: *Qihang Lin, Negar Soheili*,
 Fast method for non-smooth non-convex minimization
 Speaker: Peng Zheng, University of Washington, US, talk

416 Co-Authors: *Aleksandr Aravkin*,

4 - Stochastic Primal-Dual Coordinate Method for Nonlinear Convex Cone Programs

Speaker: DaoLi Zhu, Shanghai Jiaotong University, CN, talk 1637

Co-Authors: Lei Zhao,

Stochastic optimization

INVITED TALKS INTERFACE - We 8:30am-10:30am, Format: 4x30 min Room: SIGALAS Building: C, 2nd floor, Zone: 2 CONTRIBUTED SESSION 314 Chair: Alexei Gaivoronski, NTNU, NO

1 - Using disjunctive programming to represent Risk Aversion policies

Speaker: Bernardo Costa, UFRJ, BR, talk 790

Co-Authors: Filipe Cabral, Joari Costa,

2 - SDDP with stagewise-dependent objective coefficient uncertainty

Speaker: Anthony Downward, University of Auckland, NZ, talk 1187

Co-Authors: Oscar Dowson, Regan Baucke,

3 - Stochastic optimization of simulation models: management of

Speaker: Alexei Gaivoronski, NTNU, NO, talk 1416

Co-Authors: Giovanni Sechi, Paola Zuddas,

4 - Demand Response To Electricity Prices In Flexible Manufacturing

Speaker: Kazem Abbaszadeh, UoA, NZ, talk 794 Co-Authors: *Golbon Zakeri*, *Geoffrey Pritchard*,

First-Order Methods for Machine Learning

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - We 9:00am-10:30am, Format: 3x30 min Room: Salle 16 Building: I, 2nd floor, Zone: 7 INVITED SESSION 319 **Organizer:** Fabian Pedregosa, UC Berkeley, US

1 - Stochastic Composite Least-Squares Regression with convergence rate O(1/n)

Speaker: Nicolas Flammarion, UC Berkeley, US, talk 1114 2 - Adaptive Three Operator Splitting Speaker: Fabian Pedregosa, UC Berkeley, US, talk 527

Co-Authors: Gautheir Gidel,

3 - Approximate Composite Minimization: Convergence Rates and Examples

Speaker: Sebastian Stich, EPFL, CH, talk 1016 Co-Authors: Sai Praneeth Karimireddy, Martin Jaggi,

Structured Optimization for Machine Learning and Signal Processing

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - We 8:30am-10:30am, Format: 4x30 min Room: FABRE Building: J, Ground Floor, Zone: 8

INVITED SESSION 330 Organizer: Lin Xiao, Microsoft Research, US

1 - Training neural networks using ADMM for multiaffine constrai

Speaker: Donald Goldfarb, Columbia University, US, talk 665

Co-Authors: Wenbo Gao, Frank Curtis,

2 - Generalized Conditional Gradient for Structured Sparsity and Convex Deep Network

Speaker: Xinhua Zhang, University of Illinois Chicago, US, talk 807

Co-Authors: Yaoliang Yu,

3 - Proximal methods for optimization over nonnegative trigonometric polynomials

Speaker: Lieven Vandenberghe, UCLA, US, talk 1092 Co-Authors: *Hsiao-Han Chao*,

4 - Fast convex optimization for eigenproblems and beyond

Speaker: Mikael Johansson, KTH, SE, talk 1645 Co-Authors: *Vien Van Mai*,

Primal Algorithms for Integer Programming Problems

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - We 8:30am-10:30am, Format: 4x30 min Room: Salle 42 Building: C, 3rd floor, Zone: 1

INVITED SESSION 338

Organizer: Daniel Aloise, Polytechnique Montreal, CA

1 - Integral Column Generation Algorithm for Set Partitioning Type Problems

Speaker: Adil Tahir, Polytechnique Montréal and Gerad, CA, talk 1346

Co-Authors: Issmail El Hallaoui, Guy Desaulniers,

2 - Distributed Integral Simplex Using Decomposition for Set Partitioning Problems

Speaker: Omar Foutlane, GERAD Montréal, CA, talk 916 Co-Authors: *Issmail El Hallaoui, Pierre Hansen*,

3 - A Polyhedral Study of the Shortest Path Problem with Resource Constraints

Speaker: Ilyas Himmich, Polytechnique Montréal, CA, talk 524

Co-Authors: Issmail El Hallaoui, Francois Soumis, Hatem Ben Amor,

4 - A scalable algorithm for the solution of large clustering problems

Speaker: Daniel Aloise, Polytechnique Montreal, CA, talk 559

Co-Authors: Claudio Contardo,

Dynamical Systems and Optimization

CONTINUOUS OPTIMIZATION NonSmooth - We 8:30am-10:30am, Format: 4x30 min Room: Salle 8 Building: N, 4th floor, Zone: 12 INVITED SESSION 351 **Organizer:** Hedy Attouch, Université Montpellier, FR

 The continuous proximal-gradient approach in the nonconvex setting
 Speaker: Radu Ioan Bot, University of Vienna, AT, talk 1279
 Accelerated Forward-Backward Algorithms
 Speaker: Alexandre Cabot, Universite de Bourgogne, FR,

Speaker: Alexandre Cabot, Universite de Bourgogne, FR talk 1565

Co-Authors: *Hedy Attouch*,

3 - Inertial proximal algorithms for maximally monotone operators

Speaker: Juan Peypouquet, Universidad de Chile, CL, talk 1571

Co-Authors: Hedy Attouch,

4 - A dual diagonal iterative regularization method Speaker: Silvia Villa, Politecnico di Milano, IT, talk 1572 Co-Authors: *Guillaume Garrigos, Lorenzo Rosasco*,

Robust network optimization

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE NETWORK - We 8:30am-10:30am, Format: 4x30 min Room: Salle 18 Building: I, 1st floor, Zone: 7

INVITED SESSION 357 Organizer: Dimitri Papadimitriou, Nokia Bell Labs, BE

1 - Decomposition Approach for Robust Network Interdiction

Speaker: Joe Naoum-Sawaya, Ivey Business School, CA, talk 429

2 - Robust network slice design under correlated demand uncertainties

Speaker: Varun Reddy, TU Chemnitz, DE, talk 1263

Co-Authors: Fabio D Andreagiovanni, Andreas Baumgartner, Thomas Bauschert,

3 - Equilibria for Robust Routing of Atomic Players

Speaker: Xudong Hu, Chinese Academy of Sciences, CN, talk 396

Co-Authors: Xujin Chen, Chenhao Wang,

4 - Reliable Multi-level Facility Location Problem (MFLP) Speaker: Dimitri Papadimitriou, Nokia Bell Labs, BE, talk 1526

Variational Analysis 1

CONTINUOUS OPTIMIZATION VARIAT - We 8:30am-10:30am, Format: 4x30 min Room: Salle ARNOZAN Building: Q, Ground Floor, Zone: 8

INVITED SESSION 364 Organizer: Samir Adly, Laboratoire XLIM, FR

1 - Second Order Optimality Conditions for Cardinality Constrained Problems

Speaker: Alexandra Schwartz, TU Darmstadt, DE, talk 292 Co-Authors: *Max Bucher*,

2 - Stability Analysis for Parameterized Equilibria with Conic Constraints

Speaker: Helmut Gfrerer, Johannes Kepler University, AT, talk 719

Co-Authors: Matus Benko, Boris Mordukhovich,

3 - Stability and Sensitivity Analysis of Parametrized Optimization Problems

Speaker: Michel Thera, University of Limoges, FR, talk 483 Co-Authors: *Van Huynh, Huu Nguyen*,

4 - Sensitivity analysis of parameterized nonlinear variational inequalities.

Speaker: Samir Adly, Laboratoire XLIM, FR, talk 832

Risk and Financial Markets

OPTIMIZATION UNDER UNCERTAINTY GAME - We 8:30am-10:30am, Format: 4x30 min Room: Salle 30 Building: B, Ground Floor, Zone: 5

CONTRIBUTED SESSION 377

Chair: Markku Kallio, Aalto Univ. School of Business, FI

1 - Bilevel programming approach for investment strategies under intermediation

Speaker: Stefano Nasini, IESEG School of Management, FR, talk 45

Co-Authors: F. López-Ramos, Stefano Nasini,

2 - A smooth path-following method for computing equilibria in incomplete markets

Speaker: Yang Zhan, City University of Hong Kong, HK, talk 674

Co-Authors: Chuangyin Dang,

3 - Cooperative Mitigation of Contagion in Financial Networks

Speaker: Markku Kallio, Aalto Univ. School of Business, FI, talk 326

Co-Authors: Aein Khabazian,

4 - Stable Risk Sharing and Its Monotonicity

Speaker: Zhenyu Hu, NUS Business School, SG, talk 395 Co-Authors: Xin Chen, Shuanglong Wang,

Interfaces of Applied Probability and Optimization

OPTIMIZATION UNDER UNCERTAINTY

ROBUST - We 8:30am-10:30am, Format: 4x30 min Room: Salle 37 Building: B, Intermediate, Zone: 4 INVITED SESSION 409 Organizer: Omar El Housni, Columbia University, US

1 - Robust Markov Decision Process: Beyond (and back to) Rectangularity

Speaker: Julien Grand Clement, Columbia University, US, talk 749

Co-Authors: Vineet Goyal,

2 - Beyond Worst-case: A Probabilistic Analysis of Affine Policies

Speaker: Omar El Housni, Columbia University, US, talk 875 Co-Authors: *Vineet Goyal*,

3 - Sustainable Inventory With Robust Periodic-affine Policies and Med. Supply Chains

Speaker: Omid Nohadani, Northwestern University, US, talk 896

Co-Authors: Eojin Han, Chaithanya Bandi,

4 - Distributionally Robust Markovian Traffic Equilibrium

Speaker: Karthik Natarajan, SUTD, SG, talk 693 Co-Authors: *Selin Ahipasaoglu, Ugur Arikan*,

Computational advances in NLP

CONTINUOUS OPTIMIZATION NLP - We 8:30am-10:30am, Format: 4x30 min Room: Salle KC7 Building: K, Intermediate 2, Zone: 10

CONTRIBUTED SESSION 434 Chair: Jeffrey Pang, NUS, SG

1 - Optimal Bidding, Allocation, and Budget Spending for a Demand-Side Platform.

Speaker: Alfonso Lobos Ruiz, UC, Berkeley, US, talk 1594
Co-Authors: Paul Grigas, Zheng Wen, Kuang-chih Lee,
2 - Distributed deterministic asynchronous optimization using Dykstra's splitting
Speaker: Jeffrey Pang, NUS, SG, talk 932
3 - Decompositions and optimizations of symmetric conjugate complex forms
Speaker: Zhaning Li, University of Portsmouth GB, talk

Speaker: Zhening Li, University of Portsmouth, GB, talk 1316

Co-Authors: Taoran Fu, Bo Jiang,

4 - An inexact Newton-like conditional gradient method for constrained systems

Speaker: Max Goncalves, Federal University of Goias, BR, talk 237

Co-Authors: Fabricia Oliveira,

Fixed Point Approaches

CONTINUOUS OPTIMIZATION NLP - We 8:30am-10:30am, Format: 4x30 min Room: Salle 9 Building: N, 4th floor, Zone: 12

Contributed Session 435 Chair: Poom Kumam, KMUTT, TH

1 - Convergence analysis of S-iteration process for discontinuous operators

Speaker: Konrawut Khammahawong, KMUTT, TH, talk 724

Co-Authors: Poom Kumam,

2 - A new lgorithms for split feasibility problems involving paramonotone equilibria

Speaker: Poom Kumam, KMUTT, TH, talk 577

Co-Authors: Wiyada Kumam,

3 - Fixed point and convergence theorems for monotone (α, β) -nonexpansive

Speaker: Khanitin Muangchoo-in, KMUTT, TH, talk 1068 Co-Authors: *Poom Kumam*,

4 - Monotone generalized almost contraction on weighted graph

Speaker: Wudthichai Onsod, KMUTT, TH, talk 946 Co-Authors: *Poom Kumam*,

Robust combinatorial optimization IV

Optimization under Uncertainty

Robust - We 8:30am-10:30am, Format: 4x30 min Room: Salle 33 Building: B, Ground Floor, Zone: 5

CONTRIBUTED SESSION 449

Chair: Arie Koster, RWTH Aachen University, DE

1 - The vehicle routing problem under uncertainty via robust optimization

Speaker: Pedro Munari, UFSCar, BR, talk 1471

Co-Authors: Alfredo Moreno, Jonathan De La Vega, Douglas Alem, Jacek Gondzio, Reinaldo Morabito,

2 - A time-dependent version of the robust TSP and SPP. Speaker: Marina Leal, University of Seville, ES, talk 982 Co-Authors: *Eduardo Conde, Justo Puerto*,

3 - Scheduling Jobs under Uncertainty: A Customeroriented Approach

Speaker: Arie Koster, RWTH Aachen University, DE, talk 1380

Co-Authors: Cole Smith,

4 - Optimizing the electricity production planning with stochastic outage durations

Speaker: Roberto Wolfler Calvo, Université Paris13, FR, talk 1581

Co-Authors: Antoine Rozenknop, Marc Porcheron, Pascale Bendotti, Clement Pira,

Sampling and stability in stochastic optimization

OPTIMIZATION UNDER UNCERTAINTY STOCH - We 9:00am-10:30am, Format: 3x30 min Room: Salle 32 Building: B, Ground Floor, Zone: 5

CONTRIBUTED SESSION 488

Chair: Harsha Honnappa, Purdue University, US

1 - Distributional Robustness and Sample Average Approximation

Speaker: Edward Anderson, University of Sydney, AU, talk 367

Co-Authors: Andy Philpott,

2 - On stability of stochastic bilevel programs with risk

aversion

Speaker: Matthias Claus, University Duisburg-Essen, DE, talk 268

Co-Authors: *Johanna Burtscheidt*, *Stephan Dempe*, **3 - From Estimation to Optimization via Shrinkage**

Speaker: Gerard Cornuejols, Carnegie Mellon University, US, talk 1649

Co-Authors: Danial Davarnia,

New trends II

CONTINUOUS OPTIMIZATION SDP - We 8:30am-10:30am, Format: 4x30 min Room: Salle LC5 Building: L, Intermediate 1, Zone: 10

CONTRIBUTED SESSION 500 Chair: Frank Permenter, Toyota Research Institute, US

1 - An *L*²-approach to Copositivity

Speaker: Claudia Adams, Trier University, DE, talk 331 Co-Authors: *Mirjam Duer*, *Leonhard Frerick*,

2 - On algorithms to optimize homogeneous polynomial over the simplex and the sphere

Speaker: Faizan Ahmed, Institute of Space Technology, PK, talk 1363

Co-Authors: Georg Still,

talk 1483

3 - Complementarity formulations of rank minimization problems

Speaker: John Mitchell, RPI, US, talk 904 Co-Authors: *April Sagan*, *Xin Shen*,

4 - Interior-point methods via the exponential map Speaker: Frank Permenter, Toyota Research Institute, US,

Distribution and Demand Flexibility

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - We 8:30am-10:30am, Format: 4x30 min Room: Salle 24 Building: G, 3rd floor, Zone: 6

CONTRIBUTED SESSION 510 Chair: Golbon Zakeri, University of Auckland, NZ

1 - A Data–Driven Robust Power Management in Active Distribution Systems

Speaker: Alejandro Angulo, UTFSM, CL, talk 1491
Co-Authors: *Fernando Mancilla-David*, *Alexandre Street*, **2 - Exploiting Flexibility in Loads for Balancing Power in Electrical Grids**Speaker: Anja Hähle, TU Chemnitz, DE, talk 572
Co-Authors: *Christoph Helmberg*, **3 - Analysis of a Routing Game Model for Demand Side Management**Speaker: Paulin Jacquot, EDF Lab - Inria Saclay, FR, talk 993

Co-Authors: Olivier Beaude, Stephane Gaubert, Nadia Oudjane,

4 - Demand response in electricity markets

Speaker: Golbon Zakeri, University of Auckland, NZ, talk 914

Co-Authors: Mahbubeh Habibian, Anthony Downward,

Monotone Operator Theory in Convex Optimization

INVITED TALKS

KEYNOTE - We 11:00am-12:00am, Format: 1x60 min Room: BROCA Building: W, 3rd floor, Zone: 0 INVITED SESSION 537

Organizer: Samir Adly, Laboratoire XLIM, FR

1 - Monotone Operator Theory in Convex Optimization Speaker: Patrick Combettes, North Carolina State Univ., US, talk 1552

Online Competitive Algorithms for Resource Allocation

INVITED TALKS

KEYNOTE - We 11:00am-12:00am, Format: 1x60 min Room: DENIGES Building: C, Ground Floor, Zone: 5 INVITED SESSION 539

Organizer: Frank Curtis, Lehigh University, US

1 - Online Competitive Algorithms for Resource Allocation

Speaker: Maryam Fazel, Univ. of Washington, US, talk 1684

Model-Based Methods, Sampling Models, and A New Second-Order Model-Based Method

INVITED TALKS

KEYNOTE - We 11:00am-12:00am, Format: 1x60 min Room: LEYTEIRE Building: E, 3rd floor, Zone: 1 INVITED SESSION 546

Organizer: Stefan Wild, Argonne National Laboratory, US

1 - Model-Based Methods, Sampling Models, and A New Second-Order Model-Based Method

Speaker: Luis Nunes Vicente, University of Coimbra, PT, talk 1582

Insights via volumetric comparison of polyhedral relaxations

INVITED TALKS

SEMI - We 11:00am-12:00am, Format: 1x60 min Room: Auditorium Building: Symph H, Gambetta, Zone: 0

INVITED SESSION 548

Organizer: Andrea Lodi, Polytechnique Montreal, CA

1 - Insights via volumetric comparison of polyhedral relaxations

Speaker: Jon Lee, University of Michigan, US, talk 1548

Relaxations and Approximations of Chance Constraints

INVITED TALKS

PLENARY - We 1:30pm-2:30pm, Format: 1x60 min Room: Auditorium Building: Symph H, Gambetta, Zone: 0

INVITED SESSION 525

Organizer: Simge Kucukyavuz, University of Washington, US

1 - Relaxations and Approximations of Chance Constraints

Speaker: Shabbir Ahmed, Georgia Tech, US, talk 912

The power and limits of the Lasserre hierarchy

CONTINUOUS OPTIMIZATION

NLP - We 3:15pm-4:45pm, Format: 3x30 min

Room: GINTRAC Building: Q, Ground Floor, Zone: 8 INVITED SESSION 9

Organizer: Markus Schweighofer, Universität Konstanz, DE

1 - The power and limits of convex relaxations for general-valued CSPs

Speaker: Standa Zivny, University of Oxford, GB, talk 37
Co-Authors: Johan Thapper,
2 - On the convergence of the Lasserre/SoS hierarchy for 0/1 optimization problems.
Speaker: Adam Kurpisz, ETH Zurich, CH, talk 175
Co-Authors: Samuli Leppänen, Monaldo Mastrolilli,

3 - High Degree SOS Proofs, Bienstock-Zuckerberg hierarchy and Chvatal-Gomory cuts

Speaker: Monaldo Mastrolilli, IDSIA, CH, talk 39

SDP approaches to combinatorial and global optimization problems

CONTINUOUS OPTIMIZATION SDP - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 20 Building: G, 1st floor, Zone: 6

Invited Session 15

Organizer: Etienne De Klerk, Tilburg University, NL

1 - Semidefinite Programming Relaxations of the Traveling Salesman Problem

Speaker: Samuel Gutekunst, Cornell University, US, talk 80 Co-Authors: *David Williamson*,

2 - On Solving the Quadratic Shortest Path Problem.

Speaker: Hao Hu, Tilburg University, NL, talk 121 Co-Authors: *Renata Sotirov*,

3 - SDP relaxations of polynomial optimization problems with chordal structure

Speaker: Ahmadreza Marandi, Eindhoven University, NL, talk 16

Co-Authors: Etienne De Klerk, Joachim Dahl,

Clustering

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - We 3:15pm-4:45pm, Format: 3x30 min Room: LEYTEIRE Building: E, 3rd floor, Zone: 1

INVITED SESSION 30

Organizer: Mohammad Salavatipour, University of Alberta, CA

1 - Clustering Mixtures of Well-Separated Gaussians

Speaker: Aravindan Vijayaraghavan, Northwestern University, US, talk 150

Co-Authors: Oded Regev,

2 - Correlation Clustering

Speaker: Konstantin Makarychev, Northwestern University, US, talk 223

Co-Authors: Shuchi Chawla, Yury Makarychev, Tselil Schramm, Aravindan Vijayaraghavan, Grigory Yaroslavtsev,

3 - Analysis of Ward's method

Speaker: Melanie Schmidt, University of Bonn, DE, talk 640 Co-Authors: *Anna Großwendt, Heiko Röglin*,

Subspace methods in NLP I

CONTINUOUS OPTIMIZATION NLP - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 05 Building: Q, 1st floor, Zone: 11

INVITED SESSION 45

Organizer: Michal Kocvara, University of Birmingham, GB

1 - A Space Transformation Framework for Nonlinear Optimization: Part I

Speaker: Zaikun Zhang, Hong Kong Polytechnic Univ., HK, talk 417

Co-Authors: Serge Gratton, Luis Nunes Vicente,

2 - A Space Transformation Framework for Nonlinear Optimization: Part II

Speaker: Serge Gratton, ENSEEIHT, FR, talk 447

Co-Authors: Luis Nunes Vicente, Zaikun Zhang,

3 - Quasi-Newton and the Unreduced Matrix in Interior Point Methods

Speaker: Francisco Sobral, State University of Maringa, BR, talk 425

Co-Authors: Jacek Gondzio,

Decomposition methods for MINLP

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - We 3:15pm-4:45pm, Format: 3x30 min Room: DURKHEIM Building: A, 3rd floor, Zone: 1 INVITED SESSION 55 **Organizer:** Ivo Nowak, HAW Hamburg, DE

1 - Decomposition-based Successive Approximation Methods for MINLP

Speaker: Ivo Nowak, HAW Hamburg, DE, talk 690 Co-Authors: *Pavlo Muts, Eligius Hendrix*,

2 - Decogo - A new decomposition-based MINLP solver Speaker: Pavlo Muts, HAW Hamburg, DE, talk 865

Co-Authors: *Ivo Nowak*, *Eligius Hendrix*,

3 - On simplicial monotonicity and dimension reduction in MINLP

Speaker: Eligius Hendrix, Universidad de Málaga, ES, talk 426

Co-Authors: Leocadio Casado, Jose Manuel Salmerón,

MINLP (II)

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 34 Building: B, 1st floor, Zone: 3 INVITED SESSION 66 **Organizer:** Daniel Bienstock, Columbia University, US

1 - Polyhedral relaxations for nonconvex quadratic functions

Speaker: Akshay Gupte, Clemson University, US, talk 1144 2 - Product convexification: A new relaxation framework for nonconvex programs

Speaker: Mohit Tawarmalani, Purdue University, US, talk 93 Co-Authors: *Taotao He*,

3 - Sparse conic optimization: low-rank solutions and near-linear time algorithms

Speaker: Javad Lavaei, UC Berkeley, US, talk 110 Co-Authors: *Richard Zhang*,

Conic Optimization and Power Systems

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 23 Building: G, 3rd floor, Zone: 6 INVITED SESSION 68

Organizer: Jakub Marecek, IBM Research, IE

1 - Degeneracy in Chordal Decomposition of Semidefinite Programs

Speaker: Arvind Raghunathan, Mitsubishi Electric Res. Labs, US, talk 238

Co-Authors: Lorez Biegler,

2 - When to switch from a convex relaxation to Newton's method on the non-convex POP

Speaker: Jakub Marecek, IBM Research, IE, talk 4 Co-Authors: *Martin Takac*,

3 - Convex restrictions of power flow feasibility sets

Speaker: Konstantin Turitsyn, MIT, US, talk 403 Co-Authors: Dongchan Lee, Hung Nguyen, Dvijotham Kr- 1 - Optimal agricultural scheduling through MINLP ishnamurthy,

Dynamic Optimization: Theory and Algorithms

OPTIMIZATION UNDER UNCERTAINTY Robust - We 3:15pm-4:45pm, Format: 3x30 min Room: DENIGES Building: C, Ground Floor, Zone: 5

INVITED SESSION 100 Organizer: Vineet Goyal, Columbia University, US

1 - A Scalable Algorithm for Two-Stage Adaptive Linear Optimization

Speaker: Shimrit Shtern, Technion, IL, talk 66 Co-Authors: Dimitris Bertsimas,

2 - Data-Driven Multi-Stage Adaptive Optimization Speaker: Bradley Sturt, MIT, US, talk 1120 Co-Authors: Dimitris Bertsimas, Shimrit Shtern,

3 - Optimal Approximation via Affine Policies for Twostage Robust Optimization Speaker: Vineet Goyal, Columbia University, US, talk 801

Co-Authors: Omar El Housni,

MINLP for Data Science

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 35 Building: B, Intermediate, Zone: 4 **INVITED SESSION 108**

Organizer: Vanesa Guerrero, University Carlos III, ES

1 - Cost-sensitive SVM

Speaker: Sandra Benítez-Peña, University of Seville, ES, talk 826

Co-Authors: Rafael Blanquero, Emilio Carrizosa, Pepa Ramírez-Cobo,

2 - Optimizing classification trees via non-linear continuous programming

Speaker: Cristina Molero-Río, IMUS, ES, talk 469

Co-Authors: Rafael Blanquero, Emilio Carrizosa, Dolores Romero Morales.

3 - MINLP to visualize dynamic proximities and frequencies

Speaker: Vanesa Guerrero, University Carlos III, ES, talk 759 Co-Authors: Emilio Carrizosa, Dolores Romero Morales,

Surrogate-based algorithms for constrained derivative-free problems

CONTINUOUS OPTIMIZATION

DerFree - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 21 Building: G, Intermediate, Zone: 6 **CONTRIBUTED SESSION 126**

Chair: Phillipe Sampaio, Veolia, FR

surrogate-based optimization

Speaker: Manuel Ramos-Castillo, Veolia Research and Innovation, FR, talk 624

Co-Authors: Gabriela Maschietto, Marie Orvain, Damien Chenu, Agathe Revallier, Maria Albuquerque,

2 - A global optimization algorithm for derivative-free constrained problems

Speaker: Phillipe Sampaio, Veolia, FR, talk 765

3 - Derivative-Free Trust-Region Algorithms for L1, Minimax and Bi-Objective Optimiz

Speaker: Geovani Grapiglia, Universidade Federal do Paraná, BR, talk 1456

Optimization Algorithms and Variational Inequalities II

CONTINUOUS OPTIMIZATION

VARIAT - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 06 Building: Q, 1st floor, Zone: 11

INVITED SESSION 150

Organizer: Xiaoqi Yang, Hong Kong Polytechnic Uni., HK

1 - On Error Bound Moduli for Locally Lipschitz and **Regular Functions**

Speaker: Xiaoqi Yang, Hong Kong Polytechnic Uni., HK, talk 650

Co-Authors: Minghua Li, Kaiwen Meng,

2 - Inexact primal-dual hybrid gradient methods for saddle-point problems

Speaker: Min Li, Nanjing University, CN, talk 604 Co-Authors: Xiaoming Yuan,

3 - On directional pseudo/quasi-normality and directional enhanced KKT conditions

Speaker: Kuang Bai, University of Victoria, CA, talk 195 Co-Authors: Jane Ye,

Knapsack Problems

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 44 Building: C, 3rd floor, Zone: 1

INVITED SESSION 185

Organizer: Enrico Malaguti, DEI - University of Bologna, IT

1 - Algorithms for bilevel knapsack problem

Speaker: Ashwin Arulselvan, University of Strathclyde, GB, talk 1541

2 - Cutting Planes for the Multi-Modal Precedence Constrained Problem

Speaker: Orlando Rivera-Letelier, Universidad Adolfo Ibáñez, CL, talk 1250

Co-Authors: Marcos Goycoolea,

3 - The Fractional Knapsack Problem with Penalties

Speaker: Enrico Malaguti, DEI - University of Bologna, IT,

talk 1513 Co-Authors: Michele Monaci, Ulrich Pferschy, Paolo Paronuzzi,

Adaptivity in non-smooth optimization

CONTINUOUS OPTIMIZATION

NonSmooth - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 8 Building: N, 4th floor, Zone: 12

INVITED SESSION 187 Organizer: Volkan Cevher, EPFL, CH

1 - Adaptive Double Loop Smoothing Algorithms

Speaker: Olivier Fercoq, Télécom ParisTech, FR, talk 235 Co-Authors: *Quoc Tran-Dinh, Ahmet Alacaoglu, Volkan Cevher*,

2 - Universal Acceleration through Learning Rate Adaptation

Speaker: Kfir Levy, ETH, CH, talk 233

Co-Authors: Alp Yurtsever, Volkan Cevher,

3 - ADMM vs gradient methods for ill-conditioned imaging problems

Speaker: Stephen Becker, University of Colorado Boulder, US, talk 251

Co-Authors: James Folberth,

Fast Converging Stochastic Optimization Algorithms

CONTINUOUS OPTIMIZATION RANDOMM - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle KC6 Building: K, Intermediate 1, Zone: 10

INVITED SESSION 213 Organizer: Francis Bach, INRIA - ENS, FR

1 - Bridging the Gap between Constant Step Size SGD and Markov Chains

Speaker: Aymeric Dieuleveut, EPFL, CH, talk 1102

Co-Authors: Alain Durmus, Francis Bach,

2 - Stochastic Optimization for Large Scale Optimal Transport

Speaker: Aude Genevay, ENS, FR, talk 888 3 - Variance Reduced Methods via Sketching

Speaker: Robert Gower, Telecom Paristech, FR, talk 859 Co-Authors: *Peter Richtarik, Francis Bach*,

Reformulation-based solution methods for quadratic programming CONTINUOUS OPTIMIZATION

SDP - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle LC5 Building: L, Intermediate 1, Zone: 10 INVITED SESSION 215

Organizer: Dominique Quadri, Université Paris Sud - LRI, FR

1 - Non-convex Quadratic Integer Programming : a piecewise linearization Speaker: Eric Soutil, CEDRIC-Cnam, FR, talk 1299 Co-Authors: *Dominique Quadri*, *David Nizard*,

2 - Solving Alternative Current Optimal Power Flow to global optimality

Speaker: Hadrien Godard, RTE, FR, talk 1117

Co-Authors: Jean Maeght, Sourour Elloumi, Amélie Lambert, Manuel Ruiz,

3 - Preprocessing and reformulation for the Quadratic Assignment Problem

Speaker: Sourour Elloumi, ENSTA-UMA and CNAM-CEDRIC, FR, talk 1522

Co-Authors: Amélie Lambert,

Risk-Averse PDE-Constrained Optimization–Methods and Applications

CONTINUOUS OPTIMIZATION

CONTROL - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle AURIAC Building: G, 1st floor, Zone: 6

INVITED SESSION 222 Organizer: Harbir Antil, George Mason University, US

1 - Stochastic Dominance in Elastic Shape Optimization

Speaker: Ruediger Schultz, Univ. of Duisburg - Essen, DE, talk 266

Co-Authors: Sergio Conti, Martin Rumpf,

2 - Weighted Sobolev Spaces with Application to Image Processing

Speaker: Harbir Antil, George Mason University, US, talk 1004

Co-Authors: Carlos Rautenberg,

3 - Smoothing Techniques for Risk-Averse PDE-Constrained Optimization

Speaker: Drew Kouri, Sandia, US, talk 1394

Progress in Conic and MIP Solvers

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - We 3:15pm-4:45pm, Format: 3x30 min Room: PITRES Building: O, Ground Floor, Zone: 8 INVITED SESSION 237 **Organizer:** Imre Polik, SAS Institute, US

1 - Artelys Knitro 11.0, a new conic solver and other novelties

Speaker: Jean-Hubert Hours, Artelys, FR, talk 556 Co-Authors: *Richard Waltz, Figen Oztoprak Topkaya, Michaël Gabay, Sylvain Mouret,*

2 - MOSEK version 9

Speaker: Erling Andersen, MOSEK, DK, talk 346

3 - Recent enhancements in MATLAB Optimization Toolbox solvers for LP and MILP

Speaker: Franz Wesselmann, The MathWorks GmbH, DE, talk 737

Learning and Stochastic Programming

Optimization under Uncertainty

STOCH - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 32 Building: B, Ground Floor, Zone: 5

INVITED SESSION 254

Organizer: Matthias Poloczek, University of Arizona, US

1 - Asymptotic Results For Two-stage Stochastic Quadratic Programming

Speaker: Junyi Liu, Univ. of Southern California, US, talk 642

Co-Authors: Suvrajeet Sen,

2 - Optimizing Crashing Decisions in a Project Management Problem with Disruptions

Speaker: Haoxiang Yang, Northwestern University, US, talk 1064

Co-Authors: David Morton,

3 - Bayesian Optimization of Combinatorial Structures

Speaker: Matthias Poloczek, University of Arizona, US, talk 639

Co-Authors: Ricardo Baptista,

Variants of the Assignment problem

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 41 Building: C, 3rd floor, Zone: 1 INVITED SESSION 266

Organizer: Kavitha Telikepalli, TIFR Mumbai, IN

1 - Approximating Airports and Railways

Speaker: Tobias Mömke, University of Bremen, DE, talk 186 Co-Authors: Anna Adamaszek, Amit Kumar, Antonios Antoniadis,

2 - A (2+eps)-Approximation for Maximum Weight Matching in the Semi-Streaming Model

Speaker: Ami Paz, IRIF - CNRS and U. Paris Diderot, FR, talk 655

Co-Authors: Ami Paz,

3 - Popularity, Mixed Matchings, and Self-duality

Speaker: Kavitha Telikepalli, TIFR Mumbai, IN, talk 511 Co-Authors: *Chien-Chung Huang*,

Nonconvex and Complex Problems in Multiobjective Optimization

Optimization under Uncertainty

GAME - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 30 Building: B, Ground Floor, Zone: 5

CONTRIBUTED SESSION 268

Chair: Gabriele Eichfelder, Technische Universität Ilmenau, DE

1 - A Trust Region Method for Heterogeneous Multiobjective Optimization

Speaker: Gabriele Eichfelder, Technische Universität Ilmenau, DE, talk 114

Co-Authors: Jana Thomann,

2 - Multiobjective programming via bundle methods Speaker: Elizabeth Karas, UFPR, BR, talk 994

Co-Authors: Claudia Sagastizabal, Hasnaa Zidani,

3 - Sparse multiobjective optimization via concave approximations

Speaker: Tommaso Levato, Università di Firenze, IT, talk 836 Co-Authors: *Guido Cocchi, Giampaolo Liuzzi, Marco Sciandrone*,

Structure Detection in Integer Programming

Specific Models, Algorithms, and Software Algo - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 22 Building: G, 2nd floor, Zone: 6

INVITED SESSION 272

Organizer: Taghi Khaniyev, University of Waterloo, CA

1 - Automatic structure detection in mixed integer programs

Speaker: Taghi Khaniyev, University of Waterloo, CA, talk 478

Co-Authors: Matthew Galati, Samir Elhedhli,

2 - Modular Detection of Model Structure in Integer Programming

Speaker: Michael Bastubbe, RWTH Aachen University, DE, talk 686

Co-Authors: Marco Lübbecke,

3 - A Computational Investigation on Generic Cutting Planes in Branch-Price-and-Cut

Speaker: Jonas Witt, RWTH Aachen University, DE, talk 955 Co-Authors: *Matthias Walter*, *Marco Lübbecke*,

Emerging Energy Markets

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - We 3:15pm-4:15pm, Format: 2x30 min Room: Salle 24 Building: G, 3rd floor, Zone: 6

INVITED SESSION 291

Organizer: Dennice Gayme, Johns Hopkins University, US

1 - Designing coalition-proof mechanisms - the case of electricity markets

Speaker: Maryam Kamgarpour, ETH Zurich, CH, talk 651 Co-Authors: Orcun Karaca, Neil Walton, Pier Giusepp Sessa,

2 - Irrational Agents and the Power Grid Speaker: Sean Meyn, University of Florida, US, talk 1370

Air Transportation and Air Traffic
Management

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCIENCES - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle LA4 Building: L, Basement, Zone: 8

INVITED SESSION 315

Organizer: Sonia Cafieri, ENAC, FR

1 - A two-stage stochastic model for scheduling aircraft arrivals under uncertainty

Speaker: Ahmed Khassiba, ENAC Université de Montréal, FR, talk 755

Co-Authors: Fabian Bastin, Sonia Cafieri, Bernard Gendron, Marcel Mongeau,

2 - Aircraft conflict resolution and heading recovery with mixed-integer programming

Speaker: Fernando Dias, University of New South Wales, AU, talk 787

Co-Authors: David Rey,

3 - MINLP for aircraft conflict avoidance via speed and heading angle deviations

Speaker: Sonia Cafieri, ENAC, FR, talk 1098 Co-Authors: Andrew Conn, Marcel Mongeau,

Network Design and Routing

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 43 Building: C, 3rd floor, Zone: 1

CONTRIBUTED SESSION 346

Chair: Yuko Kuroki, University of Tokyo, JP

1 - A 4-approximation algorithm for *k*-prize collecting Steiner tree problems

Speaker: Yusa Matsuda, Univ. Electro-Communications, JP, talk 533

Co-Authors: Satoshi Takahashi,

2 - Approximation algorithm for star-star hub-and-spoke network design problems

Speaker: Yuko Kuroki, University of Tokyo, JP, talk 1246 Co-Authors: *Tomomi Matsui*,

3 - Time-dependent shortest path with discounted waiting Speaker: Jeremy Omer, IRMAR-INSA, FR, talk 588 Co-Authors: *Michael Poss*,

Nash equilibrium and games 1

CONTINUOUS OPTIMIZATION VARIAT - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle ARNOZAN Building: Q, Ground Floor, Zone: 8

INVITED SESSION 365

Organizer: Lorenzo Lampariello, Roma Tre University, IT

1 - Solving Multi-Leader-Follower Games

Speaker: Anna Thünen, RWTH Aachen University, DE, talk 843

Co-Authors: Sonja Steffensen, Michael Herty,

2 - Nash equilibrium: uniqueness and approximation via

continuous optimization

Speaker: Jacqueline Morgan, Univ. of Naples Federico II, IT, talk 1056

Co-Authors: Francesco Caruso, Maria Ceparano,

3 - Fixed point and extragradient algorithms for quasiequilibria

Speaker: Mauro Passacantando, University of Pisa, IT, talk 963

Co-Authors: Giancarlo Bigi,

Dynamic programming applications

OPTIMIZATION UNDER UNCERTAINTY MARKOV - We 3:15pm-4:15pm, Format: 2x30 min

Room: Salle 31 Building: B, Ground Floor, Zone: 5

Contributed Session 379

Chair: Susanne Hoffmeister, University of Bayreuth, DE

1 - Markov Decision Processes for Sport Strategy Optimization

Speaker: Susanne Hoffmeister, University of Bayreuth, DE, talk 1528

Co-Authors: Jörg Rambau,

2 - A Model to evaluate the cost-effectiveness trade-off for urologic treatments

Speaker: Paolo Serafini, CISM, IT, talk 619 Co-Authors: *Simone Crivellaro, Laurel Sofer*,

Logistics

INVITED TALKS INTERFACE - We 3:15pm-4:45pm, Format: 3x30 min Room: SIGALAS Building: C, 2nd floor, Zone: 2

CONTRIBUTED SESSION 388 Chair: Frieder Smolny, Technical University Berlin, DE

1 - Using OpenStreetMap data for route optimization: extraction and reduction

Speaker: Kaj Holmberg, Linkoping University, SE, talk 842 2 - Modeling the Periodic Vehicle Routing Problem in an industrial context

Speaker: Gwénaël Rault, Mapotempo, FR, talk 1625 Co-Authors: *Adeline Fonseca*, *Frédéric Rodrigo*,

3 - Multiscale optimization of logistics networks Speaker: Frieder Smolny, Technical University Berlin, DE, talk 1268

Co-Authors: Karl Däubel, Martin Skutella, Torsten Mütze, Guillaume Sagnol,

Polyhedral aspects of combinatorial optimization problems

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 39 Building: E, 3rd floor, Zone: 1 CONTRIBUTED SESSION 404 Chair: Guillerme Duvillié, Université libre de Bruxelles, BE Co-Authors: Jianzhe Zhen, Dick den Hertog,

1 - A polyhedral insight into covering a 2/3 supermodular function by a graph

Speaker: Shungo Koichi, Nanzan University, JP, talk 1216

2 - Alternating contractions and their combinatorial applications

Speaker: Sergei Chubanov, University of Siegen, DE, talk 1386

3 - Comparison of some symmetry breaking techniques for graph coloring problem

Speaker: Guillerme Duvillié, Université libre de Bruxelles, BE, talk 1167

Co-Authors: Bernard Fortz,

Quadratic Optimization

CONTINUOUS OPTIMIZATION NLP - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 9 Building: N, 4th floor, Zone: 12 CONTRIBUTED SESSION 417 Choir: Anders Forsgrap KTH Powel Inst. of Technology

Chair: Anders Forsgren, KTH Royal Inst. of Technology, SE

1 - On limited-memory quasi-Newton methods for minimizing a quadratic function

Speaker: David Ek, KTH, Royal Institute of Tech., SE, talk 884

Co-Authors: Anders Forsgren,

2 - On degeneracy in active-set methods for linear and convex quadratic programming

Speaker: Anders Forsgren, KTH Royal Inst. of Technology, SE, talk 645

Co-Authors: Philip Gill, Elizabeth Wong,

3 - An algorithm for projecting a point onto a level set of a quadratic function

Speaker: Fernanda Raupp, LNCC, BR, talk 1532 Co-Authors: *Wilfredo Sosa*,

Cursing the Dimensionality: Two-Stage and Multi-Stage Robust Optimization

Optimization under Uncertainty Robust - We 3:15pm-4:45pm, Format: 3x30 min

Room: Salle 37 Building: B, Intermediate, Zone: 4 INVITED SESSION 443

Organizer: Angelos Tsoukalas, American University of Beirut, LB

${\bf 1}$ - Efficient Algorithms for Robust MDPs with State Rectangularity

Speaker: Chin Pang Ho, Imperial College London, GB, talk 1054

Co-Authors: Marek Petrik, Wolfram Wiesemann,

2 - Dual approach for two-stage robust nonlinear optimization models

Speaker: Frans de Ruiter, CQM, NL, talk 1337

Co-Authors: *Jianzhe Zhen*, *Dick den Hertog*, **3 - Robust Dual Dynamic Programming**

Speaker: Angelos Tsoukalas, American University of Beirut, LB, talk 1233

Co-Authors: Angelos Georghiou, Wolfram Wiesemann,

Rail and Maritime Transportation

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LOGISTICS - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 16 Building: I, 2nd floor, Zone: 7

CONTRIBUTED SESSION 454 Chair: Kazuhiro Kobayashi, Tokyo University of Science, JP

1 - Accelerated column generation for a ship routing problem with speed optimization

Speaker: Kazuhiro Kobayashi, Tokyo University of Science, JP, talk 802

Co-Authors: Mirai Tanaka,

2 - Column Generation in Railway Optimization

Speaker: Stanley Schade, Zuse Institute Berlin, DE, talk 1367 Co-Authors: *Markus Reuther*, *Ralf Borndörfer*, *Boris Grimm*, *Thomas Schlechte*,

3 - Optimizing Train Stopping Patterns for Congestion Management

Speaker: Tatsuki Yamauchi, Chuo University, JP, talk 226 Co-Authors: *Mizuyo Takamatsu, Shinji Imahori*,

Second order methods for training ML models

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle DENUCE Building: Q, Ground Floor, Zone: 8

Contributed Session 474 **Chair:** Julien Mairal, Inria, FR

Newton method with an adjusted generalized Hessian matrix for SVMs
 Speaker: Amir Abdessamad, University of Mostaganem, DZ, talk 248
 Co-Authors: Yassine Adnan,
 A Variable Metric Inexact Proximal Point Algorithm for Quasi-Newton Acceleration
 Speaker: Julien Mairal, Inria, FR, talk 1607
 Co-Authors: Hongzhou Lin, Zaid Harchaoui,
 An Adaptive Sample Size Trust-Region Method for Empirical Risk Minimization
 Speaker: Robert Mohr, KIT, DE, talk 668
 Co-Authors: Oliver Stein,

Convex optimization, distances and constraints

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - We 3:15pm-4:45pm, Format: 3x30 min Room: FABRE Building: J, Ground Floor, Zone: 8

CONTRIBUTED SESSION 476 Chair: Pablo Parrilo, MIT, US

1 - Computational Optimal Transport: Accelerated Gradient Descent vs Sinkhorn

Speaker: Pavel Dvurechensky, WIAS, DE, talk 626 Co-Authors: Alexander Gasnikov, Alexey Kroshnin, 2 - Geodesic distance maximization Speaker: Pablo Parrilo, MIT, US, talk 1406 Co-Authors: De Meng, Stephen Boyd, Maryam Fazel, 3 - A Splitting Algorithm for Minimization under Stochastic Linear Constraints Speaker: Adil Salim, Telecom ParisTech, FR, talk 1404

Co-Authors: Pascal Bianchi, Walid Hachem,

Decomposition I

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 36 Building: B, Intermediate, Zone: 4

CONTRIBUTED SESSION 486 Chair: Dieter Weninger, FAU Erlangen-Nürnberg, DE

1 - Benders Decomposition and Column-and-Row Generation for LPs w/Column-Dependent Rows

Speaker: Kerem Bulbul, Sabanci University, TR, talk 1445 Co-Authors: Ibrahim Muter, Ilker Birbil,

2 - Improved Cut Selection for Benders Decomposition Speaker: Paul Stursberg, Technische Universität München, DE, talk 1087

3 - A Penalty Alternating Direction Decomposition Framework for MIPs

Speaker: Dieter Weninger, FAU Erlangen-Nürnberg, DE, talk 1065

Co-Authors: Lars Schewe, Martin Schmidt,

Scheduling in Networks

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE Scheduling - We 3:15pm-4:45pm, Format: 3x30 min Room: Salle 18 Building: I, 1st floor, Zone: 7

CONTRIBUTED SESSION 532 Chair: Hamish Waterer, University of Newcastle, AU

1 - Global optimization for the pump scheduling problem in drinking water networks

Speaker: Gratien Bonvin, MINES ParisTech, FR, talk 1321 Co-Authors: Andrea Lodi, Sophie Demassey, 2 - Addressing a scheduling problem for planned disruptions on urban road networks

Speaker: Amadeu Coco, UTT, FR, talk 1360

Co-Authors: Christophe Duhamel, Andrea Santos,

3 - Scheduling of maintenance windows in a mining supply chain railway network

Speaker: Hamish Waterer, University of Newcastle, AU, talk

1476 Co-Authors: Thomas Kalinowski, Jason Matthews,

Noncommutative polynomial optimization: semidefinite relaxations, free convexity and applications to quantum information I

CONTINUOUS OPTIMIZATION

SDP - We 5:00pm-6:30pm, Format: 3x30 min Room: Salle 20 Building: G, 1st floor, Zone: 6

INVITED SESSION 20

Organizer: Monique Laurent, CWI and Tilburg University, NL

1 - Inclusion of spectrahedra, free spectrahedra and coin tossing

Speaker: Markus Schweighofer, Universität Konstanz, DE, talk 453

Co-Authors: Bill Helton, Igor Klep, Scott McCullough,

2 - Matrix convex sets and matrix extreme points

Speaker: Tom-Lukas Kriel, University of Konstanz, DE, talk 74

3 - Extracting optimisers by non-commutative GNS construction is robust

Speaker: Janez Povh, University of Ljubljana, SI, talk 53 Co-Authors: Jurij Volcic, Igor Klep,

Approximation Algorithms for Geometric Packing Problems

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - We 5:00pm-6:30pm, Format: 3x30 min Room: LEYTEIRE Building: E, 3rd floor, Zone: 1 INVITED SESSION 28 Organizer: Fabrizio Grandoni, IDSIA, CH

1 - Approximating Geometric Knapsack via L-Packings

Speaker: Fabrizio Grandoni, IDSIA, CH, talk 371 Co-Authors: Waldo Galvez, Sandy Heydrich, Salvatore Ingala, Arindam Khan, Andreas Wiese,

2 - Parameterized (1+eps)-approximation algorithms for packing problems

Speaker: Andreas Wiese, Universidad de Chile, CL, talk 354 Co-Authors: Fabrizio Grandoni, Stefan Kratsch,

3 - Closing the gap for pseudo-polynomial strip packing Speaker: Klaus Jansen, University of Kiel, DE, talk 265 Co-Authors: Malin Rau,

Non-Convex and Second-order Methods in Machine Learning

CONTINUOUS OPTIMIZATION

RANDOMM - We 5:00pm-6:30pm, Format: 4x20 min Room: Salle KC6 Building: K, Intermediate 1, Zone: 10 **INVITED SESSION 33**

Organizer: Martin Takac, Lehigh University, US

Co-Authors: Arnold Neumaier,

Escaping Saddles with Stochastic Algorithms
 Speaker: Aurelien Lucchi, ETH Zurich, CH, talk 531
 Convergence Rate of Expectation-Maximization

Speaker: Reza Babanezhad, UBC, CA, talk 1135

Co-Authors: Raunak Kumar, Mark Schmidt,

3 - Parameter-free nonsmooth convex stochastic optimization through coin betting

Speaker: Francesco Orabona, Stony Brook University, US, talk 1108

4 - SGD and Hogwild! Convergence Without the Bounded Gradients Assumption

Speaker: Martin Takac, Lehigh University, US, talk 1342 Co-Authors: Lam Nguyen, Phuong Nguyen, Marten van Dijk, Peter Richtarik, Katya Scheinberg,

Online Optimization

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - We 5:00pm-6:30pm, Format: 3x30 min Room: Salle 36 Building: B, Intermediate, Zone: 4

INVITED SESSION 35

Organizer: Kevin Schewior, École Normale Supérieure, FR

1 - How large is your graph?

Speaker: Victor Verdugo, Universidad de Chile, CL, talk 437 Co-Authors: *Varun Kanade, Frederik Mallmann-Trenn*,

2 - Submodular Secretary Problems: Cardinality, Matching, and Linear Constraints

Speaker: Andreas Tönnis, University of Bonn, DE, talk 360 Co-Authors: *Thomas Kesselheim*,

3 - Tight Competitive Analysis for Online TSP on the Line Speaker: Kevin Schewior, École Normale Supérieure, FR, talk 321

Progress in methods and theory of derivative-free optimization

CONTINUOUS OPTIMIZATION

DERFREE - We 5:00pm-6:30pm, Format: 3x30 min Room: Salle 21 Building: G, Intermediate, Zone: 6

CONTRIBUTED SESSION 42 Chair: Serge Gratton, ENSEEIHT, FR

1 - Mesh-based Nelder-Mead algorithm for inequality constrained optimization

Speaker: Charles Audet, Polytechnique Montréal, CA, talk 191

Co-Authors: Christop Tribes,

2 - Manifold Sampling for Nonconvex Optimization of Piecewise Linear Compositions

Speaker: Jeffrey Larson, Argonne National Laboratory, US, talk 466

Co-Authors: Stefan Wild, Kamil Khan,

3 - Competitive derivative-free optimization with optimal complexity

Speaker: Morteza Kimiaei, Vienna University, AT, talk 467

MINLP (III)

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - We 5:00pm-6:30pm, Format: 3x30 min Room: DURKHEIM Building: A, 3rd floor, Zone: 1

INVITED SESSION 67 Organizer: Daniel Bienstock, Columbia University, US

1 - Cardinality-constrained linear regression with sparse matrices

Speaker: Alberto Del Pia, UW-Madison, US, talk 167 Co-Authors: *Robert Weismantel, Santanu Dey*,

2 - Computational evaluation of new dual bounding techniques for sparse PCA

Speaker: Guanyi Wang, Georgia Tech, US, talk 935 Co-Authors: Santanu Dey, Rahul Mazumder,

3 - Cutting Planes for Linear Programs with Complementarity Constraints

Speaker: Jeff Linderoth, Univ. of Wisconsin-Madison, US, talk 1327

Co-Authors: Alberto Del Pia, Haoran Zhu,

Optimization and modeling of integrated energy systems

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - We 5:00pm-6:30pm, Format: 4x20 min Room: Salle DENUCE Building: Q, Ground Floor, Zone:

INVITED SESSION 71 Organizer: Jalal Kazempour, DTU, DK

1 - Market-based valuation of natural gas network flexibility

Speaker: Stefanos Delikaraoglou, ETH Zurich, CH, talk 718 Co-Authors: *Gabriela Hug*,

2 - Unintended consequences: The snowball effect of energy communities

Speaker: Ibrahim Abada, ENGIE SA, FR, talk 300

Co-Authors: *Xavier Lambin, Andreas Ehrenmann,* **3 - Coordination of Heat and Electricity Systems via** Market-Based Mechanisms

Speaker: Lesia Mitridati, DTU, DK, talk 728

Co-Authors: Jalal Kazempour, Pierre Pinson,

4 - Virtual bidders and self-schedulers in electricity and natural gas markets

Speaker: Anna Schwele, DTU, DK, talk 725

Co-Authors: Christos Ordoudis, Jalal Kazempour, Pierre Pinson,

Methods and Analysis for Nonsmooth Optimization

CONTINUOUS OPTIMIZATION

NonSmooth - We 5:00pm-6:30pm, Format: 3x30 min Room: Salle 8 Building: N, 4th floor, Zone: 12 INVITED SESSION 86

Organizer: Michael Overton, New York University, US

1 - Partial Smoothness of the Numerical Radius

Speaker: Michael Overton, New York University, US, talk 789

Co-Authors: Adrian Lewis,

2 - Partial smoothness and active sets: a fresh approach Speaker: Adrian Lewis, Cornell ORIE, US, talk 862 Co-Authors: *Jingwei Liang*,

3 - Subgradient methods for sharp weakly convex problems

Speaker: Dmitriy Drusvyatskiy, University of Washington, US, talk 885

Co-Authors: Damek Davis, Kellie MacPhee, Courtney Paquette,

Aspects of Multiobjective Combinatorial Optimization

OPTIMIZATION UNDER UNCERTAINTY GAME - We 5:00pm-6:30pm, Format: 3x30 min Room: Salle 30 Building: B, Ground Floor, Zone: 5

INVITED SESSION 87

Organizer: Matthias Ehrgott, Lancaster University, GB

1 - Generating Representative Sets for Multiobjective Discrete Optimization Problems

Speaker: Serpil Sayin, Koç University, TR, talk 329 Co-Authors: *Gokhan Kirlik*,

2 - A multi-objective approach to sensitivity analysis of MILP

Speaker: Kim Andersen, Aarhus University, DK, talk 986 Co-Authors: Lars Nielsen, Trine Boomsma,

3 - Approximating the Multiobjective Shortest Path Problem in Practice

Speaker: Fritz Bökler, Osnabrück University, DE, talk 1422

Robust Adaptive Control and Learning

OPTIMIZATION UNDER UNCERTAINTY ROBUST - We 5:00pm-6:00pm, Format: 2x30 min Room: Salle 37 Building: B, Intermediate, Zone: 4

INVITED SESSION 97 Organizer: Siqian Shen, University of Michigan, US

1 - Distributionally Robust Adaptive Control under Nonstationary Uncertainty

Speaker: Siqian Shen, University of Michigan, US, talk 415 Co-Authors: *Hideaki Nakao*, *Ruiwei Jiang*,

2 - Leveraging stochastic programming to design robust policies for Markov decision

Speaker: Lauren Steimle, University of Michigan, US, talk 159

Co-Authors: Brian Denton,

Robust Approaches for Challenging Uncertain Optimization Problems

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - We 5:00pm-6:30pm, Format: 3x30 min Room: Salle 34 Building: B, 1st floor, Zone: 3

INVITED SESSION 124

Organizer: Frauke Liers, Friedrich-Alexander University, DE

1 - A New Approach for Extending Cover Inequalities for the Robust Knapsack Polytope

Speaker: Timo Gersing, RWTH Aachen University, DE, talk 876

Co-Authors: Christina Büsing, Arie Koster,

2 - An Interdiction Approach for the Design of High-Rise Water Supply Systems

Speaker: Andreas Schmitt, TU Darmstadt, DE, talk 448 Co-Authors: *Marc Pfetsch*,

3 - Robust optimization with selected scenarios

Speaker: Sebastian Tschuppik, Universität Erlangen-Nürnberg, DE, talk 547

Co-Authors: Andreas Bärmann, Frauke Liers, Alexander Martin, Oskar Schneider,

Software for Nonlinear Optimization

CONTINUOUS OPTIMIZATION NLP - We 5:00pm-6:30pm, Format: 3x30 min Room: GINTRAC Building: Q, Ground Floor, Zone: 8

INVITED SESSION 133

Organizer: Sven Leyffer, Argonne National Laboratory, US

1 - Argonot: An Open-Source Software Framework for Nonlinear Optimization

Speaker: Charlie Vanaret, Argonne National Laboratory, US, talk 1086

Co-Authors: Sven Leyffer,

2 - A Primal-Dual Shifted Barrier Method for Nonlinear Optimization

Speaker: Philip Gill, UC San Diego, US, talk 942 Co-Authors: *Vyacheslav Kungurtsev*, *Daniel Robinson*, **3 - L-RH-B: Software for Large-Scale Bound-Constrained Optimization**

Speaker: Elizabeth Wong, UC San Diego, US, talk 1112 Co-Authors: *Philip Gill, Michael Ferry*,

Advances in MINLP

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - We 5:00pm-6:30pm, Format: 3x30 min Room: Salle 35 Building: B, Intermediate, Zone: 4 INVITED SESSION 165

Organizer: Laura Palagi, Sapienza University of Rome, IT

1 - An Active Set Algorithm for Robust Combinatorial Optimization

Speaker: Marianna De Santis, Sapienza University of Rome, IT, talk 336

Co-Authors: Christoph Buchheim,

2 - Membrane System Design Optimization

Speaker: Veronica Piccialli, University of Rome Tor Vergata, IT, talk 872

Co-Authors: Bernardetta Addis, Marjan Bozorg, Alvaro Ramirez Santos, Christoph Castel, Eric Favre,

3 - Dantzig Wolfe Decomposition for Binary Quadratic Programming

Speaker: Emiliano Traversi, University of Paris XIII, FR, talk 1348

Co-Authors: Alberto Ceselli, Lucas Letocart,

Complementarity Problems

CONTINUOUS OPTIMIZATION VARIAT - We 5:00pm-6:30pm, Format: 3x30 min Room: Salle 06 Building: Q, 1st floor, Zone: 11

INVITED SESSION 173 Organizer: Samir Neogy, Indian Statistical Institute, IN

1 - Weakly homogeneous variational inequalities

Speaker: Muddappa Gowda, UMBC, US, talk 193 Co-Authors: *David Sossa*,

2 - On testing matrices with nonnegative principal minors Speaker: Samir Neogy, Indian Statistical Institute, IN, talk 1314

Co-Authors: Dipti Dubey,

3 - Total Dual Integrality and Integral Solutions of Linear Complementarity Problem

Speaker: Dipti Dubey, Indian Statistical Institute, IN, talk 1235

Co-Authors: Samir Neogy,

Advances in optimization methods for time dependent problems II

CONTINUOUS OPTIMIZATION

CONTROL - We 5:00pm-6:30pm, Format: 4x20 min Room: Salle AURIAC Building: G, 1st floor, Zone: 6

INVITED SESSION 225 Organizer: Denis Ridzal, Sandia National Labs, US

1 - Preconditioners for unsteady PDE-constrained optimization and parallel variants

Speaker: Stefan Ulbrich, TU Darmstadt, DE, talk 887 2 - Parallel-in-time PDE-constrained optimization using PFASST

Speaker: Sebastian Goetschel, Zuse Institute Berlin, DE, talk 573

Co-Authors: Michael Minion,

3 - Direct Multiple Shooting for parabolic PDE constrained optimization

Speaker: Andreas Potschka, IWR, Heidelberg University,

DE, talk 966

4 - Multigrid-in-time methods for optimization with nonlinear PDE/DAE constraints

Speaker: Denis Ridzal, Sandia National Labs, US, talk 602 Co-Authors: *Eric Cyr*,

Progress in MIP Solvers II

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - We 5:00pm-6:30pm, Format: 3x30 min Room: PITRES Building: O, Ground Floor, Zone: 8 INVITED SESSION 234 **Organizer:** Hans Mittelmann, Arizona State University, US

1 - Benders Decomposition in IBM CPLEX

Speaker: Andrea Tramontani, IBM, IT, talk 895
2 - Gurobi 8.0 - What's new
Speaker: Michael Winkler, Gurobi, DE, talk 1393
3 - Recent Progress in the Xpress Solvers
Speaker: Michael Perregaard, FICO, GB, talk 658

Stochastic Programming and Distributionally Robust Optimization Models with Endogenous Uncertainty

OPTIMIZATION UNDER UNCERTAINTY STOCH - We 5:00pm-6:30pm, Format: 3x30 min Room: DENIGES Building: C, Ground Floor, Zone: 5

INVITED SESSION 248

Organizer: Miguel Lejeune, George Washington University, US

1 - Distributionally Robust Optimization with Decision-Dependent Ambiguity Set

Speaker: Nilay Noyan, Sabanci University, TR, talk 1440 Co-Authors: *Miguel Lejeune*, *Gabor Rudolf*,

2 - Optimization Under Decision-dependent Uncertainty Speaker: Kartikey Sharma, Northwestern University, US, talk 897

Co-Authors: Omid Nohadani,

3 - Chance-Constrained Optimization Models with Endogenous and Exogenous Uncertainty

Speaker: Miguel Lejeune, George Washington University, US, talk 105

Co-Authors: Francois Margot, Alan Del de Oliveira,

Robust combinatorial optimization III

Optimization under Uncertainty

Roвust - We 5:00pm-6:30pm, Format: 4x20 min

Room: Salle 33 Building: B, Ground Floor, Zone: 5

Invited Session 255

Organizer: Moritz Mühlenthaler, TU Dortmund University, DE

1 - Robust Matching Augmentation

Speaker: Moritz Mühlenthaler, TU Dortmund University, DE, talk 1236

Co-Authors: Felix Hommelsheim, Oliver Schaudt, Viktor Bindewald,

2 - Solving Bulk-Robust Assignment Problems to Optimality

Speaker: Viktor Bindewald, KIT, DE, talk 1148

Co-Authors: David Adjiashvili, Matthias Walter, Dennis Michaels,

3 - Assignment Problems with few Failure Resources

Speaker: Felix Hommelsheim, TU Dortmund University, DE, talk 1344

Co-Authors: David Adjiashvili, Viktor Bindewald,

4 - Distributionally Robust Chance-Constrained Binary Knapsack Problem

Speaker: Jaehyeon Ryu, KAIST, KR, talk 1215 Co-Authors: *Sungsoo Park*,

Exact Approaches for Vehicle Routing and Variants

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - We 5:00pm-6:30pm, Format: 3x30 min Room: Salle 44 Building: C, 3rd floor, Zone: 1

INVITED SESSION 288 Organizer: Ricardo Fukasawa, Ricardo, CA

1 - The Capacitated Vehicle Routing Problem with Stochastic Demands

Speaker: Ricardo Fukasawa, Ricardo, CA, talk 1365
Co-Authors: Jim Luedtke, Fernando Santos,
2 - Efficient metaheuristic pricing in vehicle routing
Speaker: Claudio Contardo, ESG UQAM, CA, talk 925
Co-Authors: Thibaut Vidal, Rafael Martinelli,
3 - Exact Solution of a Class of Vehicle Scheduling Problems
Speaker: Rafael Martinelli, PUC-Rio, BR, talk 1459

Co-Authors: Luciano Costa, Anand Subramanian,

Problems in the intersection of machine learning and optimization

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - We 5:00pm-6:30pm, Format: 3x30 min Room: FABRE Building: J, Ground Floor, Zone: 8

CONTRIBUTED SESSION 328 Chair: Ross Anderson, Google, US

1 - OptNet: End-to-End Differentiable Constrained Optimization

Speaker: Brandon Amos, Carnegie Mellon University, US, talk 50

Co-Authors: J. Zico Kolter,

2 - Solving argmax for a neural network with MIP, and related optimization problems Speaker: Ross Anderson, Google, US, talk 1381 Co-Authors: Ondrej Sykora,

3 - Learning Fast Optimizers for Contextual Stochastic Integer Programs

Speaker: Vinod Nair, DeepMind, GB, talk 1262

Co-Authors: Dvijotham Krishnamurthy, Iain Dunning, Oriol Vinyals,

Conjugate Gradient Methods

CONTINUOUS OPTIMIZATION NLP - We 5:00pm-6:30pm, Format: 3x30 min Room: Salle 05 Building: Q, 1st floor, Zone: 11 CONTRIBUTED SESSION 362

Chair: Giovanni Fasano, University Ca' Foscari, Venice, IT

1 - A New Diagonalizable Conjugate Gradient Method for Unconstrained Optimization

Speaker: Mehiddin Al-Baali, Sultan Qaboos University, OM, talk 653

Co-Authors: Giovanni Fasano, Massimo Roma, Andrea Caliciott,

2 - Conjugate Direction Methods and Polarity for Quadratic Hypersurfaces

Speaker: Giovanni Fasano, University Ca' Foscari, Venice, IT, talk 1254

Co-Authors: Raffaele Pesenti,

3 - Non-linear conjugate gradient for vector optimization on Riemannian manifolds

Speaker: Luis Lucambio Perez, Univ. Federal Goiás, BR, talk 1278

Co-Authors: Leandro Prudente,

Solvers and softwares

INVITED TALKS INTERFACE - We 5:00pm-6:30pm, Format: 4x20 min Room: SIGALAS Building: C, 2nd floor, Zone: 2 CONTRIBUTED SESSION 390 **Chair:** François Clautiaux, Université de Bordeaux, FR

1 - Solving packing, routing and scheduling problems using LocalSolver

Speaker: Julien Darlay, LocalSolver, FR, talk 578
2 - Applied mixed integer programming: The why and how
Speaker: Pawel Lichocki, Google, PL, talk 1443

3 - Solving MIPs with Gurobi Instant Cloud

Speaker: Robert Luce, Gurobi, DE, talk 714

Co-Authors: Michel Jaczynski, Edward Rothberg,

4 - Creating an optimization web app with FICO Xpress Speaker: Johannes Müller, FICO Xpress Optimization, DE,

talk 977

Co-Authors: Susanne Heipcke, Yves Colombani,

Resource-constrained and scheduling

assignment

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCIENCES - We 5:00pm-6:30pm, Format: 3x30 min Room: Salle LA4 Building: L, Basement, Zone: 8 INVITED SESSION 398

Organizer: Fabian Bastin, Université de Montréal, CA

1 - A novel formulation for job-shop scheduling in traffic management

Speaker: Giorgio Sartor, SINTEF, NO, talk 213

Co-Authors: Carlo Mannino,

2 - Improving local search for distributed resource allocation and equilibrium.

Speaker: Vipin Vijayalakshmi, RWTH Aachen University, DE, talk 1044

Co-Authors: Alexander Skopalik,

3 - A learning-based approach for multi-skill staffing optimization in call centers

Speaker: Fabian Bastin, Université de Montréal, CA, talk 1204

Co-Authors: Tien Mai, Thuy Anh Ta, Pierre L'Ecuyer,

Linear Optimization II

CONTINUOUS OPTIMIZATION NLP - We 5:00pm-6:30pm, Format: 3x30 min Room: Salle 9 Building: N, 4th floor, Zone: 12 CONTRIBUTED SESSION 416

Chair: Julian Hall, University of Edinburgh, GB

1 - Starting the dual revised simplex method from an advanced basis

Speaker: Julian Hall, University of Edinburgh, GB, talk 1478 Co-Authors: *Ivet Galabova*,

2 - On the number of simplex iterations of the steepestedge for a nondegenerate LP

Speaker: Masaya Tano, Tokyo Univ. of Agri. and Tech., JP, talk 975

Co-Authors: Ryuhei Miyashiro, Tomonari Kitahara,

3 - New Results on the Simplex Method for Minimum Cost Flows in Infinite Networks

Speaker: Marina Epelman, University of Michigan, US, talk 1429

Co-Authors: Chris Ryan, Robert Smith,

Connectivity problems and Steiner trees

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - We 5:00pm-6:30pm, Format: 4x20 min Room: Salle 41 Building: C, 3rd floor, Zone: 1

CONTRIBUTED SESSION 421 Chair: Andreas Feldmann, Charles University, CZ

1 - Computing minimum 2-connected Steiner networks in the Euclidean plane

Speaker: Marcus Brazil, University of Melbourne, AU, talk 806

Co-Authors: Martin Zachariasen, Marcus Volz,

2 - Enumerating All Spanning Subgraphs with Edge-Connectivity at Least k

Speaker: Yasuko Matsui, Tokai University, JP, talk 1009 Co-Authors: *Katsuhisa Yamanaka, Shin-ichi Nakano*,

3 - The variable-cost node-weighted Steiner tree problem in the Euclidean plane.

Speaker: Mark Turner, Zuse Institute Berlin, DE, talk 498 Co-Authors: *Charl Ras*,

4 - Parameterized Approximation Algorithms for Bidirected Steiner Network Problems

Speaker: Andreas Feldmann, Charles University, CZ, talk 420

Co-Authors: Rajesh Chtinis, Pasin Manurangsi,

Shortest paths and cutting stock

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - We 5:00pm-6:30pm, Format: 4x20 min Room: Salle 39 Building: E, 3rd floor, Zone: 1 CONTRIBUTED SESSION 426 **Chair:** Arnaud Vandaele, University of Mons, BE

1 - Cost Projection Methods for the Shortest Path Problem with Crossing Costs

Speaker: Pedro de las Casas, ZIB, DE, talk 1310

Co-Authors: Ralf Borndörfer, Marco Blanco, Nam Dung Hoang,

2 - Solving the Time-Dependent Shortest Path Problem using Super-Optimal Wind

Speaker: Adam Schienle, Zuse Institute Berlin, DE, talk 1277 Co-Authors: *Ralf Borndörfer*, *Marco Blanco*, *Nam Dung Hoang*,

3 - Earliest Arrival Transshipments in Networks With Multiple Sinks

Speaker: Miriam Schlöter, TU Berlin, DE, talk 678

4 - One-dimensional cutting stock instances for which few patterns are needed

Speaker: Arnaud Vandaele, University of Mons, BE, talk 1242

Interior Point Methods in LP and NLP

CONTINUOUS OPTIMIZATION

NLP - We 5:00pm-6:30pm, Format: 3x30 min

Room: Salle ARNOZAN Building: Q, Ground Floor, Zone: 8

CONTRIBUTED SESSION 430 Chair: Andre Tits, Univ of Maryland College Park, US

1 - Constraint-Reduced MPC for CQP, with a Modified Active Set Identification Scheme

Speaker: Andre Tits, Univ of Maryland College Park, US, talk 33

Co-Authors: Paul Laiu,

2 - An IPM approach for a time dependent large-scale assortment allocation problem

Speaker: Thiane Coliboro, State University of Campinas, BR, talk 1366

Co-Authors: Aurelio Oliveira, Felipe Silva, Márcio Oshiro,

3 - Local analysis of a primal-dual method for NLP without constraint qualification

Speaker: Ngoc Nguyen Tran, University of Limoges, FR, talk 569

Co-Authors: Paul Armand,

Location and Routing

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LOGISTICS - We 5:00pm-6:30pm, Format: 4x20 min Room: Salle 24 Building: G, 3rd floor, Zone: 6

CONTRIBUTED SESSION 451 Chair: Mustapha Oudani, UIR, MA

1 - Stochastic Two-echelon Location-Routing

Speaker: Imen Ben Mohamed, IMB, FR, talk 1603
Co-Authors: *Francois Vanderbeck, Walid Klibi*, **2 - Benders decomposition for a hierarchical facility location problem**Speaker: Rasul Esmaeilbeigi, The University of Newcastle,

AU, talk 1000

Co-Authors: *Richard Middleton, Rodolfo Garcia-Flores,* **3 - Benders Decomposition for Uncertain Hub Location** with Variable Allocation

Speaker: Nicolas Kämmerling, TU Dortmund University, DE, talk 1224

Co-Authors: Borzou Rostami,

4 - The Incomplete Hub Location and Routing Problem Speaker: Mustapha Oudani, UIR, MA, talk 1143 Co-Authors: *Kenza Oufaska*,

Production-Routing

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LOGISTICS - We 5:00pm-6:30pm, Format: 3x20 min Room: Salle 16 Building: I, 2nd floor, Zone: 7

Contributed Session 456

Chair: Feng Gao, Nanjing University of F and E, CN

1 - Models and Algorithms for Robust Production Routing Under Demand Uncertainty

Speaker: Feng Gao, Nanjing University of F and E, CN, talk 978

Co-Authors: Panos Pardalos,

2 - Meta-Heuristics for Multi-Period Sales Districting Problem

Speaker: Saranthorn Phusingha, University of Edinburgh, GB, talk 1088

Co-Authors: Joerg Kalcsics,

3 - Models and Algorithms for Stochastic and Robust Production Routing with Time Win

Speaker: Yuzhuo Qiu, Nanjing University of F and E, CN, talk 979

Co-Authors: Panos Pardalos,

Completely Positive Cones and Applications

CONTINUOUS OPTIMIZATION SDP - We 5:00pm-6:30pm, Format: 4x20 min Room: Salle LC5 Building: L, Intermediate 1, Zone: 10 CONTRIBUTED SESSION 464 **Chair:** Patrick Groetzner, University of Trier, DE

1 - Approximation Hierarchies for Copositive and Completely Positive Tensor Cones

Speaker: Muhammad Iqbal, Faisal, PK, talk 1418 Co-Authors: *Faizan Ahmed*,

2 - Inner approximating the completely positive cone via the cone of SDD matrices

Speaker: Mina Saee Bostanabad, University of Coimbra, PT, talk 756

Co-Authors: João Gouveia, Ting Kei Pong,

3 - Solving nonlinear conic programming problems with a new DC approach

Speaker: Ellen Fukuda, Kyoto University, JP, talk 1060 Co-Authors: Ichiro Isonishi, Nobuo Yamashita,

4 - A method to compute factorizations for completely positive matrices

Speaker: Patrick Groetzner, University of Trier, DE, talk 141 Co-Authors: *Mirjam Duer*,

Large-scale convex optimization

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - We 5:00pm-6:00pm, Format: 2x20 min Room: Salle 22 Building: G, 2nd floor, Zone: 6

Contributed Session 479 Chair: Alexander Rogozin, MIPT, RU

1 - Optimal distributed convex optimization on slowly time-varying graphs

Speaker: Alexander Rogozin, MIPT, RU, talk 844

Co-Authors: Alexander Gasnikov, Cesar Uribe, Nikolay Malkovsky, Angelia Nedich,

2 - Leverage data structure to improve Stochastic Gradient Descent algorithm

Speaker: Tommaso Colombo, Sapienza University of Rome, IT, talk 1110

Co-Authors: Alberto De Santis, Stefano Lucidi,

Stochastic optimization models and applications

OPTIMIZATION UNDER UNCERTAINTY

STOCH - We 5:00pm-6:30pm, Format: 4x20 min Room: Salle 32 Building: B, Ground Floor, Zone: 5

Contributed Session 495 **Chair:** F.-Javier Heredia, UPC, ES

1 - Design optimization under uncertainty

Speaker: Geoffrey Oxberry, Lawrence Livermore Laboratory,

US, talk 1500
2 - Optimal non-anticipative scenarios for nonlinear hydrothermal power systems
Speaker: Gislaine Pericaro, UNESPAR, BR, talk 734
Co-Authors: *Elizabeth Karas, Clovis Gonzaga,*3 - A Generalized Risk Parity Model with Application for Hazmat Transportation
Speaker: Alexander Vinel, Auburn University, US, talk 1055
Co-Authors: *Nasrin Mohabbati,*4 - A multistage stochastic programming model for the optimal bid of a wind producer
Speaker: F.-Javier Heredia, UPC, ES, talk 1231

Co-Authors: Marlyn Cuadrado, J.-Anton Sánchez,

IP-Formulations

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - We 5:00pm-6:00pm, Format: 2x30 min Room: Salle 43 Building: C, 3rd floor, Zone: 1

Contributed Session 516 Chair: Temitayo Ajayi, Rice University, US

1 - The quadratic assignment problem: a comparison of two linearizations

Speaker: Wolfgang Riedl, Universität der Bundeswehr, DE, talk 1566

Co-Authors: Christine Huber,

2 - Assessing Parametrized Linear Programming Relaxations With Superadditive Duality

Speaker: Temitayo Ajayi, Rice University, US, talk 694 Co-Authors: *Christopher Thomas, Andrew Schaefer*,

Energy Market Models

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - We 5:00pm-6:30pm, Format: 3x30 min Room: Salle 23 Building: G, 3rd floor, Zone: 6

CONTRIBUTED SESSION 522

Chair: Sauleh Siddiqui, Johns Hopkins University, US

1 - Global Optimization of Multilevel Electricity Market Models

Speaker: Thomas Kleinert, Universität Erlangen-Nürnberg, DE, talk 548

Co-Authors: Martin Schmidt,

2 - Co-optimization Models with Market-Clearing Equilibrium: A Robust Approach

Speaker: Emre Celebi, Kadir Has University, TR, talk 1313 3 - Solving Problems with Equilibrium Constraints Applied to Energy Markets

Speaker: Sauleh Siddiqui, Johns Hopkins University, US, talk 442

Machine Scheduling 2

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCHEDULING - We 5:00pm-6:30pm, Format: 3x20 min Room: Salle 18 Building: I, 1st floor, Zone: 7

CONTRIBUTED SESSION 529 Chair: Guopeng Song, KU Leuven, BE

1 - Human-Robot Scheduling in Collaborative Environments

Speaker: Cristiane Ferreira, FEUP, PT, talk 459

Co-Authors: Pedro Amorim, Gonçalo Figueira, Francisco Machado,

2 - Parallel machine scheduling with time constraints on machine qualifications

Speaker: Margaux Nattaf, Mines de Saint-Etienne, FR, talk 460

Co-Authors: *Stéphane Dauzère-Pérès*, *Claude Yugma*, **3 - The robust machine availability problem**

Speaker: Guopeng Song, KU Leuven, BE, talk 863

Co-Authors: Daniel Kowalczyk, Roel Leus,

K-adaptability

OPTIMIZATION UNDER UNCERTAINTY

ROBUST - Th 8:30am-10:30am, Format: 4x30 min

Room: Salle 37 Building: B, Intermediate, Zone: 4

INVITED SESSION 1

Organizer: Anirudh Subramanyam, Carnegie Mellon University, US

1 - Min-max-min Robust Optimization for the Capacitated Vehicle Routing Problem

Speaker: Jannis Kurtz, RWTH Aachen University, DE, talk 355

Co-Authors: Lars Eufinger, Christoph Buchheim, Uwe Clausen,

2 - Min-Max-Min Robustness for Combinatorial Problems with Budgeted Uncertainty

Speaker: Michael Poss, LIRMM-CNRS, FR, talk 245

Co-Authors: Andre Chassein, Marc Goerigk, Jannis Kurtz,

3 - K-Adaptibility in Stochastic Programming Speaker: Jonas Pruente, TU Dortmund, DE, talk 1553 Co-Authors: *Christoph Buchheim*,

4 - K-Adaptability in Two-Stage Mixed-Integer Robust Optimization

Speaker: Anirudh Subramanyam, Carnegie Mellon University, US, talk 353

Co-Authors: Wolfram Wiesemann, Chrysanthos Gounaris,

First-order methods: advances and applications

CONTINUOUS OPTIMIZATION

NLP - Th 8:30am-10:30am, Format: 4x30 min

Room: Salle ARNOZAN Building: Q, Ground Floor, Zone: 8

INVITED SESSION 3

Organizer: Immanuel Bomze, Universitaet Wien, AT

1 - Incremental mirror descent with random sweeping

and a proximal step

Speaker: Axel Boehm, University of Vienna, AT, talk 216 Co-Authors: *Radu Ioan Bot*,

2 - Active-set identification in Frank-Wolfe variants on the standard simplex

Speaker: Immanuel Bomze, Universitaet Wien, AT, talk 253 Co-Authors: *Francesco Rinaldi*, *Samuel Rota Bulo*,

3 - Robust StQP, first-order methods, and applications in social network analysis

Speaker: Michael Kahr, University of Vienna, AT, talk 301 Co-Authors: *Immanuel Bomze, Markus Leitner*,

4 - On the convergence of projection free Hessian Barrier-Gradient Algorithms

Speaker: Mathias Staudigl, Maastricht University, NL, talk 768

Co-Authors: Panayotis Mertikopoulos, Immanuel Bomze, Werner Schachinger,

Computer-assisted analyses of optimization algorithms I

CONTINUOUS OPTIMIZATION SDP - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 20 Building: G, 1st floor, Zone: 6

INVITED SESSION 19 Organizer: Adrien Taylor, INRIA, FR

1 - Efficient First-order Methods for Convex Minimization: A Constructive Approach

Speaker: Yoel Drori, Google, IL, talk 18

Co-Authors: Adrien Taylor,

2 - Optimized first-order method for decreasing gradient of smooth convex functions

Speaker: Donghwan Kim, Dartmouth College, US, talk 19 Co-Authors: *Jeffrey Fessler*,

3 - The Fastest Known First-Order Method for Smooth Strongly Convex Minimization

Speaker: Bryan Van Scoy, University of Wisconsin, US, talk 146

Co-Authors: Laurent Lessard, Randy Freeman, Kevin Lynch,

4 - Analysis of First-Order Algorithms for Distributed Optimization

Speaker: Laurent Lessard, Univ. of Wisconsin-Madison, US, talk 1212

Co-Authors: Akhil Sundararajan, Bryan Van Scoy, Bin Hu,

Submodular Maximization

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Th 8:30am-10:30am, Format: 4x30 min Room: LEYTEIRE Building: E, 3rd floor, Zone: 1

INVITED SESSION 29

Organizer: Moran Feldman, Open University of Israel, IL

1 - Deterministic and Combinatorial Algorithms for Submodular Maximization Speaker: Moran Feldman, Open University of Israel, IL, talk 49

2 - Constrained Submodular Maximization via Greedy Local Search

Speaker: Baruch Schieber, IBM Research, US, talk 71 Co-Authors: *Kanthi Sarpatwar*, *Hadas Shachnai*,

3 - Submodular Maximization through the Lens of Linear Programming

Speaker: Simon Bruggmann, ETH Zurich, CH, talk 67 Co-Authors: *Rico Zenklusen*,

4 - Constrained Submodular Maximization via a Nonsymmetric Technique

Speaker: Niv Buchbinder, Tel Aviv University, IL, talk 51 Co-Authors: *Moran Feldman*,

Bayesian and Randomized Optimization I

CONTINUOUS OPTIMIZATION

DerFree - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 21 Building: G, Intermediate, Zone: 6

CONTRIBUTED SESSION 39 Chair: Stefan Wild, Argonne National Laboratory, US

1 - Improving Bayesian optimization via random embeddings

Speaker: Mickael Binois, Argonne National Laboratory, US, talk 525

Co-Authors: David Ginsbourger, Olivier Roustant,

2 - Bayesian Optimization of Expensive Integrands Speaker: Saul Toscano-Palmerin, Cornell University, US, talk 931

Co-Authors: *Peter Frazier*,

3 - Using Models in Allocate and Partition Algorithms Speaker: Clément Royer, UW-Madison, US, talk 1022

Co-Authors: Jeffrey Larson, Stefan Wild,

4 - A Rigorous Framework for Efficient Global Optimization

Speaker: Youssef Diouane, ISAE-SUPAERO, FR, talk 414 Co-Authors: *Alexandre Scotto*, *Michel Salaun*,

Universal methods in non-smooth analysis

CONTINUOUS OPTIMIZATION

NonSmooth - Th 8:30am-10:30am, Format: 4x30 min Room: Salle LC4 Building: L, Intermediate 1, Zone: 9

INVITED SESSION 53 **Organizer:** Alexander Gasnikov, MIPT, RU

1 - Universal Nesterov's gradient method in general model conception

Speaker: Alexander Tyurin, HSE, RU, talk 542 Co-Authors: *Pavel Dvurechensky, Alexander Gasnikov*, **2 - Dual universal conjugate gradient type methods.** Speaker: Sergey Guminov, MIPT, RU, talk 352 Co-Authors: *Alexander Gasnikov, Alexander Gornov, Anton Anikin*.

3 - Universal Proximal Method for Variational Inequalities

Speaker: Alexander Tytov, MIPT, RU, talk 635 Co-Authors: Fedor Stonyakin, Mohammad Alkousa, Pavel Dvurechensky, Alexander Gasnikov,

4 - Universal Intermediate Gradient Method for Convex Problems with Inexact Oracle

Speaker: Dmitry Kamzolov, MIPT Moscow, RU, talk 1433 Co-Authors: Pavel Dvurechensky, Alexander Gasnikov,

Recent advances in interior point methods and NLP

CONTINUOUS OPTIMIZATION NLP - Th 8:30am-10:30am, Format: 4x30 min Room: GINTRAC Building: Q, Ground Floor, Zone: 8 INVITED SESSION 77

Organizer: Michael Todd, Cornell University, US

1 - The ellipsoid method redux

Speaker: Michael Todd, Cornell University, US, talk 204 2 - MILP Formulations for Globally Solving Nonconvex Standard Quadratic Programs

Speaker: E. Alper Yildirim, Koc University, TR, talk 733 Co-Authors: *Jacek Gondzio*,

3 - A One-phase Interior Point Method For Nonconvex Optimization Speaker: Yinyu Ye, Stanford University, US, talk 869

Co-Authors: Oliver Hinder,

4 - A polynomial time interior point method for problems with nonconvex constraints

Speaker: Oliver Hinder, Stanford, US, talk 881 Co-Authors: *Yinyu Ye*,

Cycles and Trees

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 43 Building: C, 3rd floor, Zone: 1

INVITED SESSION 90

Organizer: Tobias Mömke, University of Bremen, DE

1 - Coloring and Dominating Set on Digraphs with Bounded Independence Number

Speaker: Alantha Newman, CNRS and G-SCOP, Grenoble, FR, talk 697

Co-Authors: Ararat Haratyunyan, Tien-Nam Le, Stéphan Thomassé,

2 - A PTAS for TSP with Hyperplane Neighborhoods Speaker: Antonios Antoniadis, UdS and MPII, DE, talk 184 Co-Authors: *Krzysztof Fleszar*, *Ruben Hoeksma*, *Kevin Schewior*,

3 - Maximum Scatter TSP in doubling metrics Speaker: László Kozma, TU Eindhoven, NL, talk 222 Co-Authors: *Tobias Mömke*,

4 - Approximability of Hub Allocation Problems Speaker: Ralf Klasing, CNRS, University of Bordeaux, FR, talk 662

Unit Commitment Problem and Applications

Specific Models, Algorithms, and Software Energy - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 23 Building: G, 3rd floor, Zone: 6

INVITED SESSION 94

Organizer: Tiziano Parriani, Optit S.r.l., IT

1 - Off-line/on-line optimization under uncertainty on energy management

Speaker: Allegra De Filippo, University of Bologna, IT, talk 841

Co-Authors: Michele Lombardi, Michela Milano,

2 - A Constrained Shortest Path formulation for the Hydro Unit Commitment Problem

Speaker: Dimitri Thomopulos, LIX, Ecole Polytechnique, FR, talk 988

Co-Authors: Claudia D Ambrosio, Wim van Ackooij, Pascal Benchimol,

3 - Stochastic Hydrothermal Unit Commitment via Multilevel Scenario Trees

Speaker: Rafael Lobato, State University of Campinas, BR, talk 1074

Co-Authors: Erlon Finardi, Vitor de Matos, Claudia Sagastizabal, Asgeir Tomasgard,

4 - CHP Systems Optimization in Presence of Time Binding Constraints

Speaker: Tiziano Parriani, Optit S.r.l., IT, talk 769 Co-Authors: Angelo Gordini, Matteo Pozzi,

Advanced Linear(ized) MIP Formulations for Zero-One Programs

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 44 Building: C, 3rd floor, Zone: 1

INVITED SESSION 127 Organizer: Sven Mallach, University of Cologne, DE

1 - Mixed-Integer Programming for Clustering in Nonreversible Markov Processes

Speaker: Leon Eifler, ZIB, DE, talk 344

2 - A new ILP for the Steiner Tree Problem with Revenues, Budget and Hop Constraints

Speaker: Adalat Jabrayilov, TU Dortmund University, DE, talk 551

Co-Authors: Petra Mutzel,

3 - An extended formulation for the Steiner Forest Problem

Speaker: Daniel Schmidt, Universität zu Köln, DE, talk 813 Co-Authors: *Bernd Zey, Francois Margot*,

4 - Compact Linearization for Zero-One Quadratic Programs

Speaker: Sven Mallach, University of Cologne, DE, talk 293

Nonlinear Optimization and Variational Inequalities I

CONTINUOUS OPTIMIZATION

VARIAT - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 06 Building: Q, 1st floor, Zone: 11

INVITED SESSION 140

Organizer: Xin Liu, Chinese Academy of Sciences, CN

1 - Theory and Application of p-regularized subproblem with p > 2

Speaker: Yaxiang Yuan, Chinese Academy of Sciences, CN, talk 63

Co-Authors: Yong Tsia, S.-L. Sheu,

2 - A semidefinite relaxation algorithm for polynomial equations

Speaker: Jinyan Fan, Shanghai Jiao Tong University, CN, talk 319

3 - On a special robust optimization problem

Speaker: Cong Sun, Beijing Univ. Post. Telecomm., CN, talk 61

4 - Limited memory algorithms with cubic regularization Speaker: Liang Zhao, Chinese Academy of Sciences, CN,

talk 107

Co-Authors: Oleg Burdakov, Yaxiang Yuan,

Integer linear programming, convex geometry, and lattices

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 34 Building: B, 1st floor, Zone: 3

INVITED SESSION 142

Organizer: Sinai Robins, University of Sao Paulo, BR

1 - Exploiting Linear Symmetries in Integer Convex Optimization

Speaker: Achill Schürmann, University of Rostock, DE, talk 1145

2 - On the reverse isodiametric problem

Speaker: Matthias Schymura, EPFL, CH, talk 451 Co-Authors: *Bernardo González Merino*,

3 - The Complexity of Presburger Arithmetic in Fixed Dimension

Speaker: Kevin Woods, Oberlin College, US, talk 281

4 - Fourier transforms of polytopes, solid angle sums, and discrete volumes

Speaker: Sinai Robins, University of Sao Paulo, BR, talk 1174

Geometry and duality in convex optimization

CONTINUOUS OPTIMIZATION SDP - Th 8:30am-10:30am, Format: 4x30 min Room: Salle LC5 Building: L, Intermediate 1, Zone: 10 INVITED SESSION 160 Organizer: Javier Pena, Carnegie Mellon University, US

1 - Condition Numbers for Convex Functions with Polytope Domains

Speaker: David Gutman, Carnegie Mellon University, US, talk 1282

Co-Authors: Javier Pena,

2 - Conditioning of conic systems via the Grassmannian manifold

Speaker: Javier Pena, Carnegie Mellon University, US, talk 1014

Co-Authors: Vera Roshchina,

3 - Solving linear inequalities via non-convex optimization Speaker: Jourdain Lamperski, MIT, US, talk 1190

4 - On positive duality gaps in semidefinite programming Speaker: Gabor Pataki, UNC Chapel Hill, US, talk 283

Mining Applications

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 24 Building: G, 3rd floor, Zone: 6

INVITED SESSION 172

Organizer: Alexandra Newman, Colorado School of Mines, US

1 - Lane's Algorithm Revisisted

Speaker: Marcos Goycoolea, Universidad Adolfo Ibáñez, CL, talk 1352

Co-Authors: Patricio Lamas, Bernardo Pagnoncelli, Adriana Piazza,

2 - A MILP-based approach for loader assignment in open pit scheduling

Speaker: Peter Malkin, Datamine Software, GB, talk 923 Co-Authors: *Abdallah Jarray*,

3 - Optimal Selection of Support Pillars in an Underground Mine

Speaker: Levente Sipeki, CSM, US, talk 788

Co-Authors: Alexandra Newman, Candace Yano,

4 - Mathematical Methods for Complex Underground Design and Scheduling Problems

Speaker: Alexandra Newman, Colorado School of Mines, US, talk 792

Co-Authors: Levente Sipeki, Peter Nesbitt,

Machine learning for optimisation

CONTINUOUS OPTIMIZATION NLP - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 05 Building: Q, 1st floor, Zone: 11

INVITED SESSION 176 Organizer: Coralia Cartis, University of Oxford, GB

1 - Dimensionality reduction for global optimisation: adaptive random embeddings

Speaker: Adilet Otemissov, The Alan Turing Institute, GB, talk 839

Co-Authors: Coralia Cartis,

2 - Stochastic trust-region with global rate to second-order criticality

Speaker: Coralia Cartis, University of Oxford, GB, talk 785 Co-Authors: *Katya Scheinberg*,

3 - Online generation via offline selection of strong linear cuts from QP SDP relax.

Speaker: Radu Baltean-Lugojan, Imperial College London, GB, talk 1041

Co-Authors: Ruth Misener,

4 - Global optimization in Hilbert Space

Speaker: Boris Houska, ShanghaiTech, CN, talk 1517 Co-Authors: *Mario Villanueva, Benoit Chachuat*,

First-order methods for nonconvex and pathological convex problems

CONTINUOUS OPTIMIZATION

NonSmooth - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 8 Building: N, 4th floor, Zone: 12

INVITED SESSION 183

Organizer: Wotao Yin, UCLA, US

1 - Alternating structure-adapted proximal gradient descent for nonconvex problems

Speaker: Mila Nikolova, CMLA, CNRS, ENS Cachan, FR, talk 901

Co-Authors: Pauline Tan,

2 - ADMM for Multiaffine Constrained Optimization
Speaker: Wenbo Gao, Columbia University, US, talk 520
Co-Authors: *Donald Goldfarb*, *Frank Curtis*,
3 - Douglas-Rachford Splitting for Pathological Convex

Optimization

Speaker: Ernest Ryu, UCLA, US, talk 956 Co-Authors: Yanli Liu, Wotao Yin,

4 - Polynomial-Time Run-and-Inspect Method for Certain Nonconvex Optimization

Speaker: Wotao Yin, UCLA, US, talk 1213 Co-Authors: *Yifan Chen, Yuejiao Sun,*

Recent Advances on Stochastic Algorithms and Machine Learning

CONTINUOUS OPTIMIZATION RANDOMM - Th 8:30am-10:30am, Format: 4x30 min Room: Salle KC6 Building: K, Intermediate 1, Zone: 10 INVITED SESSION 202

Organizer: Shiqian Ma, UC Davis, US

1 - Level-Set Methods for Finite-Sum Constrained Convex Optimization

Speaker: Qihang Lin, University of Iowa, US, talk 357 Co-Authors: *Runchao Ma*, *Tianbao Yang*,

2 - Estimation of Markov Chain via Rank-constrained Likelihood

Speaker: Xudong Li, Princeton University, US, talk 413 Co-Authors: *Mengdi Wang*, *Anru Zhang*,

3 - Random gradient extrapolation for distributed and

stochastic optimization

Speaker: Guanghui Lan, Georgia Institute of Technolog, US, talk 1584

4 - An Accelerated Algorithm for Stochastic Threecomposite Optimization

Speaker: Renbo Zhao, NUS ISEM, MIT ORC, SG, talk 261 Co-Authors: *William Haskell*, *Vincent Tan*,

Graphs and clutters

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 41 Building: C, 3rd floor, Zone: 1

INVITED SESSION 263

Organizer: Gerard Cornuejols, Carnegie Mellon University, US

1 - Packing cycles in a tournament

Speaker: Guoli Ding, Louisiana State University, US, talk 1593

2 - Min-Max Theorems for Packing and Covering Odd (u,v)-trails

Speaker: Sharat Ibrahimpur, University of Waterloo, CA, talk 1172

Co-Authors: Chaitanya Swamy,

3 - Cuboids, a class of clutters

Speaker: Ahmad Abdi, University of Waterloo, CA, talk 633 Co-Authors: *Gerard Cornuejols*, *Dabeen Lee*, *Natalia Guricanova*,

4 - Deltas, extended odd holes and their blockers

Speaker: Dabeen Lee, Carnegie Mellon University, US, talk 627

Co-Authors: Ahmad Abdi,

Numerically Efficient Methods for Piecewise Algorithmic Differentiation II

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 22 Building: G, 2nd floor, Zone: 6

INVITED SESSION 270 Organizer: Torsten Bosse, FSU Jena, DE

1 - Pushing the Algorithmic Differentiation tool Tapenade towards new languages

Speaker: Laurent Hascoet, INRIA, FR, talk 1534

Co-Authors: Valerie Pascual,

2 - Generalized Sensitivity Analysis of Nonlinear Programs

Speaker: Peter Stechlinski, University of Maine, US, talk 340 Co-Authors: *Kamil Khan, Paul Barton, Amir Akbari, Johannes Jaschke*,

3 - Evaluating generalized derivatives efficiently for nonsmooth composite functions

Speaker: Kamil Khan, McMaster University, CA, talk 1435 4 - Optimality Conditions for Nonsmooth Constrained Optimization Problems

Speaker: Lisa Hegerhorst, Leibniz Universität Hannover, DE,

High-Performance Computing in Optimization I

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - Th 9:00am-10:30am, Format: 3x30 min Room: Salle 18 Building: I, 1st floor, Zone: 7

INVITED SESSION 271 Organizer: Kibaek Kim, ANL, US

1 - Performance Assessment for Parallel MILP Solvers

Speaker: Ted Ralphs, Lehigh University, US, talk 1347
Co-Authors: Stephen Maher, Yuji Shinano,
2 - Ubiquity Generator Framework to parallelize state-ofthe-art B and B based solvers
Speaker: Yuji Shinano, Zuse Institute Berlin, DE, talk 1181
3 - Branching Strategies on Decomposition Methods for Mixed-Integer Programming
Speaker: Kibaek Kim, ANL, US, talk 1510
Co-Authors: Brian Dandurand,

Parallel Computing and Sustainability

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING CP - Th 8:30am-10:30am, Format: 4x30 min Room: DURKHEIM Building: A, 3rd floor, Zone: 1

INVITED SESSION 296 Organizer: Bistra Dilkina, Univ of Southern California, US

1 - Designing the game to play in security and sustainability domains

Speaker: Fei Fang, Carnegie Mellon University, US, talk 70 Co-Authors: *Zheyuan Shi*, *Ziye Tang*, *Long Tran-Thanh*, *Rohit Singh*,

2 - A Robust Optimization Model for an Invasive Species Management Problem

Speaker: Nahid Jafari, SUNY Farmingdale, US, talk 893 Co-Authors: *Austin Phillips, Panos Pardalos*,

3 - Parallel HYbridization for Simple Heuristics

Speaker: Salvador Abreu, University of Évora, PT, talk 25 Co-Authors: *Danny Múnera*, *Daniel Diaz*, *Jheisson Lopez*,

4 - Parallel Search, Ordering, Reproducibility, and Scalability

Speaker: Ciaran McCreesh, University of Glasgow, GB, talk 214

Co-Authors: Blair Archibald, Ruth Hoffmann, Patrick Prosser, Phil Trinder,

Performance Analysis

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING CP - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 47 Building: A, 3rd floor, Zone: 1 INVITED SESSION 298 **Organizer:** Charlotte Truchet, Université de Nantes, FR

1 - The Shapley Value and the Temporal Shapley Value for Algorithm Analysis

Speaker: Lars Kotthoff, University of Wyoming, US, talk 1138

Co-Authors: Alexandre Fréchette, Alexandre Fréchette, Alexandre Fréchette, Alexandre Fréchette, Alexandre Fréchette,

2 - Phase transitions in random constraint satisfaction problems

Speaker: Guilhem Semerjian, LPT-ENS, FR, talk 510

3 - A probabilistic study of the propagation of the AllDifferent constraint

Speaker: Charlotte Truchet, Université de Nantes, FR, talk 906

Co-Authors: Xavier Lorca, Danièle Gardy,

4 - Improving Energetic Propagations for Cumulative Scheduling

Speaker: Alexander Tesch, Zuse Institute Berlin, DE, talk 727

First-order methods for large-scale convex problems

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - Th 8:30am-10:30am, Format: 4x30 min Room: FABRE Building: J, Ground Floor, Zone: 8

Invited Session 316

Organizer: Stephen Vavasis, University of Waterloo, CA

1 - A single potential governing convergence of CG, AG and Geometric Descent

Speaker: Stephen Vavasis, University of Waterloo, CA, talk 582

Co-Authors: Sahar Karimi,

2 - Robust Accelerated Gradient Method

Speaker: Mert Gurbuzbalaban, Rutgers University, US, talk 1106

3 - Randomized methods for convex feasibility problems and applications to ML

Speaker: Peter Richtarik, KAUST, SA, talk 385 Co-Authors: *Ion Necoara, Andrei Patrascu*,

4 - Bregman Divergence for Stochastic Variance Reduction

Speaker: Yaoliang Yu, University of Waterloo, CA, talk 937 Co-Authors: *Xinhua Zhang, Zhan Shi*,

Large-scale learning

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - Th 8:30am-10:30am, Format: 4x30 min

Room: Salle DENUCE Building: Q, Ground Floor, Zone: 8

INVITED SESSION 335

Organizer: Lorenzo Rosasco, university of genoa-iit-mit, IT

1 - The power of interpolation: on the effectiveness of SGD in modern learning

Speaker: Mikhail Belkin, Ohio State University, US, talk 930 2 - Precision on the Brain: Low-Precision to High-Precision for Machine Learning

Speaker: Chris Re, Stanford, US, talk 1302

3 - Iterate averaging as regularization for stochastic gradient descent

Speaker: Gergely Neu, Universitat Pompeu Fabra, ES, talk 776

Co-Authors: Lorenzo Rosasco,

4 - Convergence vs stability: a regularization view on accelerated methods

Speaker: Lorenzo Rosasco, university of genoa-iit-mit, IT, talk 632

Optimal Control of Variational Inequalities and Complementarity Systems

CONTINUOUS OPTIMIZATION

CONTROL - Th 8:30am-10:30am, Format: 4x30 min Room: Salle AURIAC Building: G, 1st floor, Zone: 6

CONTRIBUTED SESSION 336 Chair: Alexandre Vieira, INRIA Grenoble, FR

1 - Optimal control of Linear Complementarity Systems Speaker: Alexandre Vieira, INRIA Grenoble, FR, talk 1618

Co-Authors: Bernard Brogliato, Christophe Prieur,

2 - Computing a Subgradient for the Solution Operator of the Obstacle Problem

Speaker: Anne-Therese Rauls, TU Darmstadt, DE, talk 1013 Co-Authors: *Stefan Ulbrich*,

3 - Optimal Control of Thermoviscoplasticity

Speaker: Ailyn Stötzner, TU Chemnitz, DE, talk 1590

Co-Authors: Roland Herzog, Christian Meyer,

4 - Optimal Control of Elastoplasticity Problems with Finite Deformations

Speaker: Anna Walter, TU Darmstadt, DE, talk 1096 Co-Authors: *Stefan Ulbrich*,

Bin Packing

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 36 Building: B, Intermediate, Zone: 4

Contributed Session 344 Chair: Frits Spieksma, TU Eindhoven, NL

1 - Automatically computed bounds for the online bin stretching problem

Speaker: Nadia Brauner, Université Grenoble Alpes, FR, talk 1057

Co-Authors: Michaël Gabay, Vladimir Kotov, Valentin Bartier,

2 - Batched bin packing

Speaker: Leah Epstein, University of Haifa, IL, talk 1256

3 - Online Packing of Arbitrary Size Items into Designated and Multipurpose Bins

Speaker: Shlomo Karhi, Bar-Ilan Univesity, IL, talk 681 Co-Authors: *Noam Goldberg*,

4 - Partitioning Vectors into Quadruples

Speaker: Frits Spieksma, TU Eindhoven, NL, talk 847 Co-Authors: Annette Ficker, Thomas Erlebach, Matus Mihalak,

Multi-commodity flows

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE NETWORK - Th 8:30am-10:30am, Format: 4x30 min Room: Salle LA4 Building: L, Basement, Zone: 8 INVITED SESSION 358 **Organizer:** Ralf Borndörfer, ZIB, DE

1 - Monotonicity and conformality in multicommodity network-flow problems

Speaker: Daniel Granot, University of British Columbia, CA, talk 178

2 - An exact method based on adaptive partitions for the Stochastic Fixed-Charge MCF

Speaker: Eduardo Moreno, Universidad Adolfo Ibanez, CL, talk 1428

Co-Authors: Cristian Ramirez Pico,

3 - Approximate Wasserstein Distances of order 1 between images

Speaker: Stefano Gualandi, University of Pavia, IT, talk 1450 Co-Authors: *Marco Veneroni, Federico Bassetti*,

4 - Metric Inequalities for Routings on Direct Connections in Line Planning

Speaker: Ralf Borndörfer, ZIB, DE, talk 1461 Co-Authors: *Marika Karbstein*,

Stackelberg Games

OPTIMIZATION UNDER UNCERTAINTY GAME - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 30 Building: B, Ground Floor, Zone: 5 CONTRIBUTED SESSION 374 Chair: Stefano Coniglio, University of Southampton, GB

1 - Tropical geometry applied to bilevel programming

Speaker: Jean-Bernard Eytard, INRIA - Ecole Polytechnique, FR, talk 1375

Co-Authors: Marianne Akian, Mustapha Bouhtou, Stephane Gaubert, Gleb Koshevoy,

2 - Bilevel Programming for Combinatorial Exchanges with Budget Constraints

Speaker: Stefan Waldherr, TU Munich, DE, talk 295 Co-Authors: *Martin Bichler*,

3 - Computing Pessimistic Leader-Follower Equilibria with Multiple Followers

Speaker: Stefano Coniglio, University of Southampton, GB, talk 1188

4 - A learning approach for selection of subgame perfect Nash equilibria

Speaker: Francesco Caruso, Univ. of Naples Federico II, IT,

Energy

INVITED TALKS INTERFACE - Th 8:30am-10:30am, Format: 4x30 min Room: SIGALAS Building: C, 2nd floor, Zone: 2

CONTRIBUTED SESSION 387 Chair: Kazem Abbaszadeh, UoA, NZ

1 - Optimization Models for Geothermal Energy

Speaker: Rishi Adiga, The University of Auckland, NZ, talk 934

Co-Authors: Andy Philpott, John O'Sullivan,

2 - Static robustness for EDF nuclear long term production planning

Speaker: Rodolphe Griset, EDF-INRIA, FR, talk 1647 Co-Authors: *Boris Detienne, Francois Vanderbeck, Marc Porcheron, Pascale Bendotti, Hugo Gevret,*

3 - Optimization of district heating production operations Speaker: Gabriela Maschietto, Veolia, FR, talk 1297

Co-Authors: *Phillipe Sampaio*, *Damien Chenu*, *Stephane Couturier*, *David Mouquet*,

4 - Demand and reserve co-optimization for a pricemaking consumer of electricity

Speaker: Mahbubeh Habibian, University of Auckland, NZ, talk 947

Co-Authors: Golbon Zakeri, Anthony Downward,

Vehicle Routing I

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LOGISTICS - Th 9:00am-10:30am, Format: 3x30 min Room: PITRES Building: O, Ground Floor, Zone: 8

CONTRIBUTED SESSION 411

Chair: Guy Desaulniers, Polytechnique Montreal GERAD, CA

1 - The vehicle routing problem with stochastic and correlated travel times

Speaker: Guy Desaulniers, Polytechnique Montreal GERAD, CA, talk 506

Co-Authors: Borzou Rostami, Fausto Errico, Andrea Lodi,

2 - An exact formulation for pickup and delivery problem with divisible split-ups

Speaker: Bolor Jargalsaikhan, University of Groningen, NL, talk 1073

Co-Authors: *Ward Romeijnders, Kees Jan Roodbergen,* **3 - Branch-and-Price for Probabilistic Vehicle Routing** Speaker: Mathias Klapp, PUC, CL, talk 388 Co-Authors: *Felipe Lagos, Alejandro Toriello,*

Graph theory

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING

COMB - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 39 Building: E, 3rd floor, Zone: 1 CONTRIBUTED SESSION 422 Chair: Thomas Bellitto, University of Bordeaux, FR

1 - A Tight Cut Decomposition for Hypergraphs with Perfect Matchings

Speaker: Isabel Beckenbach, Zuse Institute Berlin, DE, talk 623

Co-Authors: Sebastian Wiederrecht, Meike Hatzel,

2 - Densities, Matchings, and Fractional Edge-Colorings Speaker: Xujin Chen, Chinese Academy of Sciences, CN, talk 771

Co-Authors: Wenan Zang, Qiulan Zhao,

3 - Making Bipartite Graphs DM-irreducible

Speaker: Yutaro Yamaguchi, Osaka University, JP, talk 566 Co-Authors: Kristóf Bérczi, Satoru Iwata, Jun Kato,

4 - Optimal weighting to minimize the independence ratio of a graph

Speaker: Thomas Bellitto, University of Bordeaux, FR, talk 1414

Co-Authors: Arnaud Pecher,

First Order Methods I

CONTINUOUS OPTIMIZATION NLP - Th 8:30am-10:30am, Format: 4x30 min Room: Salle KC7 Building: K, Intermediate 2, Zone: 10

CONTRIBUTED SESSION 436

Chair: Sandra Santos, University of Campinas, BR

1 - Accelerating block coordinate descent methods with identification strategies

Speaker: Sandra Santos, University of Campinas, BR, talk 389

Co-Authors: Ronaldo Lopes, Paulo Silva,

2 - On Matching Pursuit and Coordinate Descent

Speaker: Francesco Locatello, MPI - ETH Zurich, CH, talk 1642

Co-Authors: Anant Raj, Sai Praneeth Karimireddy, Gunnar Rätsch, Bernhard Schölkopf, Sebastian Stich, Martin Jaggi,

3 - A Unified Scheme to Accelerate Adaptive Cubic Regularization and Gradient Method

Speaker: Tianyi Lin, UC Berkeley, US, talk 198 Co-Authors: *Shuzhong Zhang*, *Bo Jiang*,

4 - Performance Estimation for Fixed Point Iterations

Speaker: Felix Lieder, Heinrich-Heine University, DE, talk 7

New applications of robust optimizations

OPTIMIZATION UNDER UNCERTAINTY

Robust - Th 9:00am-10:30am, Format: 3x30 min

Room: Salle 33 Building: B, Ground Floor, Zone: 5 CONTRIBUTED SESSION 461

Chair: Mirjam Duer, Augsburg University, DE

1 - Condition and geometric measures for consistency in intertemporal optimization

Speaker: Jorge Vera, Catholic University of Chile, CL, talk 1113

Co-Authors: Rodrigo Cofre,

2 - Compositional Stochastic Optimization with Kernels for Robust Online Learning

Speaker: Alec Koppel, U.S. Army Research Laboratory, US, talk 47

Co-Authors: Amrit Bedi Singh, Ketan Rajawat,

3 - Robust Approach for Stratified Sampling Allocation Problems

Speaker: Mirjam Duer, Augsburg University, DE, talk 1010

Dynamical systems, control and optimization

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 16 Building: I, 2nd floor, Zone: 7

CONTRIBUTED SESSION 470 Chair: Benjamin Recht, UC Berkeley, US

1 - Tangent Space Regularization for Neural-Networks Models of Dynamical Systems

Speaker: Fredrik Bagge Carlson, Automatic Control, Lund Uni., SE, talk 1303

Co-Authors: Anders Robertsson, Rolf Johansson,

2 - The sample complexity of iteratively learning to control

Speaker: Benjamin Recht, UC Berkeley, US, talk 1217 **3 - Optimization-based adaptive control using a system level approach.**

Speaker: Nikolai Matni, UC Berkeley, US, talk 1311 **4 - Lyapunov arguments in optimization** Speaker: Ashia Wilson, UC Berkeley, US, talk 1622

New results in chance-constrained optimization

OPTIMIZATION UNDER UNCERTAINTY STOCH - Th 8:30am-10:30am, Format: 4x30 min Room: DENIGES Building: C, Ground Floor, Zone: 5 CONTRIBUTED SESSION 489

Chair: Bismark Singh, Sandia National Laboratories, US

1 - Smoothing Methods for Chance Constrained Optimization of Elliptic PDE Systems

Speaker: Abebe Geletu, Technische Univerisität Ilmena, DE, talk 1312

Co-Authors: Armin Hoffmann, Patrick Schmidt, Pu Li,

2 - Dynamic chance constraints under random distributiond

Speaker: René Henrion, Weierstrass Institute Berlin, DE, talk 1395

3 - Differentiability of joint chance constraints under weakened LICQ

Speaker: Armin Hoffmann, TU Ilmenau, DE, talk 382

Co-Authors: Abebe Geletu, Pu Li,

4 - Approximating Chance Constrained Programs using Classical Inequalities

Speaker: Bismark Singh, Sandia National Laboratories, US, talk 1589

Co-Authors: Jean-Paul Watson,

Topics in multistage and integer stochastic optimization

OPTIMIZATION UNDER UNCERTAINTY STOCH - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 32 Building: B, Ground Floor, Zone: 5

INVITED SESSION 490

Organizer: Jim Luedtke, University of Wisconsin-Madiso, US

1 - Three-Stage Stochastic Airline Scheduling Problem

Speaker: Ozge Safak, Bilkent University, TR, talk 1293 Co-Authors: *Ozlem Cavus, Selim Akturk*,

2 - State space analysis of a stochastic DP to deal with curse of dimensionality

Speaker: Mehdi Karimi-Nasab, Institute for OR, Uni Hamburg, DE, talk 351

3 - Partitioned Subgradient Methods for Stochastic Mixed Integer Program duals

Speaker: Cong Han Lim, UW-Madison, US, talk 1196 Co-Authors: Jeff Linderoth, Jim Luedtke, Stephen Wright,

4 - Lagrangian dual decision rules for multistage stochastic integer programs

Speaker: Jim Luedtke, University of Wisconsin-Madiso, US, talk 104

Co-Authors: Merve Bodur, Maryam Daryalal,

Convexity and Polytopes

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 35 Building: B, Intermediate, Zone: 4

CONTRIBUTED SESSION 518 Chair: David Warme, Group W, Inc., US

1 - Box-Total Dual Integrality and k-Edge-Connectivity

Speaker: Emiliano Lancini, LIPN - Université Paris 13, FR, talk 1651

Co-Authors: Roland Grappe, Mathieu Lacroix, Michele Barbato, Roberto Wolfler Calvo,

2 - On the Circuit Diameter Conjecture Speaker: Tamon Stephen, Simon Fraser University, CA, talk

3 - The role of extreme points for convex hull operations. Speaker: Filipe Cabral, UFRJ, BR, talk 1107

Co-Authors: Bernardo Costa, Joari Costa,

4 - Metrics for Strength of Inequalities with Respect to a Polytope

Speaker: David Warme, Group W, Inc., US, talk 777

Hamed Rahimian, Guzin Bayraksan,

Non smooth optimization for lage scale poblems

CONTINUOUS OPTIMIZATION

NonSmooth - Th 8:30am-10:30am, Format: 4x30 min Room: Salle 9 Building: N, 4th floor, Zone: 12

INVITED SESSION 556

Organizer: Yu Du, University of Colorado Denver, US

1 - Selective Linearization for Multi-block Statistical Learning Problems

Speaker: Yu Du, University of Colorado Denver, US, talk 280 Co-Authors: *Andrzej Ruszczynski*,

2 - Randomized Proximal Algorithm with Automatic Dimension Reduction.

Speaker: Dmitry Grishchenko, Univ. Grenoble Alpes, FR, talk 1426

Co-Authors: Franck Iutzeler, Jerome Malick, Massih-Reza Amini,

3 - Inexact proximal memoryless spectral-scaling MBFGS method

Speaker: Shummin Nakayama, Tokyo University of Science, JP, talk 225

Co-Authors: Yasushi Narushima, Hiroshi Yabe,

4 - Decomposition methods for computing d-stationary solutions for nonconvex problem

Speaker: Min Tao, Nanjing University, CN, talk 3 Co-Authors: *Jong-Shi Pang*,

Cutting Planes in the Extended Space

INVITED TALKS

KEYNOTE - Th 11:00am-12:00am, Format: 1x60 min Room: BROCA Building: W, 3rd floor, Zone: 0

INVITED SESSION 543

Organizer: Adam Letchford, Lancaster University, GB

1 - Cutting Planes in the Extended Space

Speaker: Oktay Gunluk, IBM Research, US, talk 1629

Effective Scenarios and Scenario Reduction for Risk-Averse Stochastic Programs

INVITED TALKS

KEYNOTE - Th 11:00am-12:00am, Format: 1x60 min Room: DENIGES Building: C, Ground Floor, Zone: 5

INVITED SESSION 544

Organizer: Jim Luedtke, University of Wisconsin-Madiso, US

1 - Effective Scenarios and Scenario Reduction for Risk-Averse Stochastic Programs

Speaker: Tito Homem-de-Mello, Universidad Adolfo Ibanez, CL, talk 1598

Co-Authors: Sebastian Arpon, Bernardo Pagnoncelli,

The BARON software for MINLP

INVITED TALKS

SEMI - Th 11:00am-12:00am, Format: 1x60 min Room: Auditorium Building: Symph H, Gambetta, Zone: 0

INVITED SESSION 547

Organizer: Claudia D Ambrosio, LIX, FR

1 - The BARON software for MINLP

Speaker: Nikolaos Sahinidis, Carnegie Mellon University, US, talk 1558

Randomness, risk and electricity prices

INVITED TALKS

PLENARY - Th 1:30pm-2:30pm, Format: 1x60 min Room: Auditorium Building: Symph H, Gambetta, Zone:

INVITED SESSION 554

Organizer: Michael Ferris, University of Wisconsin, US

1 - Randomness, risk and electricity prices

Speaker: Andy Philpott, University of Auckland, NZ, talk 1605

Co-Authors: Michael Ferris,

Noncommutative polynomial optimization: semidefinite relaxations, free convexity and applications to quantum information II

CONTINUOUS OPTIMIZATION

SDP - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle LC5 Building: L, Intermediate 1, Zone: 10

Invited Session 18

Organizer: Monique Laurent, CWI and Tilburg University, NL

1 - Quantifying entanglement of a quantum correlation using polynomial optimization

Speaker: Sander Gribling, CWI, NL, talk 57

Co-Authors: David de Laat, Monique Laurent,

2 - Graph isomorphism: conic relaxations and physical interpretation

Speaker: Antonios Varvitsiotis, National University of Singapo, SG, talk 60

Co-Authors: Laura Mancinska, David Roberson, Albert Atserias, Robert Samal, Simone Severini,

3 - Optimization over univariate polynomials: Algorithms and applications

Speaker: Farid Alizadeh, Rutgers University, US, talk 1679

Methods of Optimization in Riemannian Manifolds

CONTINUOUS OPTIMIZATION NLP - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 05 Building: Q, 1st floor, Zone: 11

INVITED SESSION 21

Organizer: Orizon Ferreira, Universidade Federal de Goias, BR

1 - A two-phase proximal-like algorithm in domains of positivity

Speaker: Paulo Oliveira, Federal University R J, BR, talk 34 Co-Authors: *Ronaldo Gregorio, Charlan Alves*,

2 - Proximal point method in multiobjective optimization on Hadamard manifolds

Speaker: Glaydston Bento, Universidade Federal de Goias, BR, talk 42

Co-Authors: João Cruz Neto, Lucas Meireles,

3 - Newton's Method for Locally Lipschitz vector Fields on Riemannian Manifolds

Speaker: Orizon Ferreira, Universidade Federal de Goias, BR, talk 28

Co-Authors: Fabiana de Oliveira,

Approximation Algorithms for Clustering.

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Th 3:15pm-4:45pm, Format: 3x30 min Room: LEYTEIRE Building: E, 3rd floor, Zone: 1

INVITED SESSION 32

Organizer: Deeparnab Chakrabarty, Dartmouth College, US

1 - Constant-Factor Approximation for Ordered k-Median

Speaker: Jaroslaw Byrka, University of Wroclaw, PL, talk 464

Co-Authors: Krzysztof Sornat, Joachim Spoerhase,

2 - Sampling-based algorithms and clustering with outliers

Speaker: Amit Jayant Deshpande, Microsoft Research, IN, talk 454

3 - Generalized Center Problems with Outliers

Speaker: Deeparnab Chakrabarty, Dartmouth College, US, talk 891

Co-Authors: Maryam Negahbani,

Convexification and more (I)

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 39 Building: E, 3rd floor, Zone: 1 INVITED SESSION 62 Organizer: Jon Lee, University of Michigan, US

1 - Treating indefinite quadratic and bilinear forms in MINLP

Speaker: Marcia Fampa, UFRJ, BR, talk 620 Co-Authors: *Jon Lee*,

2 - Valid inequalities for QCQPs
Speaker: Amélie Lambert, Cedric-Cnam, FR, talk 745
3 - More Virtuous Smoothing
Speaker: Luze Xu, University of Michigan, US, talk 772
Co-Authors: Jon Lee, Daphne Skipper,

Optimization Models for Renewable Energy Integration 1

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle DENUCE Building: Q, Ground Floor, Zone: 8

INVITED SESSION 120

Organizer: Luis Zuluaga, Lehigh University, US

1 - Optimal Grid Operation and DER Dispatch in Active Distribution Networks

Speaker: Panagiotis Andrianesis, Boston University, US, talk 1658

Co-Authors: Michael Caramanis,

2 - Bilevel Optimization for Flexible Electricity Supply Tariff Design

Speaker: Galina Orlinskaya, FAU Erlangen-Nuernberg, DE, talk 1425

Co-Authors: Veronika Grimm, Martin Schmidt, Gregor Zöttl, Lars Schewe,

3 - Competitive equilibrium and revenue adequate prices for robust energy markets

Speaker: Luis Zuluaga, Lehigh University, US, talk 941 Co-Authors: Xin Chi, Alberto Lamadrid,

Nonlinear Optimization and Variational Inequalities II

CONTINUOUS OPTIMIZATION VARIAT - Th 3:15pm-4:45pm, Format: 3x30 min

Room: Salle 06 Building: Q, 1st floor, Zone: 11

INVITED SESSION 141

Organizer: Cong Sun, Beijing Univ. Post. Telecomm., CN

1 - On the Lojasiewicz Exponent of Quadratic Minimization with Sphere Constraint

Speaker: Xin Liu, Chinese Academy of Sciences, CN, talk 96 Co-Authors: *Bin Gao*, *Xiaojun Chen*, *Yaxiang Yuan*,

2 - A Parallelizable Algorithm for Orthogonally Constrained Optimization Problems

Speaker: Bin Gao, Chinese Academy of Sciences, CN, talk 85

Co-Authors: Xin Liu, Yaxiang Yuan,

3 - A Joint Matrix Minimization Approach for Seismic

Wavefield Recovery

Speaker: Yanfei Wang, Chinese Academy of Sciences, CN, 1 - Computing parameter sensitivities for discrete time talk 1559 Co-Authors: Liping Wang,

Asynchronous Parallel Disand tributed Optimization

CONTINUOUS OPTIMIZATION RANDOMM - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle KC6 Building: K, Intermediate 1, Zone: 10 **INVITED SESSION 200** Organizer: Wotao Yin, UCLA, US

1 - Improved asynchronous parallel optimization analysis for incremental methods

Speaker: Rémi Leblond, INRIA, FR, talk 741 Co-Authors: Fabian Pedregosa, Simon Lacoste-Julien, 2 - Why Asynchronous Algorithms may Drastically Outperform Traditional Ones Speaker: Robert Hannah, UCLA, US, talk 339 Co-Authors: Wotao Yin, 3 - Complexity of a quadratic penalty accelerated inexact proximal point method Speaker: Renato Monteiro, Georgia Tech, US, talk 938

Co-Authors: Weiwei Kong, Jefferson Melo,

Algorithms for TSP

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Th 3:15pm-4:45pm, Format: 3x30 min Room: SIGALAS Building: C, 2nd floor, Zone: 2 **INVITED SESSION 239** Organizer: Ola Svensson, EPFL, CH

1 - Approaching 3/2 for the s-t-path TSP

Speaker: Vera Traub, University of Bonn, DE, talk 571 Co-Authors: Jens Vygen,

2 - Cut-Covering Decompositions for Connectivity Problems

Speaker: Ramamoorthi Ravi, CMU, US, talk 585 Co-Authors: Arash Haddadan, Alantha Newman, 3 - A Constant-factor Approximation Algorithm for the **Asymmetric Traveling Salesman** Speaker: Ola Svensson, EPFL, CH, talk 550

Co-Authors: Jakub Tarnawski, Laszlo Vegh,

Theoreticals and practicals aspects of decomposition algorithms for multistage stochastic problems: 1

OPTIMIZATION UNDER UNCERTAINTY Sтосн - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 32 Building: B, Ground Floor, Zone: 5 **INVITED SESSION 246** Organizer: Vincent Leclère, ENPC, FR

Markov decision processes

Speaker: David Wozabal, Technical University of Munich, DE, talk 1002

Co-Authors: Goncalo Terca,

2 - Modeling time-dependent randomness in stochastic dual dynamic programming

Speaker: Nils Löhndorf, University of Luxembourg, LU, talk 849

Co-Authors: Alexander Shapiro,

3 - Computing ellipsoidal controlled invariant sets for stochastic programming

Speaker: Benoît Legat, UCLouvain, BE, talk 1243 Co-Authors: Raphaël Jungers,

Generation and Representation Algorithms in Multiobjective Optimization

OPTIMIZATION UNDER UNCERTAINTY GAME - Th 3:15pm-4:45pm, Format: 3x30 min

Room: Salle 30 Building: B, Ground Floor, Zone: 5

INVITED SESSION 267

Organizer: Michael Stiglmayr, University of Wuppertal, DE

1 - On a Polynomial Bound in Multiobjective Unconstrained Combinatorial Optimization

Speaker: Britta Schulze, University of Wuppertal, DE, talk 1061

Co-Authors: Kathrin Klamroth, Michael Stiglmayr,

2 - Efficient Representation of the Search Region and **Generic Algorithms in MOCO**

Speaker: Kathrin Klamroth, University of Wuppertal, DE, talk 1232

Co-Authors: Kerstin Daechert, Renaud Lacour, Daniel Vanderpooten,

3 - Representation of the non-dominated set of multiobjective optimization problems

Speaker: Michael Stiglmayr, University of Wuppertal, DE, talk 1127

Heuristics in MINLP

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 34 Building: B, 1st floor, Zone: 3

CONTRIBUTED SESSION 276 Chair: Bertrand Travacca, UC Berkeley, US

1 - MINLP solutions using a Generalized-GRASP solver

Speaker: João Lauro Faco', Federal University of RJ, BR, talk 1368

Co-Authors: Ricardo Silva, Mauricio Resende,

2 - Feasible rounding ideas for mixed-integer optimization problems

Speaker: Christoph Neumann, Cont. Opt. IOR KIT, DE, talk 494

Co-Authors: *Nathan Sudermann-Merx*, *Oliver Stein*, **3 - Dual Hopfield Models for Large Scale Mixed Integer Programming**

Speaker: Bertrand Travacca, UC Berkeley, US, talk 796 Co-Authors: *Scott Moura*,

MINLP with quadratic terms

DISCRETE OPTIMIZATION & ÎNTEGER PROGRAMMING MINLP - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 35 Building: B, Intermediate, Zone: 4 CONTRIBUTED SESSION 282 Chair: Enrico Bettiol, LIPN - Université Paris 13, FR

1 - The *p*-Lagrangian method for MIQCQPs

Speaker: Fabricio Oliveira, Aalto University, FI, talk 201
Co-Authors: *Tiago Andrade*, *Silvio Hamacher*,
2 - A dedicated version of BiqCrunch for solving the Max-

Stable Set problem exactly

Speaker: Etienne Leclercq, LIPN, University Paris XIII, FR, talk 1489

Co-Authors: Frederic Roupin,

3 - Simplicial Decomposition for quadratic convex 0-1 problems

Speaker: Enrico Bettiol, LIPN - Université Paris 13, FR, talk 716

Co-Authors: Lucas Letocart, Emiliano Traversi, Francesco Rinaldi,

Applications of CP

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING CP - Th 3:15pm-4:45pm, Format: 3x30 min Room: DURKHEIM Building: A, 3rd floor, Zone: 1

INVITED SESSION 284

Organizer: Louis-Martin Rousseau, Polytechnique Montreal, CA

1 - A Constraint Programming approach to a meal delivery problem

Speaker: Olivier Bachollet, IMT Atlantique - CIRRELT, FR, talk 1604

Co-Authors: Michel Gendreau, Fabien Lehuédé, Louis-Martin Rousseau,

2 - A Decomposition Approach for the Home Health Care Routing and Scheduling Problem

Speaker: Florian Grenouilleau, Polytechnique Montréal, CA, talk 1053

Co-Authors: Nadia Lahrichi, Louis-Martin Rousseau,

3 - A CP Approach to the Traveling Salesman Problem in the Postal Services

Speaker: Louis-Martin Rousseau, Polytechnique Montreal, CA, talk 1333

Co-Authors: Alexis Bretin, Guy Desaulniers,

Extending the Reach of First-Order Subproblems

Methods, Part II

CONTINUOUS OPTIMIZATION NONSMOOTH - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 8 Building: N, 4th floor, Zone: 12 INVITED SESSION 286 **Organizer:** Robert Freund, MIT, US

1 - Risk and parameter convergence of logistic regression

Speaker: Matus Telgarsky, UIUC, US, talk 1557 Co-Authors: *Ziwei Ji*,

2 - A conditional gradient framework for composite convex minimization

Speaker: Alp Yurtsever, EPFL, CH, talk 254 Co-Authors: *Olivier Fercoq, Francesco Locatello, Volkan Cevher*,

3 - Accelerating Greedy Coordinate Descent Methods Speaker: Robert Freund, MIT, US, talk 260 Co-Authors: *Haihao Lu*, *Vahab Mirrokni*,

Computational Issues in Integer Programming

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 44 Building: C, 3rd floor, Zone: 1

INVITED SESSION 289 Organizer: Ricardo Fukasawa, Ricardo, CA

1 - Implementation and performance of the simplex method

Speaker: Laurent Poirrier, University of Waterloo, CA, talk 1124

Co-Authors: Ricardo Fukasawa,

2 - Learning MILP resolution outcomes before reaching time-limit

Speaker: Giulia Zarpellon, Polytechnique Montreal, CA, talk 1341

Co-Authors: Martina Fischetti, Andrea Lodi,

3 - Computational Results with V-Polyhedral Cuts and Strengthening Approaches

Speaker: Aleksandr Kazachkov, Carnegie Mellon University, US, talk 356

Co-Authors: Egon Balas,

Accelerating Learning

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - Th 3:15pm-4:45pm, Format: 3x30 min Room: FABRE Building: J, Ground Floor, Zone: 8 INVITED SESSION 322

Organizer: Martin Takac, Lehigh University, US

Nonlinear Acceleration of Stochastic Algorithms
 Speaker: Damien Scieur, INRIA - ENS, FR, talk 468
 Co-Authors: Francis Bach, Alexandre d Aspremont,
 Accelerated First Order Methods with Approximate
 Subproblems

Speaker: Sai Praneeth Karimireddy, EPFL, CH, talk 1543 Co-Authors: *Sebastian Stich, Martin Jaggi,*

3 - Optimal Algorithms for Distributed Optimization Speaker: Angelia Nedich, ASU, US, talk 307 Co-Authors: *Cesar Uribe*, *Soomin Lee*, *Alexander Gasnikov*,

Robust first order methods

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 16 Building: I, 2nd floor, Zone: 7

INVITED SESSION 332

Organizer: Fatma Kilinc-Karzan, Carnegie Mellon University, US

1 - Robust distributed learning in the face of adversity

Speaker: Dimitris Papailiopoulos, UW-Madison, US, talk 783 Co-Authors: *Lingjiao Chen*, *Zachary Charles*, *Hongyi Wang*,

2 - Characterizing implicit bias of optimization and its role in generalization

Speaker: Suriya Gunasekar, TTI Chicago, US, talk 1519

Co-Authors: Jason Lee, Daniel Soudry, Nathan Srebro,

3 - First-order Framework for Robust Convex Optimization

Speaker: Nam Ho-Nguyen, Carnegie Mellon University, US, talk 1077

Co-Authors: Fatma Kilinc-Karzan,

Theory and Methods for ODE- and PDE-Constrained Optimization 2

CONTINUOUS OPTIMIZATION CONTROL - Th 3:15pm-4:15pm, Format: 2x30 min Room: Salle AURIAC Building: G, 1st floor, Zone: 6

CONTRIBUTED SESSION 333 Chair: Johann Schmitt, TU Darmstadt, DE

1 - Optimal boundary control of hyperbolic balance laws with state constraints

Speaker: Johann Schmitt, TU Darmstadt, DE, talk 751 Co-Authors: *Stefan Ulbrich*,

2 - Numerical approximation of optimal control problems for conservation laws

Speaker: Paloma Schäfer Aguilar, TU Darmstadt, DE, talk 1076

Co-Authors: Stefan Ulbrich,

Routing and Inventory

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 36 Building: B, Intermediate, Zone: 4 INVITED SESSION 343 **Organizer:** Dorit Hochbaum, UC Berkeley, US **1** - Improved upper bound for online Dial-a-Ride on the line

Speaker: Alexander Birx, TU Darmstadt, DE, talk 544 Co-Authors: *Yann Disser*,

2 - A 4/5 - Approximation Algorithm for the Maximum Traveling Salesman Problem

Speaker: Jan Marcinkowski, University of Wroclaw, PL, talk 1464

Co-Authors: Szymon Dudycz, Katarzyna Paluch, Bartosz Rybicki,

3 - The gap between the continuous and discrete Replenishment Schedule problem

Speaker: Dorit Hochbaum, UC Berkeley, US, talk 284 Co-Authors: Xu Rao,

Distributionally Robust Optimization With Marginals and Cones

OPTIMIZATION UNDER UNCERTAINTY ROBUST - Th 3:15pm-4:45pm, Format: 3x30 min Room: DENIGES Building: C, Ground Floor, Zone: 5

INVITED SESSION 354 Organizer: Divya Padmanabhan, SUTD, SG

1 - Distributionally Robust Linear and Discrete Optimization with Marginals

Speaker: Louis Chen, MIT, US, talk 762 Co-Authors: Karthik Natarajan, Will Ma, David Simchi-Levi, Zhenzhen Yan,

2 - A Copositive Approach for Decision Rule Approximations of Multi-Stage RO

Speaker: Guanglin Xu, University of Iowa, US, talk 696 Co-Authors: *Grani Hanasusanto*,

3 - Tractable Solutions to Distributionally Robust Optimisation

Speaker: Divya Padmanabhan, SUTD, SG, talk 1239 Co-Authors: *Karthik Natarajan, Karthyek Murthy*,

Inverse Problems in Physics

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCIENCES - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle LA4 Building: L, Basement, Zone: 8

CONTRIBUTED SESSION 391 Chair: Leo Liberti, CNRS and Ecole Polytechnique, FR

1 - On the reconstruction of lattices from diffraction data Speaker: Andreas Alpers, Technical University of Munich, DE, talk 1442

2 - Grain map reconstruction by means of generalized Voronoi Diagrams

Speaker: Fabian Klemm, Technical University of Munich, DE, talk 1003

Co-Authors: Peter Gritzmann,

3 - Scientific applications of distance geometry

Speaker: Leo Liberti, CNRS and Ecole Polytechnique, FR, talk 399

Path Problems

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LOGISTICS - Th 3:15pm-4:15pm, Format: 2x30 min Room: PITRES Building: O, Ground Floor, Zone: 8 CONTRIBUTED SESSION 453

Chair: Yanchao Liu, Wayne State University, US

1 - Dynamic Discretization Discovery Algorithms for Time-Dependent Path Problems

Speaker: Edward He, GIT, US, talk 1615

Co-Authors: Natashia Boland, George Nemhauser, Martin Savelsbergh,

2 - Drone Path Planning and Aerial Traffic Flow

Speaker: Yanchao Liu, Wayne State University, US, talk 1632

Non-linear robust optimization

OPTIMIZATION UNDER UNCERTAINTY ROBUST - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 37 Building: B, Intermediate, Zone: 4

CONTRIBUTED SESSION 460

Chair: Laurent Alfandari, ESSEC Business School, FR

1 - Graph learning with the Wasserstein metric

Speaker: Daniel de Roux, Universidad de los Andes, CO, talk 1191

Co-Authors: Mauricio Velasco,

2 - Robust optimization for non-linear impact of data variation

Speaker: Laurent Alfandari, ESSEC Business School, FR, talk 1610

Co-Authors: Juan-Carlos Espinoza-Garcia,

3 - A mathematical program for signal control with equilibrium constraints

Speaker: Suh-Wen Chiou, National Dong Hwa Univ, TW, talk 183

High-Performance Computing in Optimization II

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 22 Building: G, 2nd floor, Zone: 6

CONTRIBUTED SESSION 466 Chair: Joaquim Dias Garcia, PSR and PUC-Rio, BR

1 - High-Performance Solver for Binary Quadratic Problems

Speaker: Timotej Hrga, University of Ljubljana, SI, talk 969 Co-Authors: *Janez Povh, Angelika Wiegele*,

2 - Bilevel optimization approaches for power system security

Speaker: Brian Dandurand, Argonne National Laboratory, US, talk 1413

Co-Authors: Kibaek Kim, Sven Leyffer,

3 - Genesys: Simulating Power Systems by Solving Millions of MIPs

Speaker: Joaquim Dias Garcia, PSR and PUC-Rio, BR, talk 1091

Co-Authors: André Pinto, Raphael Chabar, Julio Dias, Luiz Carlos da Costa Junior, John Fazio, John Ollis, Dan Hua,

Progress in Algorithms for Optimal Power Flow Problems II

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 23 Building: G, 3rd floor, Zone: 6

CONTRIBUTED SESSION 509 Chair: Miguel Anjos, Polytechnique Montreal, CA

1 - Robust Optimization for the Alternating Current Optimal Power Flow Problem

Speaker: Alvaro Lorca, PUC-Chile, CL, talk 2 Co-Authors: *Andy Sun*,

2 - Global Optimization for Alternating Current Optimal Power Flow

Speaker: Ksenia Bestuzheva, ANU, Data61-CSIRO, AU, talk 1169

Co-Authors: Hassan Hijazi,

3 - Optimal Power Flow solver based on HELM Speaker: Andreas Grothey, Uni Edinburgh, GB, talk 335 Co-Authors: *Ian Wallace, Ken McKinnon*,

Electricity Generation Scheduling and Dispatch

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 24 Building: G, 3rd floor, Zone: 6

CONTRIBUTED SESSION 511

Chair: Christophe Duhamel, Université Clermont Auvergne, FR

1 - Data-Driven Generator Maintenance and Operations Scheduling under Uncertainty

Speaker: Beste Basciftci, Georgia Tech, US, talk 1292
Co-Authors: Shabbir Ahmed, Nagi Gebraeel,
2 - A Network Flow-Based MILP Formulation for the Thermal Unit Commitment Problem
Speaker: Diego Jimenez, UTFSM, CL, talk 1492
Co-Authors: Alejandro Angulo,
3 - solving the Short-term Hydrothermal Scheduling prob-

lem with linearizations

Speaker: Christophe Duhamel, Université Clermont Auvergne, FR, talk 1305

Co-Authors: Gabriela Migliorini, Pedro Palermo,

Non-Standard IP Methods

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 42 Building: C, 3rd floor, Zone: 1

Contributed Session 513

Chair: Ulf Friedrich, TU Munich, DE

1 - Algebraic Geometry and Integer Programmings in Cooperative Game Theory

Speaker: Tri-Dung Nguyen, University of Southampton, GB, talk 629

2 - A hierarchy of cutting plane operators based on lineality spaces

Speaker: Wolfgang Keller, Otto-von-Guericke University, DE, talk 854

3 - A power series algorithm for non-negative IP

Speaker: Ulf Friedrich, TU Munich, DE, talk 1021

Polynomial Time Solvable Problems and Complete Descriptions

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 43 Building: C, 3rd floor, Zone: 1 CONTRIBUTED SESSION 520 Chair: Andreas Bärmann, FAU Erlangen-Nürnberg, DE

1 - Extreme points for scheduling around a common due date

Speaker: A-E Falq, LIP6, FR, talk 870

Co-Authors: Pierre Fouilhoux, Safia Kedad-Sidhoum,

2 - On Integer Programming and Convolution Speaker: Lars Rohwedder, University of Kiel, DE, talk 846 Co-Authors: *Klaus Jansen*,

3 - The Clique Problem with Multiple-Choice Constraints and Two Polynomial Subcases

Speaker: Andreas Bärmann, FAU Erlangen-Nürnberg, DE, talk 1176

Co-Authors: Patrick Gemander, Maximilian Merkert, Oskar Schneider,

Production Planning

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCHEDULING - Th 3:15pm-4:45pm, Format: 3x30 min Room: Salle 18 Building: I, 1st floor, Zone: 7 CONTRIBUTED SESSION 531 Chair: Michel Siemon, RWTH Aachen, DE

1 - ISO-PESP - A PESP Variant for Minimizing the Cycle Time of Production Lines

Speaker: Tobias Hofmann, TU Chemnitz, DE, talk 576 Co-Authors: *Christoph Helmberg*,

2 - A matheuristic for the blocking job shop problem with a tardiness objective

Speaker: Julia Lange, OvG-Universität Magdeburg, DE, talk 1331 Co-Authors: *Reinhard Bürgy*,

3 - Value-based End-to-End Production Planning in Non-Ferrous Metal Industry

Speaker: Michel Siemon, RWTH Aachen, DE, talk 1568 Co-Authors: *Max Schiffer*, *Grit Walther*,

Polynomial and tensor optimization II

CONTINUOUS OPTIMIZATION NLP - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle 05 Building: Q, 1st floor, Zone: 11 INVITED SESSION 6 **Organizer:** Jiawang Nie, Univ. of California San Diego, US

1 - Computing invariant measures with the Lasserre hierarchy

Speaker: Didier Henrion, LAAS-CNRS Univ. Toulouse, FR, talk 227

2 - Completely positive tensor recovery with minimal nuclear value

Speaker: Anwa Zhou, Shanghai University, CN, talk 9 Co-Authors: *Jinyan Fan*,

3 - Phaseless rank of a matrix

Speaker: João Gouveia, University of Coimbra, PT, talk 297 Co-Authors: *António Goucha*,

4 - A Complete Semidefinite Algorithm for Detecting Copositive Matrices and Tensors

Speaker: Xinzhen Zhang, Tianjin University, CN, talk 10

Recent Advances in Conic Programming III

CONTINUOUS OPTIMIZATION SDP - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle AURIAC Building: G, 1st floor, Zone: 6 INVITED SESSION 84 **Organizer:** Masakazu Muramatsu, UEC, JP

1 - A path-following method for semidefinite programming without Slater condition

Speaker: Makoto Yamashita, Tokyo Institute of Technology, JP, talk 166

Co-Authors: Kei Takemura,

2 - A Majorized Newton-CG ALM for Linearly Constrained Convex Programming

Speaker: Tang Peipei, Zhejiang University City Colle, CN, talk 122

Co-Authors: Chengjing Wang,

3 - Analysis of Positive Systems by Semidefinite and Copositive Programming

Speaker: Yoshio Ebihara, Kyoto University, JP, talk 441 4 - Acceleration of the Lagrangian-DNN method for a class of QOPs

Speaker: Yuzhu Wang, University of Tsukuba, JP, talk 443 Co-Authors: *Akiko Yoshise*,

Approximation Algorithms for Optimization under Uncertainty

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Th 5:00pm-6:30pm, Format: 3x30 min Room: LEYTEIRE Building: E, 3rd floor, Zone: 1

Invited Session 95

Organizer: Marc Uetz, University of Twente, NL

1 - Prophet Inequalities Made Easy: Stochastic Opt. by Pricing Non-Stochastic Inputs

Speaker: Thomas Kesselheim, University of Bonn, DE, talk 816

Co-Authors: Paul Dütting, Michal Feldman, Brendan Lucier,

2 - Hiring Secretaries over Time: The Benefit of Concurrent Employment

Speaker: Max Klimm, HU Berlin, DE, talk 909

Co-Authors: Yann Disser, John Fearnley, Martin Gairing, Oliver Göbel, Daniel Schmand, Alexander Skopalik, Andreas Tönnis,

3 - Greed is Good - Online Algorithms for Stochastic Unrelated Machine Scheduling

Speaker: Marc Uetz, University of Twente, NL, talk 837 Co-Authors: Varun Gupta, Benjamin Moseley, Qiaomin Xie,

Large-scale combinatorial optimization implementations

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle 9 Building: N, 4th floor, Zone: 12

INVITED SESSION 96 **Organizer:** Aaron Archer, Google, US

1 - Lost in Translation: Production Code Efficiency

Speaker: Andrew Goldberg, Amazon.com, US, talk 641 2 - Distributed Balanced Partitioning via Linear Embedding

Speaker: Kevin Aydin, Google Inc, US, talk 908 Co-Authors: *Hossein Bateni*, *Vahab Mirrokni*,

3 - High Quality Graph and Hypergraph Partitioning Speaker: Christian Schulz, University Vienna, AT, talk 545 Co-Authors: *Sebastian Schlag*, *Peter Sanders*,
4 - Solving Coverage Problems on Massive Data Speaker: Hossein Bateni, Google Inc., US, talk 779

Co-Authors: *Hossein Esfandiari*, *Vahab Mirrokni*,

Robust Optimization under Data Uncertainty

OPTIMIZATION UNDER UNCERTAINTY ROBUST - Th 5:00pm-6:30pm, Format: 3x30 min Room: DENIGES Building: C, Ground Floor, Zone: 5 INVITED SESSION 98

Organizer: Omid Nohadani, Northwestern University, US

1 - Uncertain Data Envelopment Analysis

Speaker: Matthias Ehrgott, Lancaster University, GB, talk 299

Co-Authors: Allen Holder, Omid Nohadani,

2 - Wasserstein Distributionally Robust Kalman Filtering Speaker: Soroosh Shafieezadeh, EPFL, CH, talk 1449

Co-Authors: Viet Anh Nguyen, Peyman Mohajerin Esfaha, Daniel Kuhn,

3 - Appointment Scheduling Under Time-Dependent Patient No-Show Behavior

Speaker: Zhenzhen Yan, Nanyang Technological Universi, SG, talk 928

Co-Authors: Qingxia Kong, Shan Li, Nan Liu, Chung Piaw Teo,

Convexification and more (II)

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Th 5:00pm-6:30pm, Format: 3x30 min Room: DURKHEIM Building: A, 3rd floor, Zone: 1

INVITED SESSION 106

Organizer: Akshay Gupte, Clemson University, US

1 - Binary Programming with Semilinear Elliptic PDEconstraints

Speaker: Christoph Buchheim, TU Dortmund, DE, talk 374 Co-Authors: *Renke Kuhlmann, Christian Meyer*,

2 - Using algebraic structure to accelerate polyhedral approximation

Speaker: Christopher Coey, MIT, US, talk 692 Co-Authors: Juan Pablo Vielma,

3 - Quadratic optimization with M-matrices and semicontinuous variables

Speaker: Andres Gomez, University of Pittsburgh, US, talk 220

Co-Authors: Alper Atamturk,

Efficient Semismooth Newton Methods for Large Scale Statistical Optimization Problems

CONTINUOUS OPTIMIZATION

NonSmooth - Th 5:00pm-6:30pm, Format: 3x30 min Room: Salle LC4 Building: L, Intermediate 1, Zone: 9

INVITED SESSION 123 Organizer: Defeng Sun, Hong Kong Polytechnic Univ, HK

1 - Efficient sparse Hessian based algorithms for the clustered lasso problem

Speaker: Meixia Lin, NUS, SG, talk 497
Co-Authors: *Defeng Sun, Kim-Chuan Toh, Yong-Jin Liu*,
2 - An efficient algorithm for solving large scale sparse group Lasso problems

Speaker: Yangjing Zhang, NUS, SG, talk 449

Co-Authors: Ning Zhang, Defeng Sun, Kim-Chuan Toh,

3 - On the efficient computation of the projector over the Birkhoff polytope

Speaker: Defeng Sun, Hong Kong Polytechnic Univ, HK, talk

Equilibrium and Optimization in Energy Markets

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Th 5:00pm-6:30pm, Format: 3x30 min Room: Salle DENUCE Building: Q, Ground Floor, Zone: 8

INVITED SESSION 151 Organizer: Asgeir Tomasgard, NTNU, NO

1 - Bilevel Linear Programming Investment Problems Lower-Level Primal and Dual Variables

Speaker: Steven Gabriel, University of Maryland and NTNU, US, talk 1223

Co-Authors: Henrik Bylling, Trine Boomsma,

2 - The Flow-Based Market Coupling Model and the Bidding Zone Configuration

Speaker: Endre Bjorndal, Norwegian School of Economics, NO, talk 1457

Co-Authors: Mette Bjorndal, Hong Cai,

3 - A European power market model with short- and longterm uncertainty

Speaker: Asgeir Tomasgard, NTNU, NO, talk 1391 Co-Authors: *Hector Marañón-Ledesma*,

VU-decomposition techniques for nonsmooth optimization

CONTINUOUS OPTIMIZATION VARIAT - Th 5:00pm-6:30pm, Format: 3x30 min Room: Salle 06 Building: Q, 1st floor, Zone: 11 INVITED SESSION 158

Organizer: Claudia Sagastizabal, Unicamp, BR

1 - An epsilon-VU algorithm with superlinear convergence

Speaker: Shuai Liu, University of Campinas, BR, talk 481 Co-Authors: *Claudia Sagastizabal, Mikhail Solodov*,

2 - A derivative-free \mathcal{VU} -algorithm for convex finite-max problems

Speaker: Claudia Sagastizabal, Unicamp, BR, talk 30 Co-Authors: *Warren Hare, Chayne Planiden*,

3 - A Fast Gradient Sampling-like Method for Solving Nonsmooth Optimization Problems

Speaker: Lucas Simões, University of Campinas, BR, talk 477

Co-Authors: Elias Helou, Sandra Santos,

Combinatorial robust optimization I

OPTIMIZATION UNDER UNCERTAINTY ROBUST - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle 37 Building: B, Intermediate, Zone: 4 INVITED SESSION 167 Organizer: Marc Goerigk, Lancaster University, GB

1 - Solving the Robust Capacitated Vehicle Routing Problem Under Demand Uncertainty

Speaker: Artur Pessoa, Univ. Federal Fluminense, BR, talk 302

Co-Authors: Michael Poss, Ruslan Sadykov, Francois Vanderbeck,

2 - Approximating combinatorial optimization problems with the OWA criterion

Speaker: Marc Goerigk, Lancaster University, GB, talk 987 Co-Authors: Adam Kasperski, Pawel Zielinski, Andre Chassein,

3 - Reformulations for Robust Lot-Sizing Problem with Remanufacturing

Speaker: Oyku Naz Attila, University of Strathclyde, GB, talk 1103

Co-Authors: Agostinho Agra, Kerem Akartunali, Ashwin Arulselvan,

4 - ast robust shortest path computations

Speaker: Christoph Hansknecht, TU Braunschweig, DE, talk 1020

Co-Authors: Sebastian Stiller, Alexander Richter,

Matching Problems

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle 36 Building: B, Intermediate, Zone: 4

INVITED SESSION 175

Organizer: Sergio García Quiles, University of Edinburgh, GB

1 - Stable Matching with Proportionality Constraints

Speaker: Thanh Nguyen, Purdue University, US, talk 509 Co-Authors: *Rakesh Vohra*,

2 - Mathematical models for stable marriage problems with ties

Speaker: Maxence Delorme, University of Edinburgh, GB, talk 866

Co-Authors: Sergio García Quiles, David Manlove, Jacek Gondzio, Joerg Kalcsics, William Pettersson,

3 - Improvements in Kidney Exchange Programme Models for Large-Scale Programmes

Speaker: William Pettersson, University of Glasgow, GB, talk 1095

Co-Authors: David Manlove, Maxence Delorme, Sergio García Quiles, Joerg Kalcsics,

4 - Stable project allocation under distributional constraints

Speaker: Peter Biro, Hungarian Academy of Sciences, HU, talk 1369

Co-Authors: Kolos Goston, Richárd Szántó,

Different faces of nonsmoothness in optimization

CONTINUOUS OPTIMIZATION

NonSmooth - Th 5:00pm-6:30pm, Format: 3x30 min Room: Salle 8 Building: N, 4th floor, Zone: 12 INVITED SESSION 212 **Organizer:** Tim Hoheisel, McGill, CA

1 - Global optimization of GSIPs using disjunctive programming Speaker: Oliver Stein, KIT, DE, talk 203

Co-Authors: Peter Kirst,

2 - Superlinear Convergence of QN Methods for PLQ Convex-Composite Optimization

Speaker: Abraham Engle, University of Washington, US, talk 1638

Co-Authors: James Burke,

3 - Applications of the generalized matrix-fractional function

Speaker: Tim Hoheisel, McGill, CA, talk 1109 Co-Authors: *James Burke*,

Advances in Integer Programming

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle 43 Building: C, 3rd floor, Zone: 1

INVITED SESSION 227 Organizer: Robert Hildebrand, Virginia Tech, US

On the diameter of the fractional matching polytope Speaker: Laura Sanità, University of Waterloo, CA, talk 929 Treewidth-based Extension Complexity Lower Bounds Speaker: Gonzalo Muñoz, Polytechnique Montreal, CA, talk 208

Co-Authors: Yuri Faenza, Sebastian Pokutta,
3 - On valid inequalities for knapsack polytopes
Speaker: Igor Malinovic, EPFL, CH, talk 1502
Co-Authors: Yuri Faenza, Monaldo Mastrolilli, Ola Svensson,

4 - Polynomial Integer Programming in Fixed Dimension and Applications in FPT

Speaker: Robert Hildebrand, Virginia Tech, US, talk 587

Computational OR in Julia/JuMP

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - Th 5:00pm-6:30pm, Format: 3x30 min Room: PITRES Building: O, Ground Floor, Zone: 8 INVITED SESSION 238 **Organizer:** Miles Lubin, Google, US

1 - JuMP 0.19 and MathOptInterface: new abstractions for mathematical optimization

Speaker: Miles Lubin, Google, US, talk 1175
2 - Optimizing Public Policy: School Transportation and Start Times in Boston.
Speaker: Sebastien Martin, MIT, US, talk 1376
Co-Authors: Dimitris Bertsimas, Arthur Delarue,

3 - Capstan: Next-Generation Automatic Differentiation for Julia

Speaker: Jarrett Revels, MIT, US, talk 553

Theoreticals and practicals aspects of decomposition algorithms for multistage stochastic problems: 2

OPTIMIZATION UNDER UNCERTAINTY STOCH - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle 32 Building: B, Ground Floor, Zone: 5 INVITED SESSION 247

Organizer: Vincent Leclère, ENPC, FR

1 - The practitioners guide to SDDP: lessons from SDDP.jl Speaker: Oscar Dowson, University of Auckland, NZ, talk 439

2 - Decomposing Dynamic Programming equations: from global to nodal value functions

Speaker: François Pacaud, CERMICS, FR, talk 615 Co-Authors: *Carpentier Pierre*, *Michel De Lara*,

3 - Energy portfolio optimization for Brazilian distribution companies: a multistage Speaker: Vitor de Matos, Plan4, BR, talk 1373

Co-Authors: Guilherme Ramalho, Paulo Larroyd, Rodrigo Antunes, Luis Baran, Julia Paul, Marcos Coelho,

4 - Stochastic programming framework for risk aversion representation with SDDP

Speaker: Luiz Carlos da Costa Junior, PSR, BR, talk 1498 Co-Authors: *Raphael Chabar*, *Joaquim Dias Garcia*,

Approximation algorithms for combinatorial optimization problems

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Th 5:00pm-6:30pm, Format: 3x30 min Room: Salle 41 Building: C, 3rd floor, Zone: 1

INVITED SESSION 265

Organizer: Thomas Rothvoss, University of Washington, US

1 - Approximation Algorithms for Diverse Subset Selection Problems

Speaker: Mohit Singh, Georgia Institute of Technolog, US, talk 868

Co-Authors: Aleksander Nikolov, Weijun Xie, Uthaipon Tantipongpipat,

2 - Local Guarantees in Graph Cuts and Clustering

Speaker: Roy Schwartz, Technion, IL, talk 1153

Co-Authors: Moses Charikar, Neha Gupta,

3 - Scheduling Stochastic Jobs on Unrelated Machines

Speaker: Anupam Gupta, Carnegie Mellon University, US, talk 224

Co-Authors: Amit Kumar, Xiangkun Shen, Viswanath Nagarajan,

Relaxations in MINLP

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Th 5:00pm-6:30pm, Format: 3x30 min Room: Salle 34 Building: B, 1st floor, Zone: 3 CONTRIBUTED SESSION 280

Chair: Jan Kronqvist, Åbo Akademi University, FI

1 - Tight Convex Relaxations for Expansion Planning of Potential Driven Networks

Speaker: Ralf Lenz, Zuse Institute Berlin, DE, talk 1063 Co-Authors: *Felipe Serrano*,

2 - Using Regularization and Second Order Derivatives with Outer Approximation

Speaker: Jan Kronqvist, Åbo Akademi University, FI, talk 1362

Co-Authors: David Bernal, Ignacio Grossmann,

3 - The Supporting Hyperplane Optimization Toolkit for Convex MINLP

Speaker: Andreas Lundell, Åbo Akademi University, FI, talk 998

Co-Authors: Jan Kronqvist,

Applications in MINLP

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Th 5:00pm-6:30pm, Format: 3x30 min Room: Salle 35 Building: B, Intermediate, Zone: 4 CONTRIBUTED SESSION 283 Chair: Justo Puerto, University of Seville, ES

1 - Modeling and optimization of traffic at traffic-light controlled intersections

Speaker: Do Duc Le, OVGU Magdeburg, DE, talk 1319 Co-Authors: *Maximilian Merkert, Sebastian Sager, Stephan Sorgatz, Mirko Hahn,*

2 - Flow-based extended formulations for feasible traffic light controls

Speaker: Maximilian Merkert, OVGU Magdeburg, DE, talk 1295

Co-Authors: Gennadiy Averkov, Do Duc Le, Sebastian Sager,

3 - MINLP for pricing transaction costs in different models of portfolio selection

Speaker: Justo Puerto, University of Seville, ES, talk 972 Co-Authors: *Marina Leal-Palazon*,

Gas Network and Market Optimization

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Th 5:00pm-6:30pm, Format: 3x30 min Room: Salle 23 Building: G, 3rd floor, Zone: 6 INVITED SESSION 293 **Organizer:** Jonas Schweiger, Zuse Institute Berlin, DE

1 - Foresighted decision support for gas network operation

Speaker: Jonas Schweiger, Zuse Institute Berlin, DE, talk 856 2 - Controlling complex network elements by target values

Speaker: Felix Hennings, Zuse Institute Berlin, DE, talk 456 3 - Nonconvex Equilibrium Models for Gas Market Analvsis

Speaker: Julia Grübel, FAU Erlangen-Nürnberg, DE, talk 981 Co-Authors: Veronika Grimm, Martin Schmidt, Lars Schewe, Gregor Zöttl,

Recent Progress on Second-order Type Optimization Methods

CONTINUOUS OPTIMIZATION

RANDOMM - Th 5:00pm-6:30pm, Format: 3x20 min Room: Salle KC6 Building: K, Intermediate 1, Zone: 10

Invited Session 302

Organizer: Andre Milzarek, PKU, CN

1 - Inexact Successive Quadratic Approximation for Regularized Optimization

Speaker: Ching-pei Lee, Univ. of Wisconsin-Madison, US, talk 393

Co-Authors: Stephen Wright,

2 - Structured Quasi-Newton method For Optimization with Orthogonality Constraints

Speaker: Jiang Hu, Peking university, CN, talk 960 Co-Authors: Zaiwen Wen, Yaxiang Yuan,

3 - A stochastic semismooth Newton method for nonsmooth nonconvex optimization

Speaker: Andre Milzarek, PKU, CN, talk 958

Co-Authors: Xiantao Xiao, Shicong Cen, Zaiwen Wen, Michael Ulbrich,

First-order methods for large-scale convex problems II

Specific Models, Algorithms, and Software Learning - Th 5:00pm-6:30pm, Format: 4x20 min Room: FABRE Building: J, Ground Floor, Zone: 8

INVITED SESSION 318 Organizer: Stephen Vavasis, University of Waterloo, CA

1 - Convex Low Rank Semidefinite Optimization

Speaker: Madeleine Udell, Cornell, US, talk 770

Co-Authors: Lijun Ding, Volkan Cevher, Joel Tropp, Alp Yurtsever,

2 - Frank-Wolfe Splitting via Augmented Lagrangian Method

Speaker: Simon Lacoste-Julien, Université de Montréal, CA, talk 1514

Co-Authors: Gautheir Gidel, Fabian Pedregosa,

3 - Extending performance estimation beyond exact convex fixed-step methods

Speaker: Francois Glineur, UCLouvain, BE, talk 1072 Co-Authors: *Adrien Taylor*, *Théo Golvet*,

4 - Low-Storage Conditional Gradient Method for Low-Rank and Sparse Optimization

Speaker: Xuan Vinh Doan, The University of Warwick, GB, talk 1286

Co-Authors: Stephen Vavasis, Jimit Majmudar,

Advances in Reinforcement Learning Algorithms

Specific Models, Algorithms, and Software Learning - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle 16 Building: I, 2nd floor, Zone: 7

INVITED SESSION 329 Organizer: Lin Xiao, Microsoft Research, US

1 - Compressive Learning for Sequential Decision Process

Speaker: Mengdi Wang, Princeton University, US, talk 775 2 - Posterior sampling for reinforcement learning

Speaker: Shipra Agrawal, Columbia University, US, talk 1179

Co-Authors: Randy Jia,

3 - SBEED learning: Convergent control with nonlinear function approximation

Speaker: Lihong Li, Google, US, talk 535

Co-Authors: Bo Dai, Albert Shaw, Lin Xiao, Niao He, Zhen Liu, Jianshu Chen, Le Song,

4 - Zap Q-Learning: Fastest Convergent Q-learning

Speaker: Adithya M Devraj, University of Florida, US, talk 939

Co-Authors: Sean Meyn,

Variational Analysis 5

CONTINUOUS OPTIMIZATION VARIAT - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle ARNOZAN Building: Q, Ground Floor, Zone: 8

INVITED SESSION 371 Organizer: David Sossa, Universidad de O'Higgins, CL

1 - A global-local approach for stochastic programs with complementarity constraints

Speaker: Francisco Jara-Moroni, Northwestern University, US, talk 1436

Co-Authors: Andreas Waechter,

2 - Conical Regularization of Multiobjective Optimization Problems

Speaker: Miguel Sama, UNED, ES, talk 502

Co-Authors: Ruben López, Akhtar Khan, Baasansuren Jadamba,

3 - Complementarity problems with respect to Loewnerian cones

Speaker: David Sossa, Universidad de O'Higgins, CL, talk 1579

Co-Authors: Alberto Seeger,

4 - Relaxed Peaceman-Rachford Splitting Method: Convergence Study

Speaker: Chee Khian Sim, University of Portsmouth, GB, talk 485

Co-Authors: Renato Monteiro,

Approximation in dynamic programming

OPTIMIZATION UNDER UNCERTAINTY MARKOV - Th 5:00pm-6:30pm, Format: 3x30 min Room: Salle 31 Building: B, Ground Floor, Zone: 5 CONTRIBUTED SESSION 382 **Chair:** Philip Placek, CityBldr, US

1 - Dynamic Programming via a State Abstract Machine and Implementation

Speaker: Wolf Kohn, Veritone, US, talk 160
Co-Authors: Zelda Zabinsky,
2 - An Incremental Probability Model for Dynamic Systems
Speaker: Philip Placek, CityBldr, US, talk 163
Co-Authors: Wolf Kohn, Zelda Zabinsky, Jonathan Cross,

3 - A Stochastic Min-plus Algorithm for Deterministic
 Optimal Control

Speaker: Benoît Tran, CERMICS, FR, talk 1567 Co-Authors: *Marianne Akian, Jean-P. Chancelier*,

Planning

INVITED TALKS

INTERFACE - Th 5:00pm-6:30pm, Format: 4x20 min Room: SIGALAS Building: C, 2nd floor, Zone: 2

CONTRIBUTED SESSION 389 Chair: Jeanjean Antoine, Recommerce Group, FR

1 - Planning model for recommerce activities

Speaker: Jeanjean Antoine, Recommerce Group, FR, talk 1251

Co-Authors: Nabil Absi, Xavier Schepler,

2 - A Propagation Approach for Railway Rolling Stock Optimization

Speaker: Boris Grimm, Zuse Institute Berlin, DE, talk 1332 Co-Authors: *Ralf Borndörfer*, *Stanley Schade*, *Markus Reuther*, *Thomas Schlechte*,

3 - Real Size Exam Timetabling at Montpellier University (France)

Speaker: Eric Bourreau, LIRMM, FR, talk 687 Co-Authors: *Valentin Pollet*,

4 - An Hypergraph Model for the Rolling Stock Rotation Planning and Train Selection

Speaker: Mohamed Benkirane, IMB and SNCF, FR, talk 1599

Co-Authors: François Clautiaux, Boris Detienne, Jean Damay,

Medicine and Metabolic engineering

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCIENCES - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle LA4 Building: L, Basement, Zone: 8 CONTRIBUTED SESSION 396 Chair: Mahdi Doostmohammadi, University of Edinburgh, GB

1 - Model Predictive Control and Robust Optimization in Adaptive Radiation Therapy

Speaker: Michelle Boeck, KTH, SE, talk 1228

Co-Authors: Anders Forsgren, Kjell Eriksson,

2 - Improving a Dose-Volume Model for HDR Brachytherapy to Reduce Tumour Cold Spots

Speaker: Björn Morén, Linköping University, SE, talk 613 Co-Authors: *Torbjörn Larsson*, *ÅSa Carlsson Tedgren*,

3 - New bilevel formulations for optimizing flux bounds in metabolic engineering

Speaker: Amanda Smith, Univ. of Wisconsin-Madison, US, talk 303

Co-Authors: *Jim Luedtke*,

4 - MOMO - Multi-Objective Mixed integer Optimisation for metabolic engineering

Speaker: Mahdi Doostmohammadi, University of Edinburgh, GB, talk 519

Co-Authors: Ricardo Andrade, Joao Santos, Marie-France Sagot, Nuno Mira, Susana Vinga,

Vehicle Routing III

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LOGISTICS - Th 5:00pm-6:30pm, Format: 3x20 min Room: Salle 24 Building: G, 3rd floor, Zone: 6

CONTRIBUTED SESSION 413

Chair: Raquel Bernardino, CMAFCIO-FCUL, PT

1 - A hybrid algorithm for the family traveling salesman problem

Speaker: Raquel Bernardino, CMAFCIO-FCUL, PT, talk 821 Co-Authors: *Ana Paias*,

2 - Snow removal: Modeling and bounds by relaxation, heuristic and branch-and-bound

Speaker: Roghayeh Hajizadeh, Linköping University, SE, talk 1037

Co-Authors: Kaj Holmberg,

3 - Column Generation Based Local Search for Pickupand-Delivery problems

Speaker: Vitor Nesello, Université de Bordeaux, FR, talk 1577

Co-Authors: Francois Vanderbeck, Ruslan Sadykov, Artur Pessoa, Issam Tahiri,

Heuristics for combinatorial optimization problems

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle 39 Building: E, 3rd floor, Zone: 1

CONTRIBUTED SESSION 428

Chair: Evren Guney, Istanbul Arel University, TR

1 - A Matheuristic to the Firefighter Problem on Graphs Speaker: Cid de Souza, University of Campinas, BR, talk 598 Co-Authors: *Natanael Ramos, Pedro de Rezende*,

2 - Accelerated Best-first Search for Monotone Submodular Function Maximization

Speaker: Shinsaku Sakaue, NTT, JP, talk 680 Co-Authors: *Masakazu Ishihata*,

3 - A statistical stopping criterion for simulated annealing Speaker: Kazuya Fukuoka, Kyoto University, JP, talk 1225

Co-Authors: Hiroyuki Masuyama, Hiroshige Dan, Shunji Umetani,

4 - A Lagrangean Relaxation Based Heuristic For Efficient Influence Maximization

Speaker: Evren Guney, Istanbul Arel University, TR, talk 989

First Order Methods II

CONTINUOUS OPTIMIZATION NLP - Th 5:00pm-6:30pm, Format: 3x20 min Room: Salle KC7 Building: K, Intermediate 2, Zone: 10 CONTRIBUTED SESSION 437

Chair: Guillaume Berger, UCLouvain, BE

1 - Hölder-continuous gradient and first-order approximation accuracy

Speaker: Guillaume Berger, UCLouvain, BE, talk 231
Co-Authors: *P.-A. Absil, Raphaël Jungers, Yurii Nesterov,*2 - Accelerating Nonnegative Matrix Factorization Algorithms using Extrapolation
Speaker: Andersen Ang, UMONS, BE, talk 1240

Co-Authors: *Nicolas Gillis*, **3 - First-Order Primal-Dual Method for Nonlinear Con-**

vex Cone Programs Speaker: Lei Zhao, Shanghai Jiaotong University, CN, talk 1636

Co-Authors: DaoLi Zhu,

Ranking and recommendation

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle 22 Building: G, 2nd floor, Zone: 6

CONTRIBUTED SESSION 472 Chair: Aleksandra Burashnikova, Skoltech, RU

1 - Learning Online Ranking Models with a Sequential Optimization Algorithm

Speaker: Aleksandra Burashnikova, Skoltech, RU, talk 1208 2 - Integrating Individual and Aggregate Diversity in Top-N Recommendation

Speaker: Ibrahim Muter, University of Bath, GB, talk 1529 Co-Authors: *Ethem Canakoglu, Tevfik Aytekin*,

3 - A stochastic gradient descent algorithm for learning to rank

Speaker: Engin Tas, Afyon Kocatepe University, TR, talk 12 Co-Authors: *Senay Ozdemir*,

4 - The Recommender Problem with Convex Hulls Speaker: Jose Dula, University of Alabama, US, talk 338 Co-Authors: *Marie-Laure Bougnol*,

Cutting Planes

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle 44 Building: C, 3rd floor, Zone: 1

CONTRIBUTED SESSION 485 Chair: Fabrizio Marinelli, Univ. Politecnica delle Marche, IT

1 - A tighter ILP model and an improved branching for a load-balancing problem

Speaker: Edvin ABlad, Chalmers - Math. Sci., SE, talk 1338 2 - A Branch-and-Cut Approach for the Car Renter Salesman Problem

Speaker: Sávio Dias, UFRJ, BR, talk 375

Co-Authors: Luidi Simonetti, Pedro González,

3 - On Lifted Cover Inequalities: A New Lifting Procedure with Unusual Properties

Speaker: Georgia Souli, Lancaster University, GB, talk 294 Co-Authors: *Adam Letchford*,

4 - Exploiting star inequalities for the maximum quasiclique problem

Speaker: Fabrizio Marinelli, Univ. Politecnica delle Marche, IT, talk 838

Co-Authors: Andrea Pizzuti, Fabrizio Rossi,

Topics in multistage stochastic optimization

OPTIMIZATION UNDER UNCERTAINTY STOCH - Th 5:00pm-6:30pm, Format: 3x20 min Room: Salle 30 Building: B, Ground Floor, Zone: 5

Contributed Session 492 Chair: Felipe Beltrán, UFSC, BR

1 - Risk Minimization, Regret Minimization and the Progressive Hedging Algorithm

Speaker: Min Zhang, Curtin University, AU, talk 286 Co-Authors: *Jie Sun, Xinmin Yang, Qiang Yao*,

2 - Recursive Evaluate and Cut for combinatorial Multistage Programs

Speaker: David Hemmi, Monash University, Data61, AU, talk 1165

Co-Authors: Guido Tack, Mark Wallace,

3 - Stochastic dual dynamic programming with Chebyshev centers

Speaker: Felipe Beltrán, UFSC, BR, talk 1354

Co-Authors: Erlon Finardi, Welnigton de Oliveira, Guilherme Fredo,

Advances in DFO III

CONTINUOUS OPTIMIZATION DERFREE - Th 5:00pm-6:30pm, Format: 3x30 min Room: Salle 21 Building: G, Intermediate, Zone: 6

Contributed Session 496 Chair: Juan Meza, NSF, US

1 - Utilizing Non-Commutative Maps in Derivative-Free Optimization

Speaker: Jan Feiling, University of Stuttgart, DE, talk 965 Co-Authors: *Christian Ebenbauer*,

2 - Generalization of DIRECT algorithm supporting interactive problem redefinition

Speaker: Richard Carter, DNVGL, US, talk 1137

3 - Pattern Search Methods With Surrogates for Surface Structure Determination

Speaker: Juan Meza, NSF, US, talk 1683 Co-Authors: *Mark Abramson*,

Using coning programming in problems solving

CONTINUOUS OPTIMIZATION SDP - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle LC5 Building: L, Intermediate 1, Zone: 10

Contributed Session 497

Chair: Kurt Majewski, Siemens AG. CT RDA BAM ORD-DE, DE

1 - Linear Relaxation of Maximum k-Cut with Semidefinite-Based Constraints

Speaker: Vilmar Jefte De Sousa, Polytechnique Montreal, CA, talk 666

Co-Authors: Miguel Anjos, Sébastien Le Digabel,

2 - Feedback Controller and Topology Design for uncertain mechanical systems

Speaker: Anja Kuttich, TU Darmstadt, DE, talk 1249 Co-Authors: *Stefan Ulbrich*,

3 - Stabilization of the moment-based approach to prove global optimality for ACOPF

Speaker: Julie Sliwak, RTE, FR, talk 579

Co-Authors: Miguel Anjos, Lucas Letocart, Manuel Ruiz, Emiliano Traversi,

4 - Maximum Volume Inscribed Ellipsoids for Specific Absorption Rate Bounds in MRI

Speaker: Kurt Majewski, Siemens AG. CT RDA BAM ORD-DE, DE, talk 1152

Global Optimization 3

CONTINUOUS OPTIMIZATION GLOBAL - Th 5:00pm-6:30pm, Format: 4x20 min

Room: Salle 20 Building: G, 1st floor, Zone: 6

Contributed Session 503

Chair: Jean-Baptist Hiriart-Urruty, Paul Sabatier University, FR

1 - Tighter McCormick relaxations through subgradient propagation in a BaB framework

Speaker: Jaromil Najman, AVT.SVT RWTH Aachen University, DE, talk 1241

Co-Authors: Alexander Mitsos,

2 - Nonlinear branch-and-bound improvements for global optimization

Speaker: Simon Boulmier, LocalSolver, FR, talk 1266 **3 - JAVA implementation of a modular, population based global optimizer package**

Speaker: Mester Abigél, SZTE, HU, talk 1412 Co-Authors: *Balázs Bánhelyi*, *Tibor Csendes*, *Dániel Zom*-

bori, Balázs Lévai, László Pál, **4 - A rigorous MINLP solver using interval unions** Speaker: Tiago Montanher, University of Vienna, AT, talk

1633 Co-Authors: Mihály Markót, Arnold Neumaier,

Cutting Planes for Special Problems

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - Th 5:00pm-6:30pm, Format: 3x30 min Room: Salle 42 Building: C, 3rd floor, Zone: 1

CONTRIBUTED SESSION 517 Chair: Eleazar Madriz, UFRB, BR

1 - Separation problem for 2-partition inequalities

Speaker: Ruslan Simanchev, Omsk State University, RU, talk 1220

Co-Authors: Inna Urazova,

2 - Polyhedral results for position based scheduling of chains on a single machine

Speaker: Markó Horváth, MTA SZTAKI, HU, talk 263 Co-Authors: *Tamás Kis*,

3 - A Benders procedure for the b-complementary multisemigroup dual program.

Speaker: Eleazar Madriz, UFRB, BR, talk 659 Co-Authors: *Yuri Passos*,

Supply Chain

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCHEDULING - Th 5:00pm-6:30pm, Format: 4x20 min Room: Salle 18 Building: I, 1st floor, Zone: 7

Contributed Session 533

Chair: Daniel Ramón-Lumbierres, UPC, ES

1 - Using SAP Integrated Business Planning to Optimize Supply Chain

Speaker: Wei Huang, SAP, DE, talk 1533
2 - Complexity of processing-time dependent profit maximization scheduling problems
Speaker: Florian Fontan, G-SCOP, FR, talk 1300
Co-Authors: *Pierre Lemaire*, *Nadia Brauner*,
3 - Modelization and optimization of inventory management for palletization
Speaker: Abdessamad Ouzidan, UBS Lorient, Fives Syleps, FR, talk 1301
Co-Authors: *Marc Sevaux*, *Berenger David*,
4 - A multistage stochastic programming model for the strategic supply chain design

Speaker: Daniel Ramón-Lumbierres, UPC, ES, talk 1006 Co-Authors: F.-Javier Heredia, Robert Gimeno Feu, Julio Consola, Román Buil Giné,

Copositive and completely positive optimization

CONTINUOUS OPTIMIZATION

SDP - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 20 Building: G, 1st floor, Zone: 6 INVITED SESSION 24 **Organizer:** Olga Kuryatnikova, Tilburg University, NL

1 - A New Certificate For Copositivity

Speaker: Peter Dickinson, University of Twente, NL, talk 507 2 - Copositive Approach to adjustable robust optimization Speaker: Markus Gabl, UNIVIE, AT, talk 232 Co-Authors: *Immanuel Bomze*,

3 - Using Binary Programming to solve Copositive Opti-

mization Problems Speaker: Juan Vera, Tilburg University, NL, talk 1245

Co-Authors: Luis Zuluaga, Luis Zuluaga,

4 - Copositive certificates of non-negativity for polynomials on unbounded sets

Speaker: Olga Kuryatnikova, Tilburg University, NL, talk 729 Co-Authors: *Juan Vera*, *Luis Zuluaga*,

Power Systems Models with Discrete Decision Variables

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Fr 9:00am-10:30am, Format: 3x30 min Room: Salle 24 Building: G, 3rd floor, Zone: 6

INVITED SESSION 26 Organizer: Adolfo Escobedo, ASU, US

1 - Co-optimizing Energy and Ancillary Services

Speaker: Kai Pan, Hong Kong Polytechnic Univ., HK, talk 65 Co-Authors: Jianqiu Huang, Yongpei Guan,

2 - Stochastic Framework for Coordinated Operation of Multiple Microgrids

Speaker: Harsha Gangammanavar, Southern Methodist University, US, talk 922

3 - Generation of Angular Valid Inequalities for Transmission Expansion Planning

Speaker: Adolfo Escobedo, ASU, US, talk 58 Co-Authors: *Laura Escobar V., J. Kyle Skolfield*,

First order methods

CONTINUOUS OPTIMIZATION

NLP - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 05 Building: Q, 1st floor, Zone: 11

INVITED SESSION 27

Organizer: Gerardo Toraldo, Uni. Naples Federico II, IT

1 - Variable metric techniques for the inexact inertial forward-backward algorithm

Speaker: Simone Rebegoldi, Università di Ferrara, IT, talk 392

Co-Authors: Silvia Bonettini, Valeria Ruggiero,

2 - Combining IRN and gradient methods for TV-based Poisson image restoration

Speaker: Daniela di Serafino, Univ. Campania L. Vanvitelli, IT, talk 401

Co-Authors: Germana Landi, Marco Viola,

3 - An Active Set Algorithm for Polyhedral Constrained Optimization

Speaker: William Hager, University of Florida, US, talk 390 Co-Authors: *Hongchao Zhang, James Diffenderfer*,

4 - A line-search based proximal gradient method for (non-)convex optimization

Speaker: Ignace Loris, Université libre de Bruxelles, BE, talk 419

Challenging applications in DFO

CONTINUOUS OPTIMIZATION

DERFREE - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 21 Building: G, Intermediate, Zone: 6

CONTRIBUTED SESSION 38

Chair: Francesco Rinaldi, University of Padova, IT

1 - Global Direct Search and an application to Additive Manufacturing (3D Printing)

Speaker: A Ismael Vaz, University of Minho, PT, talk 473 Co-Authors: *Luis Nunes Vicente*,

2 - Derivative-free methods for complex black-box problems

Speaker: Stefano Lucidi, DIAG Sapienza Univ. of Rome, IT, talk 970

Co-Authors: Giampaolo Liuzzi, Andrea Credo, Francesco Rinaldi, Marco Villani,

3 - Parallel Hybrid Multiobjective Derivative-Free Optimization for Machine Learning

Speaker: Steven Gardner, SAS Institute, Inc., US, talk 1084 Co-Authors: Joshua Griffin, Oleg Golovidov, Patrick Koch, Scott Pope,

4 - Robust multi-objective optimization: Application to the recycling of plastics

Speaker: Lukas Adam, SUSTECH, CN, talk 1207 Co-Authors: *Frantisek Mach*,

Stochastic and Nonlinear Optimization II

CONTINUOUS OPTIMIZATION NLP - Fr 8:30am-10:30am, Format: 4x30 min Room: GINTRAC Building: Q, Ground Floor, Zone: 8 INVITED SESSION 48

Organizer: Jorge Nocedal, Northwestern University, US

1 - "Active-set complexity" of proximal-gradient: How long does it take to find the

Speaker: Mark Schmidt, UBC, CA, talk 482
2 - A Positive Outlook on Negative Curvature
Speaker: Daniel Robinson, Johns Hopkins University, US, talk 804

Co-Authors: Frank Curtis, Zachary Lubberts,

3 - Derivative-Free Optimization of Noisy Functions via Quasi-Newton Methods

Speaker: Albert Berahas, Northwestern University, US, talk 561

Co-Authors: Jorge Nocedal, Richard Byrd,

4 - Randomized Primal-Dual Algorithms for Asynchronous Distributed Optimization

Speaker: Lin Xiao, Microsoft Research, US, talk 472 Co-Authors: *Wei Yu*, *Qihang Lin*,

Matching and scheduling

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Fr 8:30am-10:30am, Format: 4x30 min Room: SIGALAS Building: C, 2nd floor, Zone: 2 INVITED SESSION 54 **Organizer:** Seffi Naor, Technion, IL

 Online Matching in Regular Graphs (and Beyond) Speaker: David Wajc, CMU, US, talk 433
 Co-Authors: Ilan Cohen, Seffi Naor,
 Coflow Scheduling and beyond
 Speaker: Samir Khuller, U. Maryland, US, talk 649
 Best of Two Local Models: Centralized local and Distributed local Algorithms
 Speaker: Guy Even, Tel-Aviv Univ., IL, talk 476
 Co-Authors: Moti Medina, Dana Ron,
 Competitive Algorithms for Online Multi-level Aggregation
 Speaker: Seffi Naor, Technion, IL, talk 436
 Co-Authors: Niv Buchbinder, Moran Feldman, Ohad Talmon,

Regularization and Iterative Methods in Large-Scale Optimization

CONTINUOUS OPTIMIZATION NLP - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle KC7 Building: K, Intermediate 2, Zone: 10 INVITED SESSION 59

Organizer: Jacek Gondzio, University of Edinburgh, GB

1 - Local analysis of a regularized primal-dual algorithm for NLP without SOSC

Speaker: Paul Armand, University of Limoges, FR, talk 611 Co-Authors: *Ngoc Nguyen Tran*,

2 - Implementing a smooth exact penalty function for nonlinear optimization

Speaker: Dominique Orban, GERAD and Ecole Polytechnique, CA, talk 1308

Co-Authors: Ron Estrin, Michael Saunders, Michael Friedlander,

3 - Dynamic primal-dual regularization in interior point methods

Speaker: Spyridon Pougkakiotis, University of Edinburgh, GB, talk 410

Co-Authors: Jacek Gondzio,

4 - Stabilized Optimization via an NCL Algorithm

Speaker: Michael Saunders, Stanford University, US, talk 605

Co-Authors: Ding Ma, Dominique Orban, Kenneth Judd,

Data-Driven Revenue Management with Customer Choice

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Fr 8:30am-10:30am, Format: 4x30 min Room: LEYTEIRE Building: E, 3rd floor, Zone: 1 INVITED SESSION 81

Organizer: Jacob Feldman, Washington University, US

1 - Constrained Assortment Optimization under the Markov Chain based Choice Model

Speaker: Antoine Desir, Google Inc., US, talk 8 Co-Authors: *Vineet Goyal, Danny Segev, Chun Ye*,

2 - Near-Optimal Approximations for Dynamic Assortment Planning under the MNL Model

Speaker: Danny Segev, University of Haifa, IL, talk 656 Co-Authors: *Ali Aouad*,

3 - Near-Optimal Approximations for Display Optimization Under MNL Preferences

Speaker: Ali Aouad, London Business School and Uber, GB, talk 672

Co-Authors: Danny Segev,

4 - New Results for Assortment Optimization under the Exponomial Choice Model

Speaker: Jacob Feldman, Washington University, US, talk 685

Co-Authors: Ali Aouad, Danny Segev,

New Developments in Optimization Modeling Software

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 22 Building: G, 2nd floor, Zone: 6

INVITED SESSION 101

Organizer: Robert Fourer, AMPL Optimization Inc, US

Enhanced Model Deployment and Solution in GAMS Speaker: Steven Dirkse, GAMS Development, US, talk 628 Adding Functions to AMPL

Speaker: David Gay, AMPL Optimization Inc., US, talk 219 **3 - Optimization Modeling in MATLAB**

Speaker: Paul Kerr-Delworth, MathWorks, GB, talk 73 Co-Authors: Aurèle Turnes, Steve Grikschat, Adam Hug, Mary Fenelon, Alan Weiss, Penny Anderson,

4 - Efficient model generation for decomposition methods in modeling languages

Speaker: Youngdae Kim, Univ. of Wisconsin-Madison, US, talk 1487

Co-Authors: Michael Ferris,

Optimal Control Problems with Discrete Switches

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Fr 9:00am-10:30am, Format: 3x30 min Room: Salle 34 Building: B, 1st floor, Zone: 3 INVITED SESSION 102 **Organizer:** Christian Kirches, TU Braunschweig, DE

1 - An Algorithm for Model-Predictive Control of Switched Nonlinear Dynamic Systems

Speaker: Adrian Bürger, Karlsruhe UAS, DE, talk 828 Co-Authors: Angelika Altmann-Dieses, Moritz Diehl, Clemens Zeile, Sebastian Sager,

2 - Approximation algorithms for MIOCPs with discontinuous switch costs

Speaker: Felix Bestehorn, TU Braunschweig, DE, talk 1043 Co-Authors: *Christian Kirches*,

3 - Numerical Modeling of Switched Systems with Jumps in Optimal Control Problems

Speaker: Matthias Schloeder, IAM Heidelberg University, DE, talk 570

Co-Authors: Ekaterina Kostina,

Machine Learning in State Estimation and Situational Awareness in Power Grids

Specific Models, Algorithms, and Software

ENERGY - Fr 8:30am-10:30am, Format: 4x30 min

Room: Salle DENUCE Building: Q, Ground Floor, Zone: 8

INVITED SESSION 134

Organizer: Deepjyoti Deka, Los Alamos National Lab, US

1 - Learning with end-users in distribution grids: Topology and parameter estimation

Speaker: Deepjyoti Deka, Los Alamos National Lab, US, talk 597

Co-Authors: Scott Backhaus, Deepjyoti Deka, Michael Chertkov,

2 - Online Learning of Power Transmission Dynamics

Speaker: Marc Vuffray, Los Alamos National Laboratory, US, talk 490

Co-Authors: Andrey Lokhov, Dmitry Shemetov, Deepjyoti Deka, Michael Chertkov,

3 - Machine learning with PMU signals

Speaker: Mauro Escobar, Columbia University, US, talk 596 Co-Authors: *Daniel Bienstock*, *Michael Chertkov*, *Apurv Shukla*,

4 - Convex polytope machine approach for transient stability assessment

Speaker: Dongchan Lee, MIT, US, talk 408

Co-Authors: Konstantin Turitsyn, Yury Maximov,

Stochastic Optimization and Variational Inequalites

CONTINUOUS OPTIMIZATION

VARIAT - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 06 Building: Q, 1st floor, Zone: 11 INVITED SESSION 149 **Organizer:** Hailin Sun, NJUST, CN

1 - Behavioural Function Equilibria and Approximation Schemes in Bayesian Games

Speaker: Huifu Xu, University of Southampton, GB, talk 679 Co-Authors: *Shaoyan Guo, Liwei Zhang*,

2 - Inference of two stage stochastic programs using SVI techniques

Speaker: Shu Lu, UNC-Chapel Hill, US, talk 282 Co-Authors: *Yang Yu*,

3 - Theory and algorithms for two-stage stochastic variational inequalities

Speaker: Xiaojun Chen, Hong Kong Polytechnic Univ., HK, talk 46

4 - Sample average approximation of two-stage stochastic generalized equation

Speaker: Hailin Sun, NJUST, CN, talk 44 Co-Authors: Xiaojun Chen, Alexander Shapiro,

Clustering.

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 36 Building: B, Intermediate, Zone: 4 INVITED SESSION 155

Organizer: Zac Friggstad, University of Alberta, CA

1 - A Near-Linear Approximation Scheme for Multicuts of Embedded Graphs

Speaker: Arnaud de Mesmay, CNRS, Gipsa-lab, FR, talk 857 Co-Authors: *Vincent Cohen-Addad*, *Éric Colin de Verdière*,

2 - On local search for clustering

Speaker: Vincent Cohen-Addad, CNRS and Sorbonne Université, FR, talk 689

3 - Approximation Schemes for Clustering With Outliers Speaker: Zac Friggstad, University of Alberta, CA, talk 1146 Co-Authors: *Kamyar Khodamoradi*, *Mohsen Rezapour*, *Mohammad Salavatipour*,

4 - Dynamic Facility Location via Exponential Clocks Speaker: Ashkan Norouzi Fard, EPFL, CH, talk 514 Co-Authors: *Ola Svensson, Hyung-chan An*,

Hybrid Algorithms and Matheuristics for VRP

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LOGISTICS - Fr 8:30am-10:30am, Format: 4x30 min Room: PITRES Building: O, Ground Floor, Zone: 8 INVITED SESSION 181 **Organizer:** Thibaut Vidal, PUC-Rio, BR

1 - Heuristics for vehicle routing problems: Sequence or set optimization?

Speaker: Thibaut Vidal, PUC-Rio, BR, talk 1261

Co-Authors: Túlio Toffolo, Tony Wauters,

2 - Single Liner Service Design with Speed Optimization

Speaker: Dominique Feillet, Mines Saint-Etienne and LIMOS, FR, talk 1359

Co-Authors: Nadjib Brahimi, Ali Cheaitou, Pierre Cariou,

3 - Heuristic pricing for the shortest path problem with resource constraints

Speaker: Jean Bertran Gauthier, Johannes Gutenberg University, DE, talk 1026

Co-Authors: Stefan Irnich,

4 - Garbage Collection Routing With Heterogeneous Fleet Speaker: Pedro Diniz, PUC-Rio, BR, talk 1508

Co-Authors: Rafael Martinelli, Marcus Poggi, Augusto Baffa, Thibaut Vidal,

Geometry in complexity analysis of non-smooth optimization methods

CONTINUOUS OPTIMIZATION

NonSmooth - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle LC4 Building: L, Intermediate 1, Zone: 9

INVITED SESSION 199 Organizer: Jalal Fadili, Normandie Univ-ENSICAEN, FR

1 - An ODE associated to the Nesterov acceleration scheme Speaker: Charles Dossal, INSA de Toulouse, FR, talk 1551 Co-Authors: *J-F Aujol, Aude Rondepierre*,

2 - Structured sparsity in inverse problems and support recovery

Speaker: Guillaume Garrigos, ENS Paris, FR, talk 202 Co-Authors: *Lorenzo Rosasco*, *Silvia Villa*,

3 - Error Bound-Based Convergence Rate Analysis of Newton-Type Methods

Speaker: Anthony So, CUHK, HK, talk 1535

Co-Authors: Man-Chung Yue, Zirui Zhou,

4 - Finite Activity Identification: Geometry and Algorithms

Speaker: Jalal Fadili, Normandie Univ-ENSICAEN, FR, talk 54

Co-Authors: Jerome Malick, Gabriel Peyre,

Recent Advances in Coordinate Descent and Constrained Problems

CONTINUOUS OPTIMIZATION

RANDOMM - Fr 9:00am-10:30am, Format: 3x30 min Room: Salle KC6 Building: K, Intermediate 1, Zone: 10

INVITED SESSION 208 Organizer: Ion Necoara, Univ. Politehnica Bucharest, RO

1 - Convergence Analysis of Inexact Randomized Iterative Methods

Speaker: Nicolas Loizou, University of Edinburgh, GB, talk 835

Co-Authors: Peter Richtarik,

2 - A Stochastic Penalty Model for Optimization with Many Convex Constraints
Speaker: Konstantin Mishchenko, KAUST, SA, talk 1264 Co-Authors: *Peter Richtarik, Ion Necoara*,

3 - Random coordinate descent methods for linearly constrained convex optimization

Speaker: Ion Necoara, Univ. Politehnica Bucharest, RO, talk 809

Co-Authors: Martin Takac,

Recent advances in Integer Optimization

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 43 Building: C, 3rd floor, Zone: 1

INVITED SESSION 218

Organizer: Alberto Del Pia, UW-Madison, US

1 - Computational evaluation of new MIP models for tree ensembles optimization

Speaker: Jean-Philipp Richard, UF, US, talk 1141 Co-Authors: *Bijan Taslimi, Jongeun Kim, Mohit Tawarmalani,*

2 - Strong duality for conic mixed-integer programs Speaker: Diego Moran, UAI, CL, talk 1195

Co-Authors: Burak Kocuk, Gustavo Angulo,

3 - An affine bounding method for two-stage stochastic integer programs

Speaker: Gustavo Angulo, Universidad Católica, CL, talk 1051

Co-Authors: Merve Bodur, Diego Moran,

4 - Aggregation-based cutting-planes for packing and covering integer programs

Speaker: Merve Bodur, University of Toronto, CA, talk 218 Co-Authors: *Alberto Del Pia, Santanu Dey, Marco Molinaro, Sebastian Pokutta*,

Recent progress in graph cut problems

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 41 Building: C, 3rd floor, Zone: 1

INVITED SESSION 244 Organizer: Karthekeyan Chandrasekaran, UIUC, US

1 - Approximation of Linear 3-Cut and related problems Speaker: Tamás Király, Eötvös University Budapest, HU, talk 125

2 - An FPT Algorithm Beating 2-Approximation for *k*-Cut Speaker: Euiwoong Lee, New York University, US, talk 170 Co-Authors: *Anupam Gupta, Jason Li*,

3 - An Integrality Gap for the Călinescu–Karloff–Rabani Relaxation for Multiway Cut

Speaker: Yury Makarychev, TTIC, US, talk 181
Co-Authors: *Haris Angelidakis, Pasin Manurangsi*,
4 - Hypergraph k-cut in randomized polynomial time
Speaker: Karthekeyan Chandrasekaran, UIUC, US, talk 196
Co-Authors: *Chao Xu, Xilin Yu*,

Theoreticals and practicals aspects of decomposition algorithms for multistage stochastic problems: 3

OPTIMIZATION UNDER UNCERTAINTY STOCH - Fr 8:30am-10:30am, Format: 4x30 min Room: DENIGES Building: C, Ground Floor, Zone: 5 INVITED SESSION 245

Organizer: Vincent Leclère, ENPC, FR

1 - Distributionally Robust Dual Dynamic Programming

Speaker: David Morton, Northwestern University, US, talk 435

Co-Authors: Daniel Duque,

2 - Stochastic dual dynamic integer programming

Speaker: Andy Sun, Georgia Institute of Technolog, US, talk 943

Co-Authors: Shabbir Ahmed, Jikai Zou,

3 - A deterministic algorithm for solving stochastic minimax dynamic programmes

Speaker: Regan Baucke, University of Auckland, NZ, talk 900

Co-Authors: Anthony Downward, Golbon Zakeri,

4 - Exact converging bounds for Stochastic Dual Dynamic Programming

Speaker: Vincent Leclère, ENPC, FR, talk 349 Co-Authors: *François Pacaud*, *Arnaud Lenoir*, *Jean-Philipp Chancelier*, *Carpentier Pierre*,

Algorithmic aspects of connectivity in network design

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 39 Building: E, 3rd floor, Zone: 1

INVITED SESSION 264 Organizer: Neil Olver, Vrije Universiteit Amsterdam, NL

1 - Beyond Metric Embedding: Approximating Group Steiner on Bounded Treewidth Graphs

Speaker: Bundit Laekhanukit, MPI-INF, DE, talk 190

Co-Authors: Syamantac Das, Daniel Vaz, Parinya Chalermsook,

2 - Approximating Node-Weighted k-MST on Planar Graphs

Speaker: Mateusz Lewandowski, University of Wroclaw, PL, talk 189

Co-Authors: Jaroslaw Byrka, Joachim Spoerhase,

3 - Improved Algorithms for MST and Metric-TSP Interdiction

Speaker: Andre Linhares, University of Waterloo, CA, talk 206

Co-Authors: Chaitanya Swamy,

4 - On the Integrality Gap of the Prize-Collecting Steiner Forest LP

Speaker: Kanstantsin Pashkovich, University of Waterloo, CA, talk 103

Co-Authors: Jochen Koenemann, Neil Olver, Chaitanya Swamy, Ramamoorthi Ravi, Jens Vygen,

Mixed Integer Programming Representability

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 35 Building: B, Intermediate, Zone: 4 INVITED SESSION 275 **Organizer:** Juan Pablo Vielma, MIT, US

1 - Mixed-integer linear representability, disjunctions, and Chvátal functions

Speaker: Chris Ryan, University of Chicago, US, talk 760
Co-Authors: Amitabh Basu, Kipp Martin, Guanyi Wang,
2 - A mixed-integer branching approach for very small formulations
Speaker: Joey Huchette, MIT, US, talk 781
Co-Authors: Juan Pablo Vielma,
3 - On the Size of Integer Programs with Sparse Constraints or Bounded Coefficients
Speaker: Marc Pfetsch, TU Darmstadt, DE, talk 766
Co-Authors: Christopher Hojny, Hendrik Lüthen,
4 - Mixed-integer convex representability

4 - Mixed-Integer convex representability

Speaker: Juan Pablo Vielma, MIT, US, talk 699 Co-Authors: *Miles Lubin, Ilias Zadik*,

Integer Programming and Crew Scheduling

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 44 Building: C, 3rd floor, Zone: 1 INVITED SESSION 292

Organizer: Francois Soumis, Polytechnique, CA

1 - Dynamic Constraints Aggregation for Crew Scheduling Problem

Speaker: Francois Soumis, Polytechnique, CA, talk 1173 2 - Integrated Crew Pairing and Personalized Crew Assignment Problems

Speaker: Vahid Zeighami, Polytechnique Montreal, CA, talk 1575

Co-Authors: Francois Soumis,

3 - Considering preferences and language skills in the airline crew pairings problem

Speaker: Frédéric Quesnel, École Polytechnique Montréal, CA, talk 1388

Co-Authors: Francois Soumis, Guy Desaulniers,

4 - Alternate Lagrangian Decomposition for Integrated Crew Scheduling Problem

Speaker: Mohammed Saddoune, Polytechnique Montréal, CA, talk 1555

Co-Authors: Vahid Zeighami,

Graphical Optimization Model 2

DISCRETE ÖPTIMIZATION & INTEGER PROGRAMMING CP - Fr 8:30am-10:30am, Format: 4x30 min Room: DURKHEIM Building: A, 3rd floor, Zone: 1 INVITED SESSION 297 **Organizer:** Maria Restrepo, Polytechnique Montreal, CA

1 - Recent algorithmic advances for combinatorial optimization in graphical models

Speaker: Simon de Givry, INRA, FR, talk 1524 Co-Authors: *Thomas Schiex*, *David Allouche*, *George Katsirelos*, *Abdelkader Ouali*, *Matthias Zytnicki*,

2 - Learning and using Graphical models to design new molecules

Speaker: Thomas Schiex, INRA, FR, talk 1587

Co-Authors: Sophie Barbe, David Simoncini, Jelena Vucinic, Manon Ruffini,

3 - Integrated staffing and scheduling for home healthcare Speaker: Maria Restrepo, Polytechnique Montreal, CA, talk 1027

Co-Authors: Louis-Martin Rousseau,

4 - Solving parallel machine scheduling problems with B and P and decision diagrams

Speaker: Daniel Kowalczyk, KU Leuven, BE, talk 736 Co-Authors: *Roel Leus*,

Optimal Control in Engineering Applications

CONTINUOUS OPTIMIZATION CONTROL - Fr 9:00am-10:30am, Format: 3x30 min Room: Salle AURIAC Building: G, 1st floor, Zone: 6 CONTRIBUTED SESSION 310 Chair: Maxime Grangereau, EDF, FR

1 - A Priori Error Estimates for a Linearized Fracture Control Problem

Speaker: Masoumeh Mohammadi, TU Darmstadt, DE, talk 824

Co-Authors: *Winnifried Wollner*,
2 - Stochastic optimal control of a battery : resolution with McKean-FBSDE
Speaker: Maxime Grangereau, EDF, FR, talk 984

Co-Authors: Emmanuel Gobet,

3 - Adaptive Multilevel Optimization of Fluid-Structure Interaction

Speaker: Johanna Biehl, TU Darmstadt, DE, talk 740 Co-Authors: *Stefan Ulbrich*,

Dimensionality reduction tools for learning: A sketchy session

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - Fr 9:00am-10:30am, Format: 3x30 min Room: FABRE Building: J, Ground Floor, Zone: 8 INVITED SESSION 313 **Organizer:** Robert Gower, Telecom Paristech, FR

1 - Sketched Learning with Random Feature Moments

Speaker: Nicolas Keriven, ENS, FR, talk 991

Co-Authors: Rémi Gribonval, Gabriel Peyre, Gilles Blanchard, Clarice Poon, Yann Traonmilin,

2 - Stochastic Subsampling for Factorizing Huge Matrices Speaker: Arthur Mensch, Inria, FR, talk 1481

Co-Authors: Julien Mairal, Bertrand Thirion, Gaël Varoquaux,

3 - Optimal kernel methods for large scale machine learning

Speaker: Alessandro Rudi, INRIA and ENS, FR, talk 730

Telecommunications

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE NETWORK - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 18 Building: I, 1st floor, Zone: 7 INVITED SESSION 361

Organizer: Edoardo Amaldi, Politecnico di Milano, IT

1 - An Optimization Model for Quadratic Flow Thinning Speaker: Michal Pioro, Warsaw Univ. of Techn., PL, talk 161 Co-Authors: *Ilya Kalesnikau*, *Michael Poss*,

2 - Approximating the Virtual Network Embedding Problem: Theory and Practice

Speaker: Matthias Rost, TU Berlin, DE, talk 1218

Co-Authors: Stefan Schmid,

3 - DDRA: Distributed Detection and Recovery Algorithm for Wireless Sensor Networks

Speaker: Chafiq Titouna, University of Batna2, DZ, talk 1544 4 - On the Virtual Network Embedding problem with substrate network expansion

Speaker: Edoardo Amaldi, Politecnico di Milano, IT, talk 1485

Co-Authors: Antonio Capone, Alessandro Cimbelli,

Variational Analysis 3

CONTINUOUS OPTIMIZATION VARIAT - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle ARNOZAN Building: Q, Ground Floor, Zone: 8

INVITED SESSION 369

Organizer: Johanna Burtscheidt, University of Duisburg-Essen, DE

1 - Stability and Small Application of a Risk Averse CP under Uncertainty

Speaker: Johanna Burtscheidt, University of Duisburg-Essen, DE, talk 543

2 - Variable selection with heredity principles by nonconvex optimization

Speaker: Hongbo Dong, Washington State University, US, talk 1540

3 - Adaptive Full Newton-step Infeasible Interior-Point Method for Sufficient HLCP

Speaker: Goran Lesaja, Georgia Southern University, US, talk 1046

Co-Authors: Florian Potra,

4 - Application of Optimization over the Pareto set in Machine Learning

Speaker: Henri Bonnel, University of New Caledonia, NC, talk 1660

Co-Authors: Christopher Schneider,

Algorithmic Game Theory II

OPTIMIZATION UNDER UNCERTAINTY GAME - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 30 Building: B, Ground Floor, Zone: 5

CONTRIBUTED SESSION 372 Chair: Margarida Carvalho, Polytechnique Montréal, CA

1 - Efficient Black-Box Reductions for Separable Cost Sharing

Speaker: Anja Huber, Augsburg University, DE, talk 961 2 - Finding and verifying the nucleolus of cooperative games

Speaker: Marton Benedek, University of Southampton, GB, talk 1343

Co-Authors: Tri-Dung Nguyen, Joerg Fliege,

3 - Perfect d-Proper Equilibrium and Its Determination Speaker: Chuangyin Dang, City University of Hong Kong, HK, talk 798

4 - Kidney Exchange Game

Speaker: Margarida Carvalho, Polytechnique Montréal, CA, talk 1035

Co-Authors: Andrea Lodi,

Advances in theory of dynamic programming

OPTIMIZATION UNDER UNCERTAINTY MARKOV - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 31 Building: B, Ground Floor, Zone: 5

Contributed Session 385 Chair: Stephane Gaubert, INRIA, FR

1 - On controllability of Markov chains: A Markov Decision Processes approach

Speaker: Mauricio Junca, Universidad de los Andes, CO, talk 601

Co-Authors: Daniel Avila,

2 - Stochastic Convex Optimization and Regret Bounds for Apprenticeship Learning

Speaker: Angeliki Kamoutsi, ETH ZURICH, CH, talk 1490 Co-Authors: *John Lygeros*,

3 - Randomized Dimension Reduction for Monte Carlo Simulations

Speaker: Nabil Kahale, ESCP Europe, FR, talk 574

4 - Dynamic programming over noncommutative spaces applied to switched systems

Speaker: Nikolas Stott, INRIA - Ecole Polytechnique, FR, talk 1676

Co-Authors: Stephane Gaubert,

Finance and Portfolio Optimization

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCIENCES - Fr 9:00am-10:30am, Format: 3x30 min Room: Salle LA4 Building: L, Basement, Zone: 8 INVITED SESSION 395

Organizer: Asaf Shupo, TD Bank, CA

1 - Auction under ROI constraints

Speaker: Benjamin Heymann, Criteo R & D, FR, talk 652 2 - Time Consistency of the Mean-Risk Problem Speaker: Gabriela Kovacova, Wirtschaftsuniversität Wien, AT, talk 273 Co-Authors: *Birgit Rudloff*,

3 - Building Optimal Strategies Using Multi-Objective Optimization Speaker: Asaf Shupo, TD Bank, CA, talk 664

Co-Authors: Daniel Ivan,

Decomposition Methods

CONTINUOUS OPTIMIZATION NLP - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 9 Building: N, 4th floor, Zone: 12

CONTRIBUTED SESSION 431 Chair: Roger Behling, UFSC, BR

1 - Circumcentering the Douglas-Rachford method

Speaker: Roger Behling, UFSC, BR, talk 6

Co-Authors: José Bello Cruz, Luiz Santos,

2 - On the linear convergence of the circumcentered-reflection method

Speaker: Luiz-Rafael Santos, UFSC, BR, talk 91 Co-Authors: *Yunier Bello-Cruz, Roger Behling*,

3 - Alternating Direction Method of Multipliers for kmeans Clustering

Speaker: Yuan Shen, Nanjing University of Finance, CN, talk 259

Co-Authors: Xin Liu,

4 - A Nonomonotone Decomposition Framework: convergence analysis and applications

Speaker: Leonardo Galli, Università di Firenze, IT, talk 1031 Co-Authors: *Alessandro Galligari, Marco Sciandrone*,

New Horizons in Robust Optimization

Optimization under Uncertainty

ROBUST - Fr 9:00am-10:30am, Format: 3x30 min Room: Salle 33 Building: B, Ground Floor, Zone: 5 INVITED SESSION 447

Organizer: Angelos Georghiou, McGill University, CA

1 - Data-driven Chance Constrained Programs over Wasserstein Balls

Speaker: Zhi Chen, Imperial College London, GB, talk 918

Co-Authors: Daniel Kuhn, Wolfram Wiesemann,

2 - Cardinality-Constrained Clustering and Outlier Detection via Conic Optimization

Speaker: Kilian Schindler, EPFL, CH, talk 974

Co-Authors: Napat Rujeerapaiboon, Daniel Kuhn, Wolfram Wiesemann,

3 - A robust optimization prospective to decentralized decision making

Speaker: Angelos Georghiou, McGill University, CA, talk 1423

Co-Authors: Georgios Darivianakis, John Lygeros,

Dealing with non-convexity

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 16 Building: I, 2nd floor, Zone: 7

Contributed Session 473

Chair: Damek Davis, Cornell University, US

1 - Smoothing Piecewise Linear Loss Functions for Deep Learning

Speaker: Leonard Berrada, University of Oxford, GB, talk 1294

Co-Authors: Pawan Kumar, Andrew Zisserman,

2 - Convergence rates of stochastic methods for nonsmooth nonconvex problems

Speaker: Damek Davis, Cornell University, US, talk 910 Co-Authors: *Dmitriy Drusvyatskiy*,

3 - Implicit Regularization in Nonconvex Statistical Estimation

Speaker: Cong Ma, Princeton University, US, talk 258 Co-Authors: *Kaizheng Wang*, *Yuxin Chen*, *Yuejie Chi*,

4 - Provable Convex Minimization under Non-convex Submodular-structured Sparsity

Speaker: Naoki Marumo, NTT, JP, talk 1193

Co-Authors: Tomoharu Iwata,

New methods for stochastic optimization and variational inequalities

OPTIMIZATION UNDER UNCERTAINTY STOCH - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 32 Building: B, Ground Floor, Zone: 5

CONTRIBUTED SESSION 491 Chair: Yunxiao Deng, Dept of ISE, USC, US

1 - Extragradient method for pseudomonotone stochastic variational inequalities

Speaker: Alfredo Iusem, IMPA, BR, talk 192
Co-Authors: *Philip Thompson*, *Alejandro Jofre*,
2 - An Accelerated Randomized Method for Smooth Stochastic Convex Optimization
Speaker: Eduard Gorbunov, MIPT, RU, talk 1287
Co-Authors: *Pavel Dvurechensky*, *Alexander Gasnikov*,

3 - Stochastic Analogues to Deterministic Optimization Methods

Speaker: Mihai Anitescu, Argonne National Laboratory, US,

talk 215

4 - Convex Stochastic Decomposition and Applications to Machine Learning

Speaker: Yunxiao Deng, Dept of ISE, USC, US, talk 1657 Co-Authors: *Suvrajeet Sen*,

Stability and scaling in conic programming

CONTINUOUS OPTIMIZATION

SDP - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle LC5 Building: L, Intermediate 1, Zone: 10 CONTRIBUTED SESSION 498

Chair: Diego Cifuentes, Max Planck Institute MPI MiS, DE

1 - Scaling points and reach for non-self-scaled barriers Speaker: Roland Hildebrand, LJK CNRS, FR, talk 496

2 - Stability Analysis for Parameterized Conic Programs Speaker: Hector Ramirez, Universidad de Chile, CL, talk 1623

3 - An improved projection and rescaling algorithm for conic feasible problems

Speaker: Wei Zhang, The logistics Institute NUS, SG, talk 288

Co-Authors: Kees Roos, Yanqin Bai,

DE, talk 1671

4 - On the local stability of semidefinite relaxations Speaker: Diego Cifuentes, Max Planck Institute MPI MiS,

Scheduling Applications

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCHEDULING - Fr 9:00am-10:30am, Format: 3x30 min Room: Salle 23 Building: G, 3rd floor, Zone: 6

Contributed Session 526 Chair: Mauricio de Souza, UFMG, BR

1 - Generating many optimal solutions in nurse scheduling

Speaker: Atsuko Ikegami, Seikei University, JP, talk 997 Co-Authors: *Wei Wu*, *Masaya Hasebe*, *Koji Nonobe*,

2 - Mixed Integer Programming Based Merge Search for Open Pit Block Scheduling

Speaker: Davaatseren Baatar, Monash University, AU, talk 702

Co-Authors: Dhananjay Thiruvady, Andreas Ernst, Angus Kenny, Mohan Krishnamoorthy, Gaurav Singh,

3 - Surgical scheduling under uncertainty by approximate dynamic programming

Speaker: Mauricio de Souza, UFMG, BR, talk 1024 Co-Authors: *Thiago Silva*,

Convergence analysis for non smooth optimization

CONTINUOUS OPTIMIZATION

NonSmooth - Fr 8:30am-10:30am, Format: 4x30 min Room: Salle 8 Building: N, 4th floor, Zone: 12

INVITED SESSION 557 Organizer: Robert Csetnek, University of Vienna, AT

1 - ADMM for monotone operators: convergence analysis and rates

Speaker: Robert Csetnek, University of Vienna, AT, talk 1012 Co-Authors: *Radu Ioan Bot*,

2 - Optimal Convergence Rates for Generalized Alternating Projections

Speaker: Mattias Fält, Lund University, SE, talk 1334 Co-Authors: *Pontus Giselsson*,

3 - Newton method for bilevel optimization: Theory+extensive numerical experiments

Speaker: Alain Zemkoho, University of Southampton, GB, talk 1434

4 - Inducing strong convergence into the asymptotic behaviour of proximal splitting

Speaker: Dennis Meier, University of Vienna, AT, talk 581 Co-Authors: *Radu Ioan Bot, Robert Csetnek*,

Majority judgment

INVITED TALKS

KEYNOTE - Fr 11:00am-12:00am, Format: 1x60 min Room: LEYTEIRE Building: E, 3rd floor, Zone: 1

INVITED SESSION 535

Organizer: Martine Labbé, Université Libre de Bruxelles, BE

1 - Majority judgment

Speaker: Michel Balinski, CNRS and Ecole Polytechnique, FR, talk 1576

Submodularity in mixed-integer quadratic and conic quadratic optimization

INVITED TALKS

KEYNOTE - Fr 11:00am-12:00am, Format: 1x60 min Room: DENIGES Building: C, Ground Floor, Zone: 5

INVITED SESSION 540 Organizer: Daniel Bienstock, Columbia University, US

1 - Submodularity in mixed-integer quadratic and conic quadratic optimization

Speaker: Alper Atamturk, UC Berkeley, US, talk 1667

Modern Branch-and-Cut Implementation

INVITED TALKS

KEYNOTE - Fr 11:00am-12:00am, Format: 1x60 min Room: BROCA Building: W, 3rd floor, Zone: 0

1 - Modern Branch-and-Cut Implementation

Speaker: Matteo Fischetti, University of Padua, IT, talk 1574

Tseng Memorial Lectureship in Continuous Optimization

INVITED TALKS

SEMI - Fr 11:00am-12:00am, Format: 1x60 min Room: Auditorium Building: Symph H, Gambetta, Zone: 0

INVITED SESSION 549

Organizer: Yaxiang Yuan, Chinese Academy of Sciences, CN

Bounds for quantum graph parameters by conic and polynomial optimization

INVITED TALKS

PLENARY - Fr 1:30pm-2:30pm, Format: 1x60 min Room: Auditorium Building: Symph H, Gambetta, Zone: 0

INVITED SESSION 553

Organizer: Frank Vallentin, University of Cologne, DE

1 - Bounds for quantum graph parameters by conic and polynomial optimization

Speaker: Monique Laurent, CWI and Tilburg University, NL, talk 311

Co-Authors: Sander Gribling, David de Laat, Sabine Burgdorf, Teresa Piovesan,

Estimation and Learning for Power Systems

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle DENUCE Building: Q, Ground Floor, Zone: 8

INVITED SESSION 25 Organizer: Javad Lavaei, UC Berkeley, US

1 - Performance Bound for Power System State Estimation via Conic Relaxations

Speaker: Yu Zhang, UC Santa Cruz, US, talk 113

Co-Authors: Ramtin Madani,

2 - Spurious Critical Points in Power System State Estimation

Speaker: Richard Zhang, UC Berkeley, US, talk 128

3 - Vulnerability analysis and robustification of power grid state estimation

Speaker: Ming Jin, UC Berkeley, US, talk 119

Interior Point Methods in Engineering Applications I

CONTINUOUS OPTIMIZATION NLP - Fr 3:15pm-4:45pm, Format: 3x30 min Room: GINTRAC Building: Q, Ground Floor, Zone: 8 INVITED SESSION 60 **Organizer:** Jacek Gondzio, University of Edinburgh, GB

1 - A (non)convex interior-point implementation tuned for radiotherapy optimisation

Speaker: Sebastiaan Breedveld, Erasmus MC, NL, talk 516
Co-Authors: *Rens van Haveren, Ben Heijmen*, **2 - Refined planning tools for external radiotherapy using interior point methods**Speaker: Lovisa Engberg, KTH, SE, talk 540
Co-Authors: *Anders Forsgren*, **3 - Computational Study of a Primal-Dual Penalty-Interior-Point Algorithm**Speaker: Renke Kuhlmann, Universität Bremen, DE, talk 79
Co-Authors: *Christof Büskens*,

Advances in the first-order methods for convex optimization

CONTINUOUS OPTIMIZATION NonSmooth - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 8 Building: N, 4th floor, Zone: 12

INVITED SESSION 73 Organizer: Angelia Nedich, ASU, US

1 - Accelerated curvature-aided incremental aggregated gradient method

Speaker: Hoi To Wai, Arizona State University, US, talk 310 Co-Authors: *Wei Shi, Cesar Uribe, Angelia Nedich, Anna Scaglione*,

2 - Fast Incremental Gradient Method for Optimization with Linear Constraints

Speaker: Tatiana Tatarenko, TU Darmstadt, DE, talk 322 Co-Authors: *Angelia Nedich*,

3 - Efficient Methods For Edge-weighted TV Models with Sphere Constraints

Speaker: Maryam Yashtini, Georgetown University, US, talk 377

Co-Authors: Sung Ha Kang, Wei Zhu,

Outer Convexification and Mixed-Integer Optimal Control

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 39 Building: E, 3rd floor, Zone: 1

INVITED SESSION 103

Organizer: Sebastian Sager, University Magdeburg, DE

1 - Improved Regularity Assumptions for Partial Outer Convexification of MIPDECOs

Speaker: Paul Manns, TU Braunschweig, DE, talk 833 Co-Authors: *Christian Kirches*,

2 - Combinatorial Integral Approximation Decompositions for Mixed-Integer Control

Speaker: Clemens Zeile, University of Magdeburg, DE, talk 505

Co-Authors: Tobias Weber, Sebastian Sager,

3 - Global optimization of ODE constrained network problems

Speaker: Oliver Habeck, TU Darmstadt, DE, talk 376 Co-Authors: *Marc Pfetsch, Stefan Ulbrich*,

Relative Entropy Optimization I

CONTINUOUS OPTIMIZATION

SDP - Fr 3:15pm-4:45pm, Format: 3x30 min

Room: Salle LC5 Building: L, Intermediate 1, Zone: 10 INVITED SESSION 111

Organizer: Venkat Chandrasekaran, Caltech, US

1 - Exactness of Relative Entropy Relaxations for Signomial Programs

Speaker: Riley Murray, Caltech, US, talk 1685

2 - Certificates of nonnegativity via conic lifts

Speaker: Hamza Fawzi, University of Cambridge, GB, talk 257

3 - Exponential cone in MOSEK: overview and applications

Speaker: Michal Adamaszek, MOSEK ApS, DK, talk 152

Advances in DFO IV

CONTINUOUS OPTIMIZATION DERFREE - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 21 Building: G, Intermediate, Zone: 6

Contributed Session 125

Chair: Katya Scheinberg, Lehigh University, US

1 - New methods for blackbox optimization via structured gradient estimation

Speaker: Krzysztof Choromanski, Google Brain Robotics, US, talk 599

Co-Authors: Mark Rowland, Vikas Sindhwani, Richard Turner, Adrian Weller,

2 - Scaling up and Randomizing Derivative Free Optimization for Machine Learning

Speaker: Katya Scheinberg, Lehigh University, US, talk 1079 Co-Authors: *Liyuan Cao*, *Hiva Ghanbari*,

3 - Globally Convergent Simulation-Based Optimization with Integer Variables

Speaker: Prashant Palkar, IIT Bombay, IN, talk 1463 Co-Authors: *Jeffrey Larson, Sven Leyffer, Stefan Wild*,

Algorithms for optimization and variational problems with possibly nonisolated solutions II

CONTINUOUS OPTIMIZATION VARIAT - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 06 Building: Q, 1st floor, Zone: 11

Invited Session 153

Organizer: Alexey Izmailov, Moscow State University, RU

1 - A globally convergent LP-Newton method for piecewise smooth constrained equation

Speaker: Mikhail Solodov, IMPA, BR, talk 236

Co-Authors: Andreas Fischer, Alexey Izmailov, Markus Herrich, Wladimir Scheck,

2 - Some Developments on Multiplier Methods in Cone-Constrained Optimization

Speaker: Daniel Steck, University of Wuerzburg, DE, talk 185

Co-Authors: Christian Kanzow,

3 - On the second order augmented Lagrangian method for MPCC

Speaker: Paulo Silva, University of Campinas, BR, talk 101 Co-Authors: *Roberto Andreani, Leonardo Secchin*,

Submodular Maximization.

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Fr 3:15pm-4:45pm, Format: 3x30 min Room: LEYTEIRE Building: E, 3rd floor, Zone: 1 INVITED SESSION 179 **Organizer:** Justin Ward, QMUL, GB

1 - Robust Maximization of Submodular Objs. in the Presence of Adversarial Removals

Speaker: Ilija Bogunovic, EPFL, CH, talk 306

Co-Authors: Slobodan Mitrovic, Volkan Cevher, Junyao Zhao, Jonathan Scarlett,

2 - Robust submodular maximization under matroid constraints

Speaker: Alfredo Torrico, Georgia Tech, US, talk 708 Co-Authors: *Mohit Singh, Sebastian Pokutta, Nika Haghtalab, Nima Anari, Seffi Naor,*

3 - Submodular Optimization: From Discrete to Continuous and Back

Speaker: Amin Karbasi, Yale, US, talk 1509

Intersection cuts, disjunctions, and valid inequalities

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Fr 3:15pm-4:45pm, Format: 3x30 min Room: DURKHEIM Building: A, 3rd floor, Zone: 1

INVITED SESSION 180 Organizer: Eli Towle, University of Wisconsin, US

1 - Outer-product-free Sets for Polynomial Optimization Speaker: Daniel Bienstock, Columbia University, US, talk 149

Co-Authors: Chen Chen, Gonzalo Muñoz,

2 - Synthetizing branch-and-bound information into cutting planes

Speaker: Egon Balas, Carnegie Mellon University, US, talk 1323

Co-Authors: Aleksandr Kazachkov,

3 - Intersection disjunctions for reverse convex sets Speaker: Eli Towle, University of Wisconsin, US, talk 691 Co-Authors: *Jim Luedtke*,

Risk-aware decision making

OPTIMIZATION UNDER UNCERTAINTY STOCH - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 32 Building: B, Ground Floor, Zone: 5 INVITED SESSION 251

Organizer: Minseok Ryu, University of Michigan, US

1 - Medical Homecare Delivery with Time-dependent Stochastic Travel Time

Speaker: Hideaki Nakao, University of Michigan, US, talk 1048

Co-Authors: Sigian Shen,

2 - A stochastic programming approach for optimization of latent disease detection

Speaker: Zheng Zhang, University of Michigan, US, talk 1178

Co-Authors: Brian Denton,

3 - Nurse staffing under uncertain demand and absenteeism

Speaker: Minseok Ryu, University of Michigan, US, talk 1123

Co-Authors: Ruiwei Jiang,

Combinatorial aspects of Linear Programming

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Fr 3:15pm-4:45pm, Format: 3x30 min Room: SIGALAS Building: C, 2nd floor, Zone: 2

INVITED SESSION 259 **Organizer:** Daniel Dadush, CWI, NL

1 - A Friendly Smoothed Analysis of the Simplex Method Speaker: Sophie Huiberts, CWI, NL, talk 158

Co-Authors: Daniel Dadush,

2 - Geometric Rescaling Algorithms for Submodular Function Minimization

Speaker: Giacomo Zambelli, London School of Economics, GB, talk 373

Co-Authors: Daniel Dadush, Laszlo Vegh, 3 - A Simpler and Faster Strongly Polynomial Algorithm for Generalized Max-Flow

Speaker: Neil Olver, Vrije Universiteit Amsterdam, NL, talk 99

Co-Authors: Laszlo Vegh,

Computational Integer Programming

I SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - Fr 3:15pm-4:45pm, Format: 3x30 min Room: PITRES Building: O, Ground Floor, Zone: 8 INVITED SESSION 273 Organizer: Domenico Salvagnin, University of Padova, IT

1 - Exploiting Degeneracy in MIP

Speaker: Tobias Achterberg, Gurobi, DE, talk 412 Co-Authors: Zonghao Gu, Edward Rothberg,

2 - Online Estimation of the Size of the Branch and Bound Tree in MIP Solvers

Speaker: Pierre Le Bodic, Monash University, AU, talk 197 3 - Multi-Row Intersection Cuts based on the Infinity Norm

Speaker: Alinson Xavier, Argonne National Laboratory, US, talk 858

Co-Authors: Ricardo Fukasawa, Laurent Poirrier,

Branch-and-cut techniques

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 35 Building: B, Intermediate, Zone: 4 INVITED SESSION 277 **Organizer:** Teodora Dan, Université de Montréal, CA

1 - A branch-and-bound algorithm for a bilevel locationallocation model

Speaker: Teodora Dan, Université de Montréal, CA, talk 1039 Co-Authors: *Andrea Lodi, Patrice Marcotte*,

2 - Improving branching for disjunctive models via approximate convex decompositions

Speaker: Lovis Anderson, Zuse Institute Berlin, DE, talk 1229

Co-Authors: Benjamin Hiller, Tom Walther,

3 - Learning with Cutting Planes

Speaker: Tu Nguyen, Johns Hopkins University, US, talk 638 Co-Authors: Amitabh Basu, Marco Molinaro, Sriram Sankaranarayanan,

Polyhedral theory in practice

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 34 Building: B, 1st floor, Zone: 3 INVITED SESSION 309 **Organizer:** Mourad Baiou, CNRS, FR

1 - The Stop Number Minimization Problem: polyhedral analysis

Speaker: Rafael Colares, LIMOS UCA, FR, talk 1438
Co-Authors: *Mourad Baiou*, *Hervé Kerivin*,
2 - On the nucleolus of shortest path and network disconnection games

Speaker: Francisco Barahona, IBM Research, US, talk 1431 Co-Authors: *Mourad Baiou*,

3 - On some network security games Speaker: Mourad Baiou, CNRS, FR, talk 1329 Co-Authors: *Francisco Barahona*,

Submodular and Incremental Maximization

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 43 Building: C, 3rd floor, Zone: 1 INVITED SESSION 340

Organizer: Martin Gross, RWTH Aachen, DE

1 - Multi-objective Maximization of Monotone Submodular Functions

Speaker: Rajan Udwani, MIT, US, talk 1089 2 - A New Approximation Guarantee for Submodular Maximization via Discrete Convexity

Speaker: Tasuku Soma, The university of Tokyo, JP, talk 1198 Co-Authors: *Yuichi Yoshida*,

3 - General Bounds for Incremental Maximization Speaker: Martin Gross, RWTH Aachen, DE, talk 1324 Co-Authors: *Aaron Bernstein, Yann Disser*,

Distributionally Robust Optimization: Models and Applications

OPTIMIZATION UNDER UNCERTAINTY ROBUST - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 33 Building: B, Ground Floor, Zone: 5

INVITED SESSION 355

Organizer: Selin Ahipasaoglu, SUTD, SG

1 - Heavy tails in a moment-constrained robust newsvendor model

Speaker: Bikramjit Das, Singapore University of Techno, SG, talk 1197

Co-Authors: *Karthik Natarajan*, *Anulekha Dhara*, **2 - Robust Extreme Event Analysis**

Speaker: Henry Lam, Columbia University, US, talk 913 Co-Authors: *Clementine Mottet*, *Xinyu Zhang*,

3 - Concentration versus Diversification in Portfolio Selection

Speaker: Selin Ahipasaoglu, SUTD, SG, talk 795

Nash equilibrium and Games 2

CONTINUOUS OPTIMIZATION VARIAT - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle ARNOZAN Building: Q, Ground Floor, Zone: 8

INVITED SESSION 366

Organizer: Giancarlo Bigi, Università di Pisa, IT

1 - Numerically tractable optimistic bilevel problems

Speaker: Lorenzo Lampariello, Roma Tre University, IT, talk 1122

Co-Authors: Simone Sagratella,

2 - Polyhedral complementarity algorithms for equilibrium problems

Speaker: Vadim Shmyrev, Sobolev Institute, RU, talk 262 3 - Semi-infinite programming via two player generalized Nash games and saddlepoints

Speaker: Giancarlo Bigi, Università di Pisa, IT, talk 967 Co-Authors: *Simone Sagratella*,

Scalarization, representation and the comparison of methods in Multiobjective Optimization

OPTIMIZATION UNDER UNCERTAINTY GAME - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 30 Building: B, Ground Floor, Zone: 5

Contributed Session 378 Chair: Tyler Perini, Georgia Tech, US

1 - New scalarization technique for solving multi-objective problems

Speaker: Kenza Oufaska, TIC Lab - ELIT - UIR, MA, talk 1336

Co-Authors: Khalid El Yassini, Mustapha Oudani, Tarik Zouadi,

2 - Approximation of the frontier for a biobjective MIP: comparison between methods

Speaker: Tyler Perini, Georgia Tech, US, talk 1620

Co-Authors: Diego Pecin, Natashia Boland, Martin Savelsbergh,

3 - Multi-Objective Optimization for the Compiler of Hard Real-Time Systems

Speaker: Kateryna Muts, TU Hamburg, DE, talk 834 Co-Authors: *Arno Luppold*, *Heiko Falk*,

Discrete stochastic dynamic programming

OPTIMIZATION UNDER UNCERTAINTY MARKOV - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 31 Building: B, Ground Floor, Zone: 5

Contributed Session 384

Chair: Adam Narkiewicz, Simiade, PL

1 - MILP formulations for discrete stochastic optimization (LIMIDs)

Speaker: Victor Cohen, Ecole des Ponts Paristech, FR, talk 1387

Co-Authors: Axel Parmentier, Vincent Leclère, Guillaume Obozinski, Joseph Salmon,

2 - LP relaxations for discrete stochastic optimization with variational inference

Speaker: Axel Parmentier, Ecole des Ponts Paristech, FR, talk 1384

Co-Authors: Victor Cohen, Vincent Leclère, Guillaume

Obozinski, Joseph Salmon,

3 - A sequential decision process with stochastic action Room: Salle 05 Building: Q, 1st floor, Zone: 11 sets

Speaker: Adam Narkiewicz, Simiade, PL, talk 26

Industrial dynamics and Environmental policy

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCIENCES - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle LA4 Building: L, Basement, Zone: 8

INVITED SESSION 392

Organizer: Inmaculada Garcia Fernandez, Universidad de Malaga, ES

1 - Dynamics of Environmental Policy

Speaker: Adriana Piazza, Universidad Adolfo Ibanez, CL, talk 840

Co-Authors: Hulya Eraslan,

2 - Challenges in Nutrient Recycling and Biogas Plant Localization

Speaker: Nils-Hassan Quttineh, Linköping University, SE, talk 1290

Co-Authors: Genevieve Metson, Uno Wennergren, Usman Akram,

3 - Use of dynamic programming in inventory control for perishable products

Speaker: Inmaculada Garcia Fernandez, Universidad de Malaga, ES, talk 428

Co-Authors: Eligius Hendrix, Gloria Ortega,

Vehicle Routing II

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LOGISTICS - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 24 Building: G, 3rd floor, Zone: 6

CONTRIBUTED SESSION 412

Chair: Chris Potts, University of Southampton, GB

1 - A Branch-Cut-and-Price Algorithm for the TSP with **Hotel Selection**

Speaker: Eduardo Uchoa, UFF, BR, talk 1467

Co-Authors: Luiz Santanna,

2 - Models and Algorithms for Dynamic Workforce **Scheduling and Routing**

Speaker: Chris Potts, University of Southampton, GB, talk 1612

Co-Authors: Fulin Xie, Tolga Bektas,

3 - Delivery robots, a transport innovation for the last mile Speaker: Stefan Schaudt, Institute of Transport Log., DE, talk 1451

Co-Authors: Uwe Clausen,

Nonlinear Optimization

CONTINUOUS OPTIMIZATION

NLP - Fr 3:15pm-4:45pm, Format: 3x30 min

CONTRIBUTED SESSION 429 Chair: Marc Steinbach, Leibniz Universität Hannover, DE

1 - On the Approximate Solutions of Augmented Subproblems within Sequential Methods

Speaker: Ademir Ribeiro, Federal University of Parana, BR, talk 924

Co-Authors: Mael Sachine, Sandra Santos,

2 - An Elastic Primal Active Set Method for Structured SOP

Speaker: Marc Steinbach, Leibniz Universität Hannover, DE, talk 1271

Co-Authors: Daniel Rose,

3 - A Dynamic Penalty Parameter Updating Strategy for SQP Methods

Speaker: Hao Wang, ShanghaiTech University, CN, talk 369 Co-Authors: Frank Curtis, James Burke, Jiashan Wang,

Distributionally Robust Optimization

Optimization under Uncertainty Robust - Fr 3:15pm-4:45pm, Format: 3x30 min Room: DENIGES Building: C, Ground Floor, Zone: 5

INVITED SESSION 446

Organizer: Daniel Kuhn, EPFL, CH

1 - Chebyshev Inequalities for Products of Random Variables

Speaker: Napat Rujeerapaiboon, EPFL, CH, talk 608 Co-Authors: Daniel Kuhn, Wolfram Wiesemann,

2 - Variational Theory for Optimization under Stochastic Ambiguity

Speaker: Johannes Royset, Naval Postgraduate School, US, talk 951

3 - Distributionally Robust Inverse Covariance Estimation Speaker: Daniel Kuhn, EPFL, CH, talk 820

Co-Authors: Viet Anh Nguyen, Peyman Mohajerin Esfaha,

Discrete methods for data centers and graphs

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 16 Building: I, 2nd floor, Zone: 7 **INVITED SESSION 477** Organizer: Aaron Archer, Google, US

1 - Overcommitment in Cloud Services - Bin Packing with **Chance Constraints**

Speaker: Philipp Keller, Facebook, US, talk 1383 Co-Authors: Maxime Cohen, Morteza Zadimoghaddam, Vahab Mirrokni,

2 - Cache-aware load balancing of data center applications via balanced partitioning

Speaker: Aaron Archer, Google, US, talk 528 Co-Authors: Kevin Aydin, Hossein Bateni, Vahab Mirrokni,

Aaron Schild, Ray Yang, Richard Zhuang, 3 - Compressing Graphs and Indexes with Recursive Chair: Mirjam Duer, Augsburg University, DE **Graph Bisection**

Speaker: Sergey Pupyrev, Facebook, US, talk 644 Co-Authors: Laxman Dhulipala, Igor Kabiljo, Brian Karrer, Giuseppe Ottaviano, Alon Shalita,

Classification, regression and cluster-

ing

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - Fr 3:15pm-4:45pm, Format: 3x30 min Room: FABRE Building: J, Ground Floor, Zone: 8

CONTRIBUTED SESSION 480 Chair: Dimitris Bertsimas, MIT, US

1 - Interpretable Machine Learning

Speaker: Dimitris Bertsimas, MIT, US, talk 1184 Co-Authors: Jack Dunn,

2 - Logistic Regression and Principal Curves Applied to **Discriminant Analysis**

Speaker: Inácio Guimarães, UTFPR Univ. Tec. Federal do PR, BR, talk 241

Co-Authors: Zaudir Dal'Cortivo, Jair Marques, 3 - Sufficient Conditions for L1-Norm Best-Fit Lines Speaker: James Brooks, Virginia Commonwealth Universi, US, talk 341 Co-Authors: Jose Dula,

Routing

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 44 Building: C, 3rd floor, Zone: 1

CONTRIBUTED SESSION 484 Chair: Cole Smith, Clemson University, US

1 - Solving the Time-Dependent TSP using Machine Learning Guidance

Speaker: Imke Joormann, TU Braunschweig, DE, talk 1159 Co-Authors: Christoph Hansknecht,

2 - Column generation for routing a fleet of plug-in hybrid vehicles

Speaker: Ann-Brith Strömberg, Chalmers Univ. of Technology, SE, talk 1453

Co-Authors: Jonathan Ruffieux, Peter Lindroth,

3 - The consistent path problem and binary decision diagrams

Speaker: Cole Smith, Clemson University, US, talk 275 Co-Authors: David Bergman, Leonardo Lozano,

Global Optimization 2

CONTINUOUS OPTIMIZATION GLOBAL - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 20 Building: G, 1st floor, Zone: 6

CONTRIBUTED SESSION 502

1 - Deterministic upper bounds in global minimization with equality constraints Speaker: Christian Füllner, KIT, DE, talk 971 Co-Authors: Peter Kirst, Oliver Stein,

2 - Nonconvex Optimization Approach to Equilibrium and **Bilevel Problems**

Speaker: Andrei Orlov, IDSTU SB RAS, RU, talk 492 3 - On Solving the General Fractional Problem via D.C.

Optimization

Speaker: Tatiana Gruzdeva, ISDCT SB RAS, RU, talk 489 Co-Authors: Alexander Strekalovskiy,

IP Practice III

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 36 Building: B, Intermediate, Zone: 4

CONTRIBUTED SESSION 507 Chair: Samuel Brito, UFOP, BR

1 - Valid inequalities for solving a stochastic lot-sizing problem with returns

Speaker: Franco Quezada, LIP6, FR, talk 1155 Co-Authors: Celine Gicquel, Safia Kedad-Sidhoum, 2 - Improving COIN-OR CBC MIP Solver Using Conflict Graphs

Speaker: Samuel Brito, UFOP, BR, talk 1389 Co-Authors: Haroldo Santos,

3 - Two Lower Bound Approaches for the Keyboard Layout Problem

Speaker: Maximilian John, MPII Saarbrücken, DE, talk 748 Co-Authors: Andreas Karrenbauer.

Extended Formulations

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 42 Building: C, 3rd floor, Zone: 1

CONTRIBUTED SESSION 514 Chair: Bartosz Filipecki, TU Chemnitz, DE

1 - An Extended Formulation for the 1-Wheels of the **Stable Set Polytope**

Speaker: Bernd Perscheid, Trier University, DE, talk 1018 Co-Authors: Sven de Vries, Ulf Friedrich,

2 - Extended formulations for higher-order spanning tree polytopes

Speaker: Mirjam Friesen, OvGU Magdeburg, DE, talk 503 Co-Authors: Volker Kaibel,

3 - Stronger Path-based Extended Formulation for the **Steiner Tree Problem**

Speaker: Bartosz Filipecki, TU Chemnitz, DE, talk 1158 Co-Authors: Mathieu Van Vyve,

Optimization in Energy

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 22 Building: G, 2nd floor, Zone: 6

CONTRIBUTED SESSION 515

Chair: Andrea Simonetto, IBM Research Ireland, IE

1 - Upstream-downstream dynamic programming for optimization of tree-shaped flows

Speaker: Christiano Lyra, University of Campinas, BR, talk 1200

2 - Mathematical Programming for Forecasting Supplies and Demands in Gas Networks

Speaker: Milena Petkovic, Zuse Institute Berlin, DE, talk 1058

Co-Authors: Inken Gamrath,

3 - Time-varying optimization: algorithms and engineering applications

Speaker: Andrea Simonetto, IBM Research Ireland, IE, talk 580

Optimization for Energy System Planning

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 23 Building: G, 3rd floor, Zone: 6

CONTRIBUTED SESSION 524 Chair: Andrew Liu, Purdue University, US

1 - Expansion Planning of a Small Size Electric Energy System

Speaker: Luigi Boffino, University of Bergamo, IT, talk 892 Co-Authors: Luis Baringo, Giorgia Oggioni,

2 - Regaining tractability in SDDP algorithms for large energy planning problems

Speaker: Marion Lemery, Edinburgh University, GB, talk 1059

Co-Authors: Ken McKinnon, Philippe Mahey,

3 - Capacity Expansion through Decentralized Optimization

Speaker: Andrew Liu, Purdue University, US, talk 752 Co-Authors: *Run Chen*,

Machine Scheduling 1

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCHEDULING - Fr 3:15pm-4:45pm, Format: 3x30 min Room: Salle 18 Building: I, 1st floor, Zone: 7

CONTRIBUTED SESSION 527 Chair: Renan Trindade, UFRJ, BR

1 - Maximum Probabilistic All-or-Nothing Paths and Critical Chains

Speaker: Noam Goldberg, Bar-Ilan University, IL, talk 1260

Co-Authors: Michael Poss,

2 - Max-Cost Scheduling with Controllable Processing Times and a Common Deadline

Speaker: Vitaly Strusevich, University of Greenwich, GB, talk 852

Co-Authors: Akiyoshi Shioura, Natalia Shakhlevich,

3 - An arc-flow formulation for minimizing makespan on a batch processing machine

Speaker: Renan Trindade, UFRJ, BR, talk 1653

Co-Authors: Olinto C. B. de Araújo, Marcia Fampa,

Moment relaxations for polynomial optimization with symmetries

CONTINUOUS OPTIMIZATION

NLP - Fr 5:00pm-6:30pm, Format: 3x30 min

Room: GINTRAC Building: Q, Ground Floor, Zone: 8

INVITED SESSION 10

Organizer: Markus Schweighofer, Universität Konstanz, DE

1 - Coloring the Voronoi tessellation of lattices

Speaker: Frank Vallentin, University of Cologne, DE, talk 40 Co-Authors: *David Madore*,

2 - Semidefinite optimization and arithmetic progressions Speaker: Cordian Riener, Arctic University of Norway, NO, talk 109

Co-Authors: Aron Rahman, Frank Vallentin,

3 - The upper density of sets avoiding norm one in the real space of dimension n

Speaker: Philippe Moustrou, University of Tromsø, NO, talk 83

Co-Authors: Christine Bachoc, Sinai Robins,

Computer-assisted analyses of optimization algorithms II

CONTINUOUS OPTIMIZATION SDP - Fr 5:00pm-6:30pm, Format: 3x30 min Room: Salle AURIAC Building: G, 1st floor, Zone: 6 INVITED SESSION 16 **Organizer:** Adrien Taylor, INRIA, FR

1 - SDP performance analysis of inexact Newton-type methods for self-concordant func

Speaker: Etienne De Klerk, Tilburg University, NL, talk 15 Co-Authors: *Adrien Taylor, Francois Glineur*,

2 - A Universal Interior Point Method Using Hit-and-Run Sampling

Speaker: Riley Badenbroek, Tilburg University, NL, talk 90 Co-Authors: *Etienne De Klerk*,

3 - Worst-case analyses of stochastic gradient-based methods using SDPs

Speaker: Adrien Taylor, INRIA, FR, talk 20 Co-Authors: *Francis Bach*,

Sparse Semidefinite Programming

CONTINUOUS OPTIMIZATION SDP - Fr 5:00pm-6:30pm, Format: 3x30 min Room: Salle LC5 Building: L, Intermediate 1, Zone: 10

INVITED SESSION 17

Organizer: Somayeh Sojoudi, UC Berkeley, US

1 - Sparse Semidefinite Relaxations of Communicability-Based Graph Partition Problem

Speaker: Martin Andersen, Technical Univ. of Denmark, DK, talk 123

2 - Lasserre hierarchy for large scale polynomial optimization

Speaker: Cedric Josz, UC Berkeley, US, talk 112 Co-Authors: *Daniel Molzahn*,

3 - Fast Algorithms for Max-Det Matrix Completion and Graphical Lasso

Speaker: Somayeh Sojoudi, UC Berkeley, US, talk 111 Co-Authors: *Salar Fattahi*, *Richard Zhang*,

Derivative-free global optimization algorithms

CONTINUOUS OPTIMIZATION DERFREE - Fr 5:00pm-6:00pm, Format: 2x30 min Room: Salle 21 Building: G, Intermediate, Zone: 6

CONTRIBUTED SESSION 41

Chair: Zaikun Zhang, Hong Kong Polytechnic Univ., HK

1 - Optimization with global surrogate and trust-region assisted local search

Speaker: Limeng Liu, Natl. Univ. Singapore, SG, talk 271 Co-Authors: *Christine Shoemaker*,

2 - Benchmarking Bayesian, Derivative-Free, and Stochastic Blackbox Algorithms

Speaker: Anne Auger, Inria and Ecole Polytechnique, FR, talk 555

Co-Authors: Dimo Brockhoff, Pierre Marion, Lin Lu, Nikolaus Hansen,

Subspace methods in NLP II

CONTINUOUS OPTIMIZATION

NLP - Fr 5:00pm-6:30pm, Format: 3x30 min

Room: Salle KC7 Building: K, Intermediate 2, Zone: 10 INVITED SESSION 44

Organizer: Panos Parpas, Imperial College London, GB

1 - Distributed Subspace Decomposition

Speaker: Panos Parpas, Imperial College London, GB, talk 384

2 - Subspace Frameworks for Eigenvalue Optimization Speaker: Emre Mengi, Koc University, TR, talk 430

3 - A block-coordinate Gauss-Newton method for nonlinear least squares

Speaker: Jaroslav Fowkes, University of Oxford, GB, talk 455

Co-Authors: Coralia Cartis,

Nonsmooth DC optimization with applications

CONTINUOUS OPTIMIZATION NonSmooth - Fr 5:00pm-6:30pm, Format: 3x30 min Room: Salle 8 Building: N, 4th floor, Zone: 12 CONTRIBUTED SESSION 46 **Chair:** Napsu Karmitsa, University of Turku, FI

1 - PIECEWISE LINEAR REGRESSION VIA NONS-MOOTH DC OPTIMIZATION

Speaker: Sona Taheri, Federation University, AU, talk 199 Co-Authors: *Adil Bagirov*, *Soodabeh Asadi*,

2 - Double Bundle Method for Nonsmooth DC Optimization

Speaker: Kaisa Joki, University of Turku, FI, talk 118

Co-Authors: Adil Bagirov, Napsu Karmitsa, Marko Mäkelä, Sona Taheri,

3 - Support vector machines for clusterwise linear regression

Speaker: Napsu Karmitsa, University of Turku, FI, talk 537 Co-Authors: Kaisa Joki, Adil Bagirov, Marko Mäkelä, Sona Taheri,

Mixed-Integer PDE-Constrained Optimization

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Fr 5:00pm-6:30pm, Format: 3x30 min Room: DURKHEIM Building: A, 3rd floor, Zone: 1

INVITED SESSION 63 Organizer: Sven Leyffer, Argonne National Laboratory, US

1 - Inversion of Convection-Diffusion PDE with Discrete Source

Speaker: Meenarli Sharma, IIT Bombay, IN, talk 1094 Co-Authors: Sven Leyffer, Lars Ruthotto,

2 - Shape optimization towards binary variables with PDE constraints

Speaker: Martin Siebenborn, Universität Hamburg, DE, talk 607

3 - Set-valued steepest descent for binary topology and control optimization

Speaker: Mirko Hahn, OvGU Magdeburg, DE, talk 1036 Co-Authors: *Sebastian Sager, Sven Leyffer*,

Primal-dual and ADMM algorithms for nonlinear programming

CONTINUOUS OPTIMIZATION

NLP - Fr 5:00pm-6:30pm, Format: 4x20 min Room: Salle 05 Building: Q, 1st floor, Zone: 11

INVITED SESSION 91

Organizer: Marco Sciandrone, Università di Firenze, IT

1 - Smooth Primal-Dual Coordinate Descent for Nonsmooth Convex Optimization

Speaker: Ahmet Alacaoglu, EPFL, CH, talk 347

Co-Authors: *Quoc Tran-Dinh*, *Olivier Fercoq*, *Volkan Cevher*,

2 - A primal-dual algorithm for general convex-concave saddle point problems

Speaker: N. Serhat Aybat, Penn State University, US, talk 767 Co-Authors: *Erfan Y. Hamedani*,

3 - ADMM with Plug-and-Play Regularizers: Convergence Guarantees and Applications

Speaker: Mario Figueiredo, Instituto de Telecomunicacoes, PT, talk 774

4 - Alternating minimization methods for constrained nonconvex optimization

Speaker: Giulio Galvan, Università di Firenze, IT, talk 631 Co-Authors: *Matteo Lapucci, Tommaso Levato, Marco Sciandrone*,

Global Optimization for nonconvex MINLPs

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Fr 5:00pm-6:30pm, Format: 3x30 min Room: Salle 39 Building: E, 3rd floor, Zone: 1

INVITED SESSION 92

Organizer: Hassan Hijazi, Los Alamos National Laboratory, US

1 - Global Optimization for AC Optimal Power Flow Applications

Speaker: Anya Castillo, Sandia National Laboratories, US, talk 761

Co-Authors: Michael Bynum, Carl Laird, Jean-Paul Watson,

2 - Tight Piecewise Formulations and Algorithms for Global Optimization of MINLPs

Speaker: Harsha Nagarajan, Los Alamos National Laboratory, US, talk 782

Co-Authors: Kaarthik Sundar, Russell Bent, Site Wang, Jeff Linderoth,

3 - Semidefinite Programming Cuts in Gravity

Speaker: Hassan Hijazi, Los Alamos National Laboratory, US, talk 753

Co-Authors: Ksenia Bestuzheva, Carleton Coffrin,

Recent Advances and Applications of MINLP

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING MINLP - Fr 5:00pm-6:30pm, Format: 3x30 min Room: Salle 35 Building: B, Intermediate, Zone: 4

INVITED SESSION 139

Organizer: Jose Ucha, Universidad de Sevilla, ES

1 - Duality and multidimensional kernels in ℓ_p -Support Vector Machines

Speaker: Victor Blanco, Universidad de Granada, ES, talk 874

Co-Authors: Justo Puerto, Antonio Rodríguez-Chía,

2 - An algebraic exact method for multi-objective RAP in series-parallel systems.

Speaker: Jose Ucha, Universidad de Sevilla, ES, talk 1069 Co-Authors: *M Isabel Hartillo, Haydee Jimenez*,

3 - On Testing Attainment of the Optimal Value in Nonlinear Optimization

Speaker: Jeffrey Zhang, Princeton University, US, talk 933 Co-Authors: *Amir Ali Ahmadi*,

Nonlinear Optimization and Variational Inequalities IV

CONTINUOUS OPTIMIZATION

VARIAT - Fr 5:00pm-6:30pm, Format: 3x30 min

Room: Salle 06 Building: Q, 1st floor, Zone: 11

INVITED SESSION 144

Organizer: Cong Sun, Beijing Univ. Post. Telecomm., CN

1 - A TVSCAD approach for image deblurring with impulsive noise

Speaker: Junfeng Yang, Nanjing University, CN, talk 87 Co-Authors: *Guoyong Gu, Suhong Jiang*,

2 - A semismooth Newton based augmented Lagrangian method for solving SVM problems

Speaker: Chengjing Wang, Southwest Jiaotong University, CN, talk 72

Co-Authors: Dunbiao Niu, Tang Peipei, Enbin Song,

3 - Matrix optimization in data science: recent progress on algorithm foundation

Speaker: Chao Ding, AMSS CAS, CN, talk 62 Co-Authors: *Cui Ying*, *Xinyuan Zhao*,

Algorithmic Fairness and Optimization

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Fr 5:00pm-6:30pm, Format: 4x20 min Room: LEYTEIRE Building: E, 3rd floor, Zone: 1

INVITED SESSION 161 Organizer: Nisheeth Vishnoi, EPFL, CH

1 - Measuring Algorithmic (Un)Fairness via Inequality Indices

Speaker: Krishna Gummadi, Max Planck Institute, DE, talk 1163

2 - Controlling Bias in Bandit-based Personalization Speaker: Elisa Celis, EPFL, CH, talk 500

Co-Authors: Sayash Kapoor, Farnood Salehi, Nisheeth Vishnoi,

3 - Calibration for the (Computationally-Identifiable) Masses

Speaker: Omer Reingold, Stanford University, US, talk 106 Co-Authors: Ursula Hebert-Johnson, Michael Kim, Michael Kim,

4 - Fair and Diverse DPP-based Data Summarization

Speaker: Nisheeth Vishnoi, EPFL, CH, talk 1140 Co-Authors: *Elisa Celis, Vijay Keswani, Damian Straszak, Amit Jayant Deshpande, Tarun Kathuria,*

Algorithmic Discrepancy

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING APPROX - Fr 5:00pm-6:30pm, Format: 3x30 min Room: Salle 43 Building: C, 3rd floor, Zone: 1

INVITED SESSION 164

Organizer: Nikhil Bansal, CWI and TU Eindhoven, NL

1 - Balancing Vectors in Any Norm

Speaker: Aleksandar Nikolov, University of Toronto, CA, talk 484

Co-Authors: Daniel Dadush, Kunal Talwar, Nicole Tomczak,

2 - The Gram-Schmidt Walk: A cure to the Banaszczyk Blues

Speaker: Daniel Dadush, CWI, NL, talk 359

Co-Authors: Nikhil Bansal, Shashwat Garg, Shachar Lovett,

3 - A Fourier-Analytic Approach For Random Set systems Speaker: Rebecca Hoberg, University of Washington, US, talk 764

Co-Authors: Thomas Rothvoss,

Robust Combinatorial Optimization II

OPTIMIZATION UNDER UNCERTAINTY ROBUST - Fr 5:00pm-6:30pm, Format: 4x20 min Room: Salle 37 Building: B, Intermediate, Zone: 4

Invited Session 168

Organizer: Agostinho Agra, University of Aveiro, PT

1 - Robust Strategic Planning of Phytosanitary Treatments in Agriculture

Speaker: Ayse Arslan, Inria Bordeaux Sud-Ouest, FR, talk 1372

Co-Authors: Boris Detienne, Francois Vanderbeck,

2 - Exact Solution Algorithms for the Robust Total Tardiness Problem

Speaker: Marco Silva, Universite d Avignon, FR, talk 274 Co-Authors: *Michael Poss, Nelson Maculan*,

3 - A Lagrangean dual model for the robust inventory problem

Speaker: Agostinho Agra, University of Aveiro, PT, talk 277 Co-Authors: *Cristina Requejo*, *Filipe Rodrigues*,

4 - Robust Expansion Planning of Interdependent Electricity, Gas, and Heat

Speaker: Yasaman Mozafari, University of Calgary, CA, talk 1411

Co-Authors: William Rosehart,

Energy-aware planning and scheduling 2

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Fr 5:00pm-6:30pm, Format: 3x30 min Room: Salle 23 Building: G, 3rd floor, Zone: 6

INVITED SESSION 178 Organizer: Christian Artigues, LAAS-CNRS, FR

1 - Modelling uncertainties in short-term operational planning optimization

Speaker: Paul Javal, Mines Paristech - EDR R & D, FR, talk 1093

Co-Authors: Welnigton de Oliveira, Hugo Morais, Sophie Demassey, Wim van Ackooij,

2 - Solving an electric vehicle routing problem with capacitated charging stations

Speaker: Aurélien Froger, Université de Tours, FR, talk 1536 Co-Authors: *Ola Jabali, Gilbert Laporte, Jorge Mendoza,*

3 - Polyhedral approach for a continuous energyconstrained scheduling problem

Speaker: Christian Artigues, LAAS-CNRS, FR, talk 1150 Co-Authors: Margaux Nattaf, Markó Horváth, Tamás Kis, Pierre Lopez,

Nonconvex Optimization: Theory and Methods - Part 3

CONTINUOUS OPTIMIZATION

NonSmooth - Fr 5:00pm-6:30pm, Format: 3x30 min Room: Salle LC4 Building: L, Intermediate 1, Zone: 9

INVITED SESSION 188 Organizer: Genaro Lopez, University of Seville, ES

1 - Globally Solving a Class of Optimal Power Flow Problems in Radial Networks

Speaker: Alexander Shtof, Technion, IL, talk 811 Co-Authors: *Amir Beck*, *Yoash Levron*, *Luba Tetruashvili*, *Yuval Beck*,

2 - Algorithms based on unions of nonexpansive maps

Speaker: Matthew Tam, University of Goettingen, DE, talk 140

3 - What do 'convexities' imply on Hadamard manifolds? Speaker: Genaro Lopez, University of Seville, ES, talk 176

Packing Steiner Trees

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Fr 5:00pm-6:30pm, Format: 3x30 min Room: SIGALAS Building: C, 2nd floor, Zone: 2

INVITED SESSION 260 Organizer: Stephan Held, University of Bonn, DE

1 - Global Routing with Timing Constraints

Speaker: Dirk Müller, University of Bonn, DE, talk 234 Co-Authors: Stephan Held, Jens Vygen, Daniel Rotter, Rudolf Scheifele, Vera Traub,

2 - Steiner Tree Packing in Rhomboidal Tiles

Speaker: Pietro Saccardi, University of Bonn, DE, talk 1537 Co-Authors: *Nicolai Hähnle*,

3 - Reach- and Direction-Restricted Rectilinear Steiner Trees

Speaker: Tilmann Bihler, University of Bonn, DE, talk 617 Co-Authors: *Stephan Held*, *Sophie Spirkl*,

Computational Integer Programming II

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ALGO - Fr 5:00pm-6:30pm, Format: 3x30 min Room: PITRES Building: O, Ground Floor, Zone: 8

INVITED SESSION 274

Organizer: Domenico Salvagnin, University of Padova, IT

1 - Tighter LP relaxations for configuration knapsacks using extended formulations

Speaker: Gregor Hendel, Zuse Institute Berlin, DE, talk 381 Co-Authors: *Ralf Borndörfer*, *Marika Karbstein*, *Timo Berthold*, *Heide Hoppmann*,

2 - Lexicographic Optimization and Recovery in Two-Stage Robust Scheduling

Speaker: Dimitrios Letsios, Imperial College London, GB, talk 504

Co-Authors: Ruth Misener,

3 - Dynamic Row Disablement: a practical Implementation of the Kernel Simplex Method

Speaker: Roland Wunderling, IBM, AT, talk 861

Stochastic Methods for Energy Optimization

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE ENERGY - Fr 5:00pm-6:30pm, Format: 3x20 min Room: Salle 24 Building: G, 3rd floor, Zone: 6

CONTRIBUTED SESSION 294 Chair: Tristan Rigaut, Efficacity, FR

1 - Stabilization of Price Signals in Energy Optimization

Speaker: Clara Lage, ENGIE - IMPA - Paris Sorbonne, FR, talk 1585

Co-Authors: Claudia Sagastizabal, Mikhail Solodov, Guillaume Erbs,

2 - Stochastic Unit Commitment Problem: an Exact Probabilistic Constrained Approach

Speaker: Guilherme Matiussi Ramalho, UFSC-Florianopolis, BR, talk 298

Co-Authors: Wim van Ackooij, Erlon Finardi,

3 - Long term management of energy storage using stochastic optimization

Speaker: Tristan Rigaut, Efficacity, FR, talk 1291 Co-Authors: Jean-Philipp Chancelier, Michel De Lara, Carpentier Pierre,

Machine Learning and Discrete Optimization

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPTHEORY - Fr 5:00pm-6:30pm, Format: 4x20 min Room: Salle 34 Building: B, 1st floor, Zone: 3

INVITED SESSION 308 Organizer: Sebastian Pokutta, Georgia Tech, US

1 - Building adversarial examples in Neural Networks by Mixed Integer Optimization

Speaker: Matteo Fischetti, University of Padua, IT, talk 402 Co-Authors: *Jason Jo*,

2 - Mathematics of Neural Networks

Speaker: Anirbit Mukherjee, Johns Hopkins University, US, talk 1616

Co-Authors: Amitabh Basu, Akshay Rangamani, Ashish Arora, Tejaswini Ganapathy, Trac Tran, Sang Chin,

3 - Smart "Predict, then Optimize"

Speaker: Paul Grigas, UC Berkeley, US, talk 1466 Co-Authors: *Adam Elmachtoub*,

4 - Lazy Conditional Gradients through Simpler Oracles Speaker: Sebastian Pokutta, Georgia Tech, US, talk 386 Co-Authors: *Gábor Braun*, *Daniel Zink*,

Spectral and Semidefinite Methods for Learning

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LEARNING - Fr 5:00pm-6:30pm, Format: 4x20 min Room: FABRE Building: J, Ground Floor, Zone: 8

INVITED SESSION 321 Organizer: Martin Jaggi, EPFL, CH

1 - Competitive Online Algorithms with Application to Optimal Experiment Design

Speaker: Maryam Fazel, Univ. of Washington, US, talk 1160 Co-Authors: *Reza Eghbali, James Saunderson*,

2 - Positive semi-definite embedding for dimensionality reduction

Speaker: Michael Fanuel, Université cath. de Louvain, BE, talk 812

3 - Variational Perspective on Local Graph Clustering Speaker: Kimon Fountoulakis, UC Berkeley, US, talk 337 Co-Authors: *Farbod Roosta-Khorasani, Julian Shun, Xiang Cheng, Michael Mahoney,*

4 - Solving lp-norm regularization with tensor kernels Speaker: Saverio Salzo, Istituto Italiano Tecnologia, IT, talk 400

Algorithms for Structured Statistical Optimization

CONTINUOUS OPTIMIZATION

RandomM - Fr 5:00pm-6:30pm, Format: 4x20 min Room: Salle KC6 Building: K, Intermediate 1, Zone: 10

CONTRIBUTED SESSION 349 Chair: Ilker Birbil, Erasmus University Rotterdam, NL

1 - A Differentially Private Stochastic Gradient Descent411Algorithm with SmoothingCo-

Speaker: Ilker Birbil, Erasmus University Rotterdam, NL, talk 1448

Co-Authors: Nurdan Kuru, Sinan Yildirim,

2 - Leave-one-out approach for statistical optimization Speaker: Lijun Ding, Cornell University, US, talk 1171 Co-Authors: *Yudong Chen*,

3 - Adaptive Sampling for Online Subspace Estimation Speaker: Greg Ongie, University of Michigan, US, talk 1099 Co-Authors: *Laura Balzano*, *Dejiao Zhang*, *David Hong*,

4 - Approximation Methods for Bilevel Programming

Speaker: Saeed Ghadimi, Princeton University, US, talk 915 Co-Authors: *Mengdi Wang*,

Transportation networks

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE NETWORK - Fr 5:00pm-6:30pm, Format: 4x20 min Room: Salle 18 Building: I, 1st floor, Zone: 7

CONTRIBUTED SESSION 359

Chair: Bernard Gendron, CIRRELT DIRO Univ. Montreal, CA

1 - The network maintenance problem

Speaker: Parisa Charkhgard, The University of Newcastle, AU, talk 983

Co-Authors: Thomas Kalinowski, Hamish Waterer,

2 - Airspace sectorization by set-partitioning approach Speaker: Yasufumi Saruwatari, University of Tsukuba, JP, talk 1221

Co-Authors: Yoichi Izunaga, Takamori Ukai, Kota Kageyama,

3 - Joint Transceiver Optimization for Wireless Information and Energy Transfer

Speaker: Bin Li, Sichuan University, CN, talk 1662

Co-Authors: Yue Rong,

4 - Node-Based Lagrangian Relaxations for Multicommodity Network Design

Speaker: Bernard Gendron, CIRRELT DIRO Univ. Montreal, CA, talk 1601

Co-Authors: Rahim Akhavan, Teodor Crainic,

Variational Analysis 2

CONTINUOUS OPTIMIZATION VARIAT - Fr 5:00pm-6:30pm, Format: 4x20 min Room: Salle ARNOZAN Building: Q, Ground Floor, Zone: 8 INVITED SESSION 367 **Organizer:** David Salas, INP-ENSIACET, FR

1 - Maximal Monotonicity Arising in Nonsmooth Lur'e Dynamical systems

Speaker: Ba Khiet Le, Universidad de O'Higgins, CL, talk 1621

Co-Authors: Samir Adly, Abderrah Hantoute,

2 - Lyapunov pairs for perturbed sweeping processes

Speaker: Emilio Vilches, Universidad de OHiggins, CL, talk 411

Co-Authors: Abderrah Hantoute,

3 - Proximal Algorithms in Hadamard Spaces Speaker: Parin Chaipunya, KMUTT, TH, talk 404 Co-Authors: *Poom Kumam*,

4 - Quasi-Variational Inequality problems over product sets

Speaker: David Salas, INP-ENSIACET, FR, talk 1156 Co-Authors: *Didier Aussel*, *Kien Cao*,

Tractability and approximation algorithms in dynamic programming

Optimization under Uncertainty

MARKOV - Fr 5:00pm-6:30pm, Format: 3x30 min Room: Salle 31 Building: B, Ground Floor, Zone: 5 CONTRIBUTED SESSION 383

Chair: Alexander Hopp, TU Darmstadt, DE

1 - Sample-Based Approximate GMDP Solution with Theoretical Guarantees

Speaker: Yann Dujardin, INRA, FR, talk 1596 Co-Authors: Nathalie Peyrard, Régis Sabbadin,

2 - An FPTAS for stochastic DPs with multidimensional action and scalar state

Speaker: Giacomo Nannicini, IBM T.J. Watson, US, talk 705 Co-Authors: *Nir Halman*,

3 - On Friedmann's subexponential lower bound for Zadeh's pivot rule

Speaker: Alexander Hopp, TU Darmstadt, DE, talk 458 Co-Authors: *Yann Disser*,

Optimization and Game Theory

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE SCIENCES - Fr 5:00pm-6:30pm, Format: 4x20 min Room: Salle LA4 Building: L, Basement, Zone: 8

INVITED SESSION 402

Organizer: Veerle Timmermans, RWTH Aachen, DE

1 - Computing Approximate Pure Nash Equilibria in Shapley Value Weighted Congestion

Speaker: Matthias Feldotto, Paderborn University, DE, talk 1306

Co-Authors: Martin Gairing, Grammateia Kotsialou, Alexander Skopalik,

2 - Dynamic taxes for polynomial congestion games

Speaker: Cosimo Vinci, University of L'Aquila, IT, talk 1105 Co-Authors: *Vittorio Bilò*,

3 - Competitive Packet Routing

Speaker: Bjoern Tauer, RWTH Aachen University, DE, talk 1045

Co-Authors: Britta Peis, Veerle Timmermans, Laura Vargas Koch, Daniel Schmand, Tobias Harks,

4 - Equilibrium Computation in Atomic Splittable Polymatroid Congestion Games

Speaker: Veerle Timmermans, RWTH Aachen, DE, talk 677

Linear Optimization I

CONTINUOUS OPTIMIZATION NLP - Fr 5:00pm-6:30pm, Format: 3x20 min Room: Salle 9 Building: N, 4th floor, Zone: 12

CONTRIBUTED SESSION 415 Chair: Jianming Shi, Tokyo University of Science, JP

1 - A Fast Polynomial-time Primal-Dual Projection Algorithm for Linear Programming

Speaker: Zhize Li, Tsinghua University, CN, talk 1379 Co-Authors: *Wei Zhang, Kees Roos*,

2 - A polarity-based algorithm for solving linear programming problems

Speaker: Jianming Shi, Tokyo University of Science, JP, talk 1274

3 - An algorithm for linear programming based on the projection onto a zonotope

Speaker: Maxim Demenkov, Institute of Control Sciences, RU, talk 1437

Optimization problems in graphs and related

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING COMB - Fr 5:00pm-6:30pm, Format: 4x20 min Room: Salle 41 Building: C, 3rd floor, Zone: 1

CONTRIBUTED SESSION 423 Chair: Claudio Arbib, University of l'Aquila, IT

1 - Critical node problem based on connectivity index and properties of components

Speaker: Xiucui Guan, southeast University, CN, talk 1640 Co-Authors: *Chao Liu, Binwu Zhang, Panos Pardalos,*

2 - Inverse Obnoxious Spanning Tree Problems under Hamming Distance

Speaker: Binwu Zhang, Hohai University, CN, talk 1639 Co-Authors: *Xiucui Guan*, *Pengxiang Zhang*,

3 - The random assignment problem on a full preference domain with submodular

Speaker: Ping Zhan, Edogawa University, JP, talk 976 Co-Authors: *Yoshio Sano*,

4 - On uncapacitated metric location and pricing Speaker: Matteo Tonelli, Gran Sasso Science Institute, IT, talk 1067

Co-Authors: Claudio Arbib,

Wasserstein Distributionally Robust Optimization

OPTIMIZATION UNDER UNCERTAINTY ROBUST - Fr 5:00pm-6:30pm, Format: 3x30 min Room: Salle 33 Building: B, Ground Floor, Zone: 5 INVITED SESSION 448 Organizer: Peyman Mohajerin Esfaha, TU Delft, NL

1 - Risk-Averse Optimization over Structured Wasserstein Ambiguity Set

Speaker: Viet Anh Nguyen, EPFL, CH, talk 1234 Co-Authors: *Daniel Kuhn, Soroosh Shafieezadeh, Peyman Mohajerin Esfaha*,

2 - Wasserstein DRO: Modeling and Optimal Choice of Uncertainty Size

Speaker: Jose Blanchet, Stanford University, US, talk 1518 Co-Authors: *Fan Zhang, Karthyek Murthy*,

3 - Data-driven Inverse Optimization with Imperfect Information

Speaker: Peyman Mohajerin Esfaha, TU Delft, NL, talk 845 Co-Authors: Soroosh Shafieezadeh, Grani Hanasusanto, Daniel Kuhn,

Logistics Networks

SPECIFIC MODELS, ALGORITHMS, AND SOFTWARE LOGISTICS - Fr 5:00pm-6:00pm, Format: 2x20 min Room: Salle 16 Building: I, 2nd floor, Zone: 7

Contributed Session 468

Chair: El Hassan Laaziz, ECOLE MOHAMMADIA D'INGENIEURS, MA

1 - Robust supply chain network equilibrium model with random demands

Speaker: Yasushi Narushima, Yokohama National University, JP, talk 289

Co-Authors: Tatsuya Hirano,

2 - Method Benchmarking for Two-Echelon Capacitated Vehicle Routing

Speaker: Guillaume Marques, Université de Bordeaux, FR, talk 1661

Co-Authors: Ruslan Sadykov, Francois Vanderbeck, Remy Dupas, Jean-Christophe Deschamps,

Decomposition II

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - Fr 5:00pm-6:30pm, Format: 4x20 min Room: Salle 44 Building: C, 3rd floor, Zone: 1

CONTRIBUTED SESSION 487 Chair: Natashia Boland, Georgia Institute of Technolog, US

1 - Discrete Nonlinear Optimization by State-Space Decompositions

Speaker: Andre Cire, University of Toronto, CA, talk 1357 Co-Authors: *David Bergman*,

2 - Strengthening of mixed integer linear program bounds using variable splitting

Speaker: Jens Clausen, DTU, DK, talk 501 Co-Authors: Stefan Ropke, Richard Lusby,

3 - A column generation based model to pickup and delivery problems with trans

Speaker: Cristiam Gil, Universidad de Chile, CL, talk 22 Co-Authors: *Michel Gendreau*, *Cristián Cortés*, *Pablo* Rey,

4 - Decomposition Branching for Mixed Integer Programming

Speaker: Natashia Boland, Georgia Institute of Technolog, US, talk 1613

Co-Authors: Baris Yildiz, Martin Savelsbergh,

Topics in stochastic optimization

OPTIMIZATION UNDER UNCERTAINTY STOCH - Fr 5:00pm-6:30pm, Format: 3x20 min Room: Salle 30 Building: B, Ground Floor, Zone: 5 CONTRIBUTED SESSION 494 Chair: Quentin Mercier, Onera, FR

1 - Flexible Multi-choice Goal Programming with Fuzzy Data

Speaker: Sakina Melloul, University Centre of Maghnia, DZ, talk 69

Co-Authors: Hocine Mouslim,

2 - Optimal inflow control in supply systems with uncertain demands

Speaker: Kerstin Lux, University of Mannheim, DE, talk 1281

Co-Authors: Simone Göttlich, Ralf Korn,

3 - A descent algorithm for stochastic multiobjective optimization problems

Speaker: Quentin Mercier, Onera, FR, talk 1038 Co-Authors: Fabrice Poirion, Jean-Antoine Désidéri,

Global Optimization 1

CONTINUOUS OPTIMIZATION GLOBAL - Fr 5:00pm-6:30pm, Format: 3x30 min Room: Salle 20 Building: G, 1st floor, Zone: 6 CONTRIBUTED SESSION 501 **Chair:** Jean-Baptist Hiriart-Urruty, Paul Sabatier University, FR

1 - New clustering methods for large scale global optimization

Speaker: Fabio Schoen, DINFO Univ di Firenze, IT, talk 999 Co-Authors: *Francesco Bagattini*, *Luca Tigli*,

2 - Continuous Approaches to Cluster-Detection Problems in Networks

Speaker: Sergiy Butenko, Texas A&M University, US, talk 1646

3 - Computational advances in the RLT algorithms: A freely available implementation

Speaker: Julio González-Díaz, Univ. Santiago de Compostela, ES, talk 541

Co-Authors: Brais González, Joaquín Ossorio-Castillo, Diego Martínez, David Penas,

Dual Ascent

DISCRETE OPTIMIZATION & INTEGER PROGRAMMING IPPRACTICE - Fr 5:00pm-6:00pm, Format: 2x20 min Room: Salle 36 Building: B, Intermediate, Zone: 4

Contributed Session 505 Chair: Sara Maqrot, INRA Toulouse, FR

1 - A dual ascent procedure for solving the generalized set partitioning model

Speaker: Stefania Pan, Horizontal Software, FR, talk 1269 Co-Authors: *Mahuna Akplogan*, *Lucas Letocart*, *Nora Touati*, *Roberto Wolfler Calvo*,

2 - Improving Wedelin's Heuristic with Sensitivity Analysis for Set Partitioning

Speaker: Sara Maqrot, INRA Toulouse, FR, talk 1432 Co-Authors: Simon de Givry, Gauthier Quesnel, Marc Tchamitchian,

Index

Abada Ibrahim, 148 Abbaszadeh Kazem, 39, 136, 161 Abdessamad Amir, 146 Abdi Ahmad, 158, 158 Abigél Mester, 177 ABlad Edvin, 176 Abramson Mark, 176 Abreu Salvador, 159 Absi Nabil, 115, 134, 174 Absil P.-A., 111, 175 Achterberg Tobias, 45, 188 Adam Lukas, 178 Adamaszek Anna, 144 Adamaszek Michal, 187 Adams Claudia, 139 Adams Warren, 125 Addis Bernardetta, 150 Adiga Rishi, 161 Adjiashvili David, 104, 151 Adly Samir, 33, 138, 138, 140, 197 Adnan Yassine, 146 Adulyasak Yossiri, 131, 134 Agra Agostinho, 171, 195, 195 Agrawal Shipra, 114, 174 Ahipasaoglu Selin, 138, 189, 189 Ahmadi Amir Ali, 43, 124, 124, 132, 194 Ahmadian Sara, 120 Ahmed Faizan, 139, 153 Ahmed Shabbir, 27, 41, 42, 119, 140, 168, 181 Ajavi Temitavo, 154, 154 Akartunali Kerem, 131, 171 Akbari Amir, 44, 158 Akhavan Rahim, 197 Akian Marianne, 160, 174 Akplogan Mahuna, 199 Akram Usman, 190 Akturk Selim, 162 Al-Baali Mehiddin, 122, 151 Alacaoglu Ahmet, 143, 194 Albuquerque Maria, 142 Alem Douglas, 139 Alfandari Laurent, 168, 168 Aliev Iskander, 109, 110, 110 Alizadeh Farid, 133, 163 Alkousa Mohammad, 156 Allamigeon Xavier, 116, 117 Allevi Elisabetta, 129, 133 Allonsius Damien, 127 Allouah Amine, 122 Allouche David, 182 Aloise Daniel, 137, 137 Alpers Andreas, 113, 167 Alphonse Amal, 119 Altmann-Dieses Angelika, 39, 179 Altschuler Jason, 121 Alves Charlan, 164 Amaldi Edoardo, 183, 183 Ambrosius Mirjam, 128 Amelunxen Dennis, 117 Amini Massih-Reza, 105, 163

Amorim Pedro, 154 Amos Brandon, 151 An Hyung-chan, 180 Anari Nima, 102, 187 Andersen Erling, 45, 143 Andersen Kim, 149 Andersen Martin, 193 Anderson Edward, 139 Anderson Lovis, 188 Anderson Penny, 179 Anderson Ross, 151, 151 Andersson Henrik, 107 Andrade Ricardo, 175 Andrade Tiago, 166 Andreani Roberto, 132, 132, 187 Andretta Marina, 114 Andrianesis Panagiotis, 164 Ang Andersen, 175 Angelidakis Haris, 181 Angulo Alejandro, 139, 168 Angulo Gustavo, 181, 181 Anikin Anton, 155 Anitescu Mihai, 111, 184 Anjos Miguel, 101, 101, 101, 123, 168, 176 Anstreicher Kurt, 43, 132 Antal Elvira, 121 Antil Harbir, 143, 143 Antoine Jeanjean, 39, 123, 174, 174 Antoniadis Antonios, 132, 144, 156 Antunes Rodrigo, 42, 172 Aouad Ali. 179, 179 Ararat Cagin, 120 Aravkin Aleksandr, 136 Arbib Claudio, 198, 198 Archer Aaron, 170, 190, 190 Archibald Blair, 159 Arikan Ugur, 138 Arjovsky Martin, 116 Armand Paul, 153, 178 Arora Ashish, 196 Arpon Sebastian, 35, 163 Arslan Ayse, 195 Artigues Christian, 134, 195, 195 Artmann Stephan, 133 Arulselvan Ashwin, 142, 171 Asadi Soodabeh, 193 Asadpour Arash, 114 Ashlagi Itai, 106 Assoumou Edi, 134 Atamturk Alper, 36, 41, 170, 185 Atserias Albert, 163 Attila Oyku Naz, 171 Attouch Hedy, 137, 137 Audet Charles, 125, 148 Auger Anne, 193 Aujol J-F, 180 Aussel Didier, 129, 129, 129, 197 Averkov Gennadiy, 102, 110, 173 Avila Daniel, 183 Aybat N. Serhat, 194

Aydin Kevin, 170, 190 Ayesta Urtzi, 113 Aytekin Tevfik, 175 Azar Yossi, 127 Aziz Mahdi, 125 Azizi Mohammad, 130 Azmi Behzad, 105 Bärmann Andreas, 108, 149, 169, 169 Bökler Fritz. 149 Bürger Adrian, 39, 179 Bürgy Reinhard, 169 Büsing Christina, 149 Büskens Christof, 186 Bánhelyi Balázs, 177 Bérczi Kristóf, 161 Baatar Davaatseren, 185 Babanezhad Reza, 148 Bach Francis, 27, 101, 128, 143, 143, 166, 192 Bachoc Christine, 192 Bachollet Olivier, 166 Backhaus Scott, 179 Badenbroek Riley, 192 Baffa Augusto, 180 Bagattini Francesco, 199 Bagge Carlson Fredrik, 162 Bagirov Adil, 193 Bai Kuang, 142 Bai Yangin, 185 Bai Yu, 121 Baiou Mourad, 188, 188, 189, 189 Balas Egon, 166, 188 Balinski Michel, 36, 185 Balkanski Eric, 135 Balseiro Santiago, 103 Baltean-Lugojan Radu, 158 Balzano Laura, 113, 113, 197 Bandi Chaithanya, 122, 122, 138 Bandi Hari, 130, 130 Baniac Goran. 129. 133 Bansal Manish, 41, 127 Bansal Nikhil, 195, 195 Baptista Ricardo, 144 Barahona Francisco, 189, 189 Baran Luis, 42, 172 Barbato Michele, 162 Barbe Sophie, 182 Barber Rina, **121** Baringo Luis, 192 Barmherzig David, 121 Barreras Jorge, 113 Bartal Yair. 135 Bartier Valentin, 160 Bartmeyer Petra, 115, 115 Bartoli Nathalie, 116 Barton Paul, 44, 158 Basciftci Beste, 168 Bassetti Federico, 160 Bastin Fabian, 105, 105, 145, 152, 152 Bastubbe Michael, 120, 144 Basu Amitabh, 104, 104, 104, 110, 182, 188, 196 Bateni Hossein, 114, 170, 170, 190 Baucke Regan, 42, 136, 181

Baumgartner Andreas, 137 Bauschert Thomas, 137 Bayraksan Guzin, 35, 127, 127, 163 Beasley John, 128 Beaude Olivier, 139 Beck Amir, 104, 195 Beck Yuval, 195 Beckenbach Isabel, 161 Becker Kai, 47, 110 Becker Kai-Helge, 47, 110 Becker Ruben, 122 Becker Stephen, 143 Bedi Singh Amrit, 162 Behling Roger, 103, 184, 184, 184 Bektas Tolga, 122, 190 Belkin Mikhail, 160 Bellavia Stefania, 122 Bellitto Thomas. 161. 161 Bello Cruz José, 184 Bello-Cruz Yunier, 184 Beltrán Felipe, 176, 176 Bemporad Alberto, 129 Ben Amor Hatem, 137 Ben Mohamed Imen. 153 Ben-Tal Aharon, 112 Benítez-Peña Sandra, 128, 142 Benchimol Pascal, 116, 156 Bendotti Pascale, 126, 139, 161 Benedek Marton, 183 Benkirane Mohamed, 174 Benko Matus, 138 Bent Russell, 105, 194 Bento Glaydston, 164 Berahas Albert, 178 Beraudy Sébastien, 115 Berger Guillaume, 175, 175 Bergman David, 108, 121, 191, 198 Bergmann Ronny, 111 Bergou El houcine, 104 Bernal David, 173 Bernal Rodrigo, 123 Bernardino Raquel, 175, 175 Bernstein Aaron, 189 Berrada Leonard, 184 Berthet Quentin, 121 Berthold Timo, 46, 196 Bertsimas Dimitris, 108, 114, 122, 130, 142, 172, 191, 191 Besbes Omar. 122 Bestehorn Felix, 39, 179 Bestuzheva Ksenia, 168, 194 Bettiol Enrico, 166, 166 Beuchat Paul, 126 Bhaskar Umang, 120, 120 Bhawalkar Kshipra, 114 Bian Wei, 126 Bianchi Luigi, 126 Bianchi Pascal, 147 Bichler Martin, 160 Biegler Lorez, 141 Biehl Johanna, 182 Bienkowski Marcin, 112

Bienstock Daniel, 37, 43, 44, 110, 132, 141, 148, 179, 185, 187 Bigi Giancarlo, 145, 189, 189 Bihler Tilmann, 196 Bilò Vittorio, 197 Bindewald Viktor, 151, 151 Bingane Christian, 101 Binois Mickael, 155 Birbil Ilker, 147, 196, 197 Birge John, 128 Birgin Ernesto, 108 Biro Peter, 171 Birx Alexander, 167 Bjorndal Endre, 171 Bjorndal Mette, 171 Blais Marko, 105 Blanchard Gilles, 183 Blanchet Jose, 111, 131, 198 Blanco Marco, 152 Blanco Victor, 194 Blanquero Rafael, 142 Bodirsky Manuel, 117 Bodur Merve, 108, 162, 181, 181 Boeck Michelle, 175 Boehm Axel, 155 Boffino Luigi, 133, 192 Bofill Walter, 108 Bogetoft Peter, 128 Bogunovic Ilija, 187 Boland Natashia, 168, 189, 198, 199 Bollapragada Raghu, 115 Bolte Jerome, 104, 119 Bomze Immanuel, 154, 155, 155, 177 Bonettini Silvia, 178 Bonnans Frédéric, 108 Bonnel Henri, 183 Bonvin Gratien, 147 Boomsma Trine, 149, 171 Borndörfer Ralf, 46, 146, 152, 160, 160, 174, 196 Boros Endre, 109 Borrero Juan, 114, 114 Bosman Thomas, 115 Bosse Torsten, 44, 44, 44, 136, 136, 136, 158 Bot Radu Ioan, 113, 137, 155, 185 Bottou Leon, 116 Bougnol Marie-Laure, 175 Bouhtou Mustapha, 160 Boulmier Simon, 177 Boumal Nicolas, 111, 111, 121 Bourreau Eric, 174 Boyd Stephen, 129, 133, 147 Boyer Claire, 104 Boyer Franck, 127 Bozorg Marjan, 150 Brahimi Nadjib, 180 Brauer Christoph, 102 Braun Gábor, 196 Brauner Nadia, 114, 160, 177 Brazil Marcus, 152 Breedveld Sebastiaan, 186 Breiding Paul, 111 Brenner Ulrich, 105 Bretin Alexis, 166

Briant Olivier, 114 Brito Samuel, 191, 191 Brockhoff Dimo, 193 Brogliato Bernard, 160 Brooks James, 191 Brotcorne Luce, 121, 129, 132 Brown David, 103, 103 Brueggemann Jo. 112, 112 Bruggmann Simon, 155 Brune Alexander, 125 Bubeck Sébastien, 125 Bucarey Victor, 121 Buchanan Austin, 123 Buchbinder Niv, 155, 178 Bucher Max, 138 Buchheim Christoph, 41, 150, 154, 170 Bueno Luis Felipe, 132 Buil Giné Román, 177 Bulbul Kerem, 147 Bulhões Júnior Teobaldo, 126 Burachik Regina, 31, 124 Burashnikova Aleksandra, 175, 175 Burdakov Oleg, 118, 157 Burer Samuel, 102 Burgdorf Sabine, 28, 186 Burke James, 172, 190 Burg Maximilien, 106 Burtscheidt Johanna, 139, 183, 183 Butenko Sergiy, 199 Bylling Henrik, 171 Bynum Michael, 194 Byrd Richard, 178 Byrka Jaroslaw, 112, 129, 164, 181 C. B. de Araújo Olinto, 192 CôTé Pascal, 131 Cabot Alexandre, 137 Cabral Filipe, 136, 162 Cafieri Sonia, 145, 145, 145 Cai Hong, 171 Cai Xingju, 118 Caliciott Andrea, 151 Caliciotti Andrea, 122, 122 Calleja Sara, 123, 123 Calmon Andre, 129 Calvete Herminia, 121 Canakoglu Ethem, 175 Candes Emmanuel, 30, 101, 121 Cao Kien, 197 Cao Liyuan, 187 Capone Antonio, 183 Caramanis Michael, 164 Cardin Michel, 131 Cardonha Carlos, 108 Cariou Pierre, 180 Carlsson Tedgren ÅSa, 175 Carrizosa Emilio, 142 Carter Richard, 176 Cartis Coralia, 111, 117, 117, 132, 157, 158, 158, 193 Caruso Francesco, 145, 160 Carvalho Margarida, 183, 183 Casado Leocadio, 141 Castel Christoph, 150

Castillo Anya, 194 Castro Jordi, 46, 46, 46, 106, 106, 112, 112 Catanzaro Daniele, 123, 123, 123 Cavaleiro Marta, 133 Cavus Ozlem, **120**, *162* Celebi Emre, 154 Celis Elisa, 194, 195 Cen Shicong, 173 Ceparano Maria, 145, 161 Ceselli Alberto, 150 Cevallos Alfonso, 118 Cevher Volkan, 43, 112, 128, 143, 143, 166, 173, 187, 194 Chabar Raphael, 42, 47, 168, 172 Chachuat Benoit, 158 Chaipunya Parin, 197 Chakrabarty Deeparnab, 120, 164, 164 Chalermsook Parinya, 181 Chambolle Antonin, 104, 134 Chancelier Jean-P., 174 Chancelier Jean-Philipp, 42, 181, 196 Chandrasekaran Karthekeyan, 181, 181 Chandrasekaran Venkat, **126**, 126, 187 Chao Hsiao-Han, 137 Chao Xiuli, 129 Charikar Moses, 172 Charkhgard Parisa, 197 Charles Zachary, 167 Chassein Andre, 154, 171 Chaves Bruno, 129 Chawla Shuchi, 141 Cheaitou Ali, 180 Chekuri Chandra, 131 Chen Argon, 114 Chen Boxiao, 113, 129 Chen Chen, 188 Chen Jianshu, 174 Chen Lingjiao, 167 Chen Louis, 167 Chen Run, 192 Chen Xiaojun, 31, 124, 126, 164, 180, 180 Chen Xin, 138 Chen Xujin, 137, 161 Chen Yifan, 158 Chen Yiwei, 122 Chen Yudong, 197 Chen Yuxin, 30, 101, 184 Chen Zheng, 127 Chen Zhi, 184 Chen Zhiping, 135 Cheng Jianqiang, 135, 135 Cheng Xiang, 196 Chenu Damien, 142, 161 Chertkov Michael, 179 Chi Xin, 107, 164 Chi Yuejie, 184 Chin Sang, 196 Chinneck John, 107 Chiou Suh-Wen, 168 Chiplunkar Ashish, 127 Chittaro Francesca, 127 Cholamjiak Prasit, 113 Choromanski Krzysztof, 187 Choulli Tahir, 106

Chtinis Rajesh, 152 Chubanov Sergei, 146 Cifuentes Arturo, 106 Cifuentes Diego, **185**, 185 Cimbelli Alessandro, 183 Ciocan Florin, 129, 130 Cire Andre, 108, 121, 198 Clason C., 134 Claus Matthias. 115, 139 Clausen Jens. 198 Clausen Uwe, 154, 190 Clautiaux François, 39, 115, 151, 174 Clement Benoit, 122 Cocan Mircea, 114 Cocchi Guido, 144 Coco Amadeu, 147 Coelho Marcos, 42, 172 Coey Christopher, 41, 170 Coffrin Carleton, 194 Cofre Rodrigo, 162 Cohen Ilan, 178 Cohen Maxime, 190 Cohen Michael, 125 Cohen Victor, 189, 189 Cohen-Addad Vincent, 120, 180, 180 Colares Rafael, 188 Coliboro Thiane, 152 Colombani Yves, 151 Colombo Tommaso, 153 Combettes Patrick. 33. 140 Conde Eduardo, 139 Conforti Michele, 104, 118 Coniglio Stefano, 160, 160 Conn Andrew, 102, 102, 145 Consola Julio, 177 Contardo Claudio, 137, 151 Conti Sergio, 143 Contreras Ivan, **122**, 122 Corchero Cristina, 131 Cordeau J.-F., 131, 134 Cordeau JeanFrancois, 134 Cornuejols Gerard, 30, 101, 139, 158, 158 Correa José, 127 Correa Rafael, 112 Cortés Cristián, 198 Cory-Wright Ryan, 124 Cosmi Matteo, 123, 126 Costa Bernardo, 136, 162 Costa Joari, 136, 162 Costa Luciano, 151 Couturier Stephane, 161 Crainic Teodor, 197 Crama Yves, 109 Credo Andrea, 178 Cremer Pascal, 105 Cristofari Andrea, 108 Crivellaro Simone, 145 Cross Jonathan, 174 Cruz Neto João, 164 Cseh Agnes, **120**, *120* Csendes Tibor, 121, 177 Csetnek Robert, 185, 185, 185 Cuadrado Marlyn, 154

Cucuringu Mihai, 111, 111 Cunha Jesus, 115 Curmei Mihaela, 124 Curtis Frank, 33, 116, 137, 140, 158, 178, 190 Custodio Ana, 132 Cyr Eric, 150 D Ambrosio Claudia, 36, 102, 156, 163 D Andreagiovanni Fabio, 132, 137 d Aspremont Alexandre, 121, 166 D'Ambrosia Claudia, 102 Däubel Karl, 145 Dütting Paul, 170 Désidéri Jean-Antoine, 199 da Costa Junior Luiz Carlos, 42, 47, 168, 172 Daboul Siad, 105 Dadush Daniel, 188, 188, 195, 195 Daechert Kerstin, 165 Dahl Joachim, 133, 141 Dahlbeck Mirko, 107 Dai Bo, 174 Dai Hanjun, 117 Dai Yu-Hong, 112, 118, 126 Dal'Cortivo Zaudir, 191 Dalal Gal, 110 Damay Jean, 174 Dan Hiroshige, 107, 107, 175 Dan Teodora, 188, 188 Dandurand Brian, 47, 47, 159, 168 Dang Chuangyin, 138, 183 Darivianakis Georgios, 126, 184 Darlay Julien, 151 Daryalal Maryam, 162 Das Abhimanyu, 124 Das Bikramjit, 189 Das Syamantac, 181 Dash Sanjeeb, 134 Daskalakis Constantinos, 114 Dauzère-Pérès Stéphane, 115, 154 Davarnia Danial. 121. 139 David Berenger, 114, 177 Davis Damek, 111, 119, 149, 184, 184 De Boeck Jérôme, 132 de Carli Silva Marcel, 116 de Castro Yohann, 104 De Filippo Allegra, 156 De Giuli Maria Elena, 133 de Givry Simon, 182, 199 De Gournay Frederic, 104 De Klerk Etienne, 124, 124, 140, 141, 192, 192 de la Gorce Martin, 122 De La Vega Jonathan, 139 de Laat David, 28, 163, 186 De Lara Michel, 42, 172, 196 de las Casas Pedro, 152 De Loera J., 110 de Maere Gauthier, 124 de Matos Vitor, 42, 156, 172 de Mesmay Arnaud, 180 de Oliveira Alan Del, 150 de Oliveira Fabiana. 164 de Oliveira Welnigton, 134, 176, 195 de Prada Mikel, 131

de Rezende Pedro, 175 de Roux Daniel, 168 de Ruiter Frans, 112, 146 De Santis Alberto, 153 De Santis Marianna, 108, 150 De Sousa Vilmar Jefte, 176 de Souza Cid, 175 de Souza Mauricio, 185, 185 de Verdière Éric Colin, 180 de Vries Sven, 191 de Wolff Timo, 126 De Zotti Giulia, 107 Deka Deepjyoti, 110, 179, 179, 179 Del Canto Felipe, 106 Del Pia Alberto, 44, 44, 148, 148, 181, 181 Delage Erick, 103, 104, 104 Delarue Arthur, 122, 122, 172 Delikaraoglou Stefanos, 148 Della Vecchia Eugenio, 121 Delorme Maxence, 171, 171 Delorme Xavier, 134 Demassey Sophie, 134, 147, 195 Demenkov Maxim, 198 Demmel James, 128 Dempe Stephan, 139 den Hertog Dick, 112, 112, 130, 146 Denault Michel, 131, 131 Deng Yunxiao, 184, 185 Denoyelle Quentin, 104 Dentcheva Darinka, 120, 120 Denton Brian, 149, 188 Deride Julio, 106, 106 Derksen Harm, 101 Desaulniers Guy, 137, 161, 161, 166, 182 Deschamps Jean-Christophe, 198 Deshpande Amit Jayant, 164, 195 Desir Antoine, 179 Desrosiers Jacques, 126 Detienne Boris, 115, 161, 174, 195 Devarakonda Aditya, 128 Devraj Adithya M, 174 DeVries Audrey, 125 Dey Santanu, 30, 44, 101, 104, 134, 135, 148, 181 Dhara Anulekha, 189 Dhulipala Laxman, 191 di Serafino Daniela, 178 Di Summa Marco, 104, 118 Diakonikolas Jelena, 125 Dias Fernando, 145 Dias Garcia Joaquim, 42, 47, 47, 168, 168, 172 Dias Julio, 47, 168 Dias Sávio, 176 Diaz Daniel, 159 Diaz Gabriel, 123 Dickinson Peter, 177 Diehl Moritz, 39, 179 Dieuleveut Aymeric, 143 Diffenderfer James, 178 Dilkina Bistra, 117, 117, 117, 159 Ding Chao, 194 Ding Guoli, 158 Ding Lijun, 43, 108, 173, 197 Diniz Pedro, 180

Diouane Youssef, 116, 155 Dirkse Steven, 179 Disser Yann, 167, 170, 189, 197 Dkiouak Rachid, 107 Doan Xuan Vinh, 43, 173 Dominguez Concepcion, 121 Dong Hongbo, 183 Doostmohammadi Mahdi, 131, 174, 175 Dossal Charles. 180 Downward Anthony, 42, 136, 140, 161, 181 Dowson Oscar, 42, 136, 172 Dressler Mareike, 126 Driessen Jan, 115 Drori Yoel, 155 Drusvyatskiy Dmitriy, 119, 149, 184 Du Yu, 163, 163 Dubey Dipti, 150, 150 Dubreuil Sylvain, 116 Duchi John, 121, 121 Duclos Rémi, 126 Dudycz Szymon, 167 Duer Mirjam, 139, 153, 161, 162, 191 Duerr Christoph, 107 Duhamel Christophe, 147, 168, 168 Dujardin Yann, 197 Dula Jose, 175, 191 Dunn Jack, 191 Dunning Iain, 151 Dupas Remy, 198 Duque Daniel, 42, 181 Durmus Alain, 143 Duval Vincent, 104, 104 Duvillié Guillerme, 146, 146 Dvinskikh Darina, 105 Dvurechensky Pavel, 105, 147, 155, 156, 184 Dwivedi Raaz, 121 Ebenbauer Christian, 176 Ebihara Yoshio, 169 Eckstein Jonathan. 118. 126 Eftekhari Armin, 117, 117 Eghbali Reza, 196 Ehrenmann Andreas, 124, 148 Ehrgott Matthias, 149, 170 Ehrhardt Matthias, 134 Eichfelder Gabriele, 144, 144 Eifler Leon, 156 Eisenbrand Friedrich, 110, 133 Ek David, 146 El Ghali Ahmed, 130 El Hallaoui Issmail, 137 El Housni Omar, 138, 138, 142 El Khadir Bachir, 43, 132 El Yassini Khalid, 130, 189 Elhedhli Samir, 144 Elloumi Sourour, 109, 121, 143, 143 Elmachtoub Adam, 196 Elsener Andreas, 121 Emiel Grégory, 105 Engberg Lovisa, 186 Engle Abraham, 172 Epelman Marina, 152 Epstein Leah, 160

Eraslan Hulya, 190 Erbs Guillaume, 196 Erdogdu Murat, 114 Eriksson Kjell, 175 Erlebach Thomas, 107, 160 Ernst Andreas, 185 Errico Fausto, 127, 161 Escobar Mauro, 179 Escobar V. Laura, 177 Escobedo Adolfo, 177, 177 Esfandiari Hossein. 170 Eskandarzadeh Saman, 113 Esmaeilbeigi Rasul, 153 Espinoza-Garcia Juan-Carlos, 168 Estrin Ron, 178 Eufinger Lars, 154 Even Guy, 178 Eytard Jean-Bernard, 160 Fält Mattias, 107, 185 Füllner Christian, 191 Faco' João Lauro, 165 Fadili Jalal, 134, 180, 180 Faenza Yuri, 118, 172 Falk Heiko, 189 Falq A-E, 169 Fampa Marcia, 40, 164, 192 Fan Jinyan, 157, 169 Fan Yueyue, 134 Fandina Nova, 135 Fang Fei, 159 Fanuel Michael, 196 Fasano Giovanni, 122, 151, 151, 151 Fattahi Salar, 193 Favre Eric, 150 Fawzi Hamza, 116, 187 Faybusovich Leonid, 108 Fazel Maryam, 33, 140, 147, 196 Fazio John, 47, 168 Fazio Nadia, 132 Fearnley John, 170 Feiling Jan, 176 Feillet Dominique, 180 Feizollahi Javad, 118 Feldman Jacob, 179, 179 Feldman Michal, 170 Feldman Moran, 155, 155, 155, 178 Feldmann Andreas, 152, 152 Feldotto Matthias, 197 Fenelon Mary, 179 Ferber Aaron, 124 Fercoq Olivier, 143, 166, 194 Fernández Pascual, 122 Ferreira Cristiane, 154 Ferreira Orizon, 164, 164 Ferris Michael, 28, 28, 106, 123, 124, 163, 163, 179 Ferry Michael, 149 Fessler Jeffrey, 155 Fiala Jan, 132 Ficker Annette, 160 Figueira Goncalo, 154 Figueiredo Mario, 194 Filipecki Bartosz, 191, 191

Finardi Erlon, 156, 176, 196 Fiorini Samuel, 104, 118 Fischer Andreas, 103, 103, 103, 187 Fischer Anja, 107, 109 Fischer Frank, 107, 109, 116 Fischer Thomas, 129 Fischer Tobias, 102 Fischetti Martina, 166 Fischetti Matteo, 37, 186, 196 Flammarion Nicolas, 136 Fleiner Tamás, 120 Fleszar Krzysztof, 156 Fliege Joerg, 183 Folberth James, 143 Foncea Patricio, 127 Fonseca Adeline, 145 Fontan Florian, 177 Forsgren Anders, 113, 146, 146, 146, 175, 186 Fortz Bernard, 132, 146 Fouilhoux Pierre, 126, 169 Fountoulakis Kimon, 128, 196 Fourer Robert, 179 Foutlane Omar, 137 Fowkes Jaroslav, 193 Fréchette Alexandre, 159 Fragkos Ioannis, 131 Frangioni Antonio, 116 Frazier Peter, 155 Fredo Guilherme, 176 Freeman Randy, 155 Frerick Leonhard, 139 Freund Daniel, 124, 125 Freund Robert, 111, 166, 166 Friberg Henrik, 116 Friedland Shmuel, 101 Friedlander Michael, 178 Friedrich Ulf, 169, 169, 191 Friesen Donald, 112 Friesen Mirjam, 191 Friggstad Zac, 180, 180 Froger Aurélien, 195 Frohn Martin, 123, 123 Fu Taoran, 138 Fujii Koichi, 130 Fukasawa Ricardo, 45, 151, 151, 166, 166, 188 Fukuda Ellen, 153 Fukuda Mituhiro, 108 Fukuoka Kazuya, 175 Fukushima Masao, 108 Funke Simon, 129 Furini Fabio, 134, 134, 134 Göbel Oliver, 170 Göttlich Simone, 199 Gaar Elisabeth, 102, 116 Gabay Michaël, 45, 143, 160 Gabl Markus, 177 Gabriel Steven, 128, 171 Gairing Martin, 170, 197 Gaivoronski Alexei, 39, 136, 136 Galé Carmen, 121 Galabova Ivet. 129. 152 Galati Matthew, 144

Galli Leonardo, 184 Galligari Alessandro, 184 Gally Tristan, 109 Galvan Giulio, 194 Galvez Waldo, 147 Gamrath Inken, 192 Ganapathy Tejaswini, 196 Gangammanavar Harsha, 177 Gao Bin. 164. 164 Gao Feng, 153, 153 Gao Wenbo, 137, 158 Gao Yini, 106 García Pérez M. Dolores, 122 García Quiles Sergio, 171, 171 García Ramos Yboon, 112 Garcia Fernandez Inmaculada, 190, 190 Garcia Palomares Ubaldo, 102 Garcia-Flores Rodolfo, 153 Gardner Steven, 178 Gardy Danièle, 159 Garg Shashwat, 195 Garreis Sebastian, 119 Garrigos Guillaume, 137, 180 Gasnikov Alexander, 105, 123, 147, 153, 155, 155, 156, 167, 184 Gaubert Stephane, 101, 116, 117, 139, 160, 183, 183 Gauthier Jean Bertran, 126, 180 Gay David, 179 Gayme Dennice, 144 Gebraeel Nagi, 168 Geletu Abebe, 162, 162 Gemander Patrick, 169 Gendreau Michel, 105, 105, 166, 198 Gendron Bernard, 123, 145, 197, 197 Genevay Aude, 143 Georghiou Angelos, 126, 146, 184, 184 Gerard Henri, 106 Gersing Timo, 149 Gevret Hugo, 161 Gfrerer Helmut. 138 Ghaddar Bissan, 125 Ghadimi Saeed, 197 Ghanbari Hiva, 187 Ghosal Shubhechyya, 130 Gianessi Paolo, 134 Gicquel Celine, 135, 191 Gidel Gautheir, 43, 137, 173 Gil Cristiam, 198 Gilboa Elad, 110 Gill Philip, 146, 149, 149 Gillis Nicolas, 175 Gimbert Hugo, 117 Gimeno Feu Robert, 177 Ginsbourger David, 155 Giselsson Pontus, 112, 118, 185 Glanzer Christoph, 133, 133 Gleixner Ambros, 102, 103 Glineur Francois, **43**, **173**, *192* Glynn Peter, 131 Gobet Emmanuel, 182 Godard Hadrien. 143 Goemans Michel, 27, 101 Goerigk Marc, 154, 171, 171

Goetschel Sebastian, 150 Gokalp Can, 125 Goldberg Andrew, 170 Goldberg Noam, 160, 192 Goldfarb Donald, 137, 158 Gollapudi Sreenivas, 124 Golovidov Oleg, 178 Golvet Théo. 43. 173 Gomez Andres. 41, 170 Goncalves Douglas, 113 Goncalves Max, 138 Gondzio Jacek, 125, 125, 139, 141, 156, 171, 178, 178, 186 González Brais, 199 González Merino Bernardo, 157 González Pedro, 176 González-Díaz Julio, 199 Gonzaga Clovis, 154 Gorbunov Eduard, 104, 184 Gordini Angelo, 156 Gorman Gerard, 129 Gornov Alexander, 155 Goston Kolos, 171 Gotlieb Arnaud, 136 Gotoh Jun-ya, 111, 127 Goucha António, 169 Goulart Paul, 112, 129, 133 Gounaris Chrysanthos, 154 Goupil Félix, 134 Gouveia João, 116, 153, 169 Gouveia Luís, 122 Gowda Muddappa, 150 Gower Robert, 143, 182 Goyal Vineet, 138, 142, 142, 179 Goycoolea Marcos, 142, 157 Goyens Florentin, 117 Grübel Julia, 132, 173 Gramacy Robert, 116, 116 Grand Clement Julien, 138 Grandoni Fabrizio, 105, 147, 147, 147 Grangereau Maxime, 182, 182 Granot Daniel, 160 Grapiglia Geovani, 142 Grappe Roland, 162 Gratton Serge, 141, 141, 148 Gregorio Ronaldo, 164 Gregorutti Baptiste, 108 Greiff Carl, 105, 106 Grenouilleau Florian, 166 Gribling Sander, 28, 163, 186 Gribonval Rémi, 183 Griewank Andreas, 44, 44, 136, 136 Griffin Joshua, 178 Grigas Paul, 138, 196 Grigoriu Liliana, 112 Grikschat Steve, 179 Grimm Boris, 146, 174 Grimm Veronika, 128, 132, 164, 173 Grimmer Benjamin, 43, 111, 132 Griset Rodolphe, 161 Grishchenko Dmitry, 105, 163 Gritzmann Peter, 113, 113, 167 Großwendt Anna, 141

Groetzner Patrick, 153, 153 Gross Martin, 104, 189, 189 Grossmann Ignacio, 173 Grothey Andreas, 168 Gruzdeva Tatiana, 191 Gu Guoyong, 194 Gu Zonghao, 45, 188 Gualandi Stefano, 160 Guan Xiucui, 198, 198 Guan Yongpei, 177 Guerrero Vanesa, 142, 142 Guillot Gaël, 115 Guimarães Inácio, 191 Gullhav Anders, 107, 107 Guminov Sergey, 155 Gummadi Krishna, 194 Gunasekar Suriya, 167 Guney Evren, 175, 175 Gunluk Oktay, 34, 108, 135, 163 Guo Shaoyan, 104, 180 Guo Yuanyuan, 41, 119 Gupta Anupam, 135, 172, 181 Gupta Manu, 113 Gupta Neelima, 129 Gupta Neha, 172 Gupta Varun, 170 Gupta Vishal, 130 Gupte Akshay, 40, 43, 141, 170 Gur Yonatan, $1\overline{29}$ Gurbuzbalaban Mert, 42, 104, 159 Guricanova Natalia, 158 Gurvich Itai, 122 Gusmeroli Nicolo, 102 Gutekunst Samuel, 140 Gutman David, 157 Hähle Anja, 139 Hähnle Nicolai, 105, 196 Habeck Oliver, 40, 187 Habibian Mahbubeh. 140, 161 Hachem Walid, 147 Haddadan Arash, 165 Haeser Gabriel, 108, 132, 132 Hager William, 178 Haghtalab Nika, 187 Hahn Mirko, 40, 173, 193 Hajizadeh Roghayeh, 175 Hall Georgina, 124, 124 Hall Julian, 152, 152 Halman Nir, 197 Hamacher Silvio, 166 Hamm Thekla. 105 Han Deren, 118 Han Eojin, 138 Han Weimin, 118 Hanasusanto Grani, 125, 167, 198 Hannah Robert, 165 Hansen Nikolaus, 193 Hansen Pierre, 137 Hansknecht Christoph, 171, 191 Hante Falk, 47, 103 Hantoute Abderrah, 112, 115, 197 Haratyunyan Ararat, 156

Harchaoui Zaid, 128, 146 Hare Warren, 109, 125, 125, 171 Harks Tobias, 120, 197, 198 Hartillo M Isabel, 194 Hascoet Laurent, 44, 158 Hasebe Masaya, 185 Hasenbein John, 127 Haskell William, 103, 131, 158 Hatzel Meike. 161 Haubner Johannes, 111 Haugh Martin, 103 Hauser Raphael, 108 He Edward. 168 He Niao, 174 He Taotao, 43, 141 Hebert-Johnson Ursula, 194 Hegde Ganapati, 102 Hegerhorst Lisa, 44, 44, 136, 158 Heijmen Ben, 186 Heinkenschloss Matthias, 111, 111 Heipcke Susanne, 151 Heitsch Holger, 115 Held Stephan, 105, 131, 195, 195, 196 Helmberg Christoph, 116, 117, 139, 169 Helou Elias, 171 Helton Bill, 147 Hemmi David, 176 Hendel Gregor, 46, 196 Henderson Shane, 125 Hendrix Eligius, 141, 141, 190 Henk Martin, 110, 133 Hennings Felix, 173 Henrion Didier, 169 Henrion René, 115, 162 Heredia F.-Javier, 131, 153, 154, 177 Hermann Anna, 105 Herrich Markus, 187 Herskovits Jose, 46, 106 Hertlein Lukas, 119 Herty Michael. 145 Herzog Roland, 160 Heydrich Sandy, 147 Heymann Benjamin, 184 Hijazi Hassan, 105, 105, 168, 194, 194 Hildebrand Robert, 172, 172 Hildebrand Roland, 185 Hiller Benjamin, 47, 47, 110, 110, 188 Himmich Ilyas, 137 Hinder Oliver, 156, 156 Hintermüller Michael, 31, 101, 112, 119 Hirai Hiroshi, 113 Hirano Tatsuya, 198 Hiriart-Urruty Jean-Baptist, 30, 101, 176, 199 Ho Chin Pang, 146 Ho-Nguyen Nam, 167 Hoang Nam Dung, 152 Hoberg Rebecca, 195 Hochart Antoine, 119 Hochbaum Dorit, 167, 167 Hoeksma Ruben, 127, 127, 132, 156 Hoffmann Armin, 162, 162 Hoffmann Ruth, 159 Hoffmeister Susanne, 145, 145

Hofmann Tobias, 169 Hoheisel Tim, 172, 172 Hojny Christopher, **126**, 126, 182 Holder Allen, 170 Holmberg Kaj, 145, 175 Homem-de-Mello Tito, 35, 127, 163 Hommelsheim Felix, 151, 151 Homs-Moreno Josep, 131 Hong David, 197 Hong Mingyi, 128 Honnappa Harsha, 139 Hooker John, **121**, *121* Hopp Alexander, 197, 197 Hoppmann Heide, 46, 196 Hoppmann Kai, **113**, 113 Horn Benjamin, 105 Horváth Markó, 177, 195 Hotta Keisuke, 113 Hougardy Stefan, 105, 105 Hours Jean-Hubert, 45, 143 Houska Boris, 158 Hrga Timotej, 47, 168 Hsieh Ya-Ping, 128 Hu Bin, 155 Hu Hao, 141 Hu Jiang, 173 Hu Xudong, 137 Hu Yaohua, 118 Hu Zhenyu, 138 Hua Dan, 47, 168 Huang Chien-Chung, 144 Huang Jianqiu, 177 Huang Wei, 177 Huang Wenjie, 104 Huang Yakui, 112 Huber Anja, 183 Huber Christine, 154 Huber Olivier, 106 Huchette Joey, 182 Hueckelheim Jan, 129 Hug Adam, 179 Hug Gabriela, 148 Huiberts Sophie, 188 Huynh Tony, 118 Huynh Van, 138 Iancu Dan, 112, 129, 129 Ibrahimpur Sharat, 158 Igualada Lucia, 131 Ikegami Atsuko, 185 Im Sungjin, 132 Imahori Shinji, 146 Ingala Salvatore, 147 Iqbal Muhammad, 153 Irnich Stefan, 180 Ishibashi Yasumi, 130 Ishihata Masakazu, 175 Isonishi Ichiro, 153 Ito Masaru, 108, 108 Ito Naoki, 125 Iusem Alfredo, 134, 184 Iutzeler Franck, 105, 105, 163 Ivan Daniel, 184

Ivanova Anastasiya, 123, 123 Iwamasa Yuni, 113 Iwata Satoru, 113, 130, 130, 161 Iwata Tomoharu, 184 Iyengar Garud, 106 Izmailov Alexey, 103, 103, 187, 187 Izunaga Yoichi, 197 Jäger Sven. 132 Jabali Ola, 195 Jaberipour Majid, 125 Jabrayilov Adalat, 156 Jacquot Paulin, 139 Jaczynski Michel, 151 Jadamba Baasansuren, 174 Jafari Nahid, 159 Jaggi Martin, 137, 161, 167, 196 Jaillet Patrick, 106, 122 Jalilzadeh Afrooz, 131 Jansen Klaus, 107, 147, 169 Janssen Teun, 115 Janzen Kristina, 131 Jara-Moroni Francisco, 174 Jargalsaikhan Bolor, 161 Jarray Abdallah, 157 Jarry-Bolduc Gabriel, 109 Jaschke Johannes, 44, 158 Javal Paul, 195 Jean-Marie Alain, 121 Jegelka Stefanie, 116 Ji Ran, 111, 111 Ji Ziwei, 166 Jia Randy, 174 Jiang Bo, 118, 118, 138, 161 Jiang Ruiwei, 41, 41, 111, 119, 119, 149, 188 Jiang Rujun, 133 Jiang Suhong, 194 Jimenez Diego, 168 Jimenez Haydee, 194 Jin Ming, 186 Jin Rong, 128 Jin Z.M., 118 Jo Jason, 196 Jofre Alejandro, 116, 134, 134, 184 Johansson Mikael, 137 Johansson Rolf, 162 John Maximilian, 191 Johnstone Patrick, 118, 126 Joki Kaisa, 193, 193 Joncour Cédric, 107 Joormann Imke, 191 Jost Felix, 129 Joswig Michael, 116 Josz Cedric, 101, 193 Joyce-Moniz Martim, 123, 123 Judd Kenneth, 179 Junca Mauricio, 183 Jungers Raphaël, 42, 165, 175 Jurdzinski Marcin, 117 Kämmerling Nicolas, 153 Köppe Matthias, 123, 123, 123 Kabiljo Igor, 191

Kageyama Kota, 197 Kahale Nabil, 183 Kahn Jonas, 104 Kahr Michael, 155 Kaibel Volker, 32, 124, 191 Kakade Sham, 128 Kalaitzis Christos, 105 Kalcsics Joerg, 153, 171 Kalesnikau Ilva. 183 Kalinowski Thomas, 113, 147, 197 Kallabis Thomas, 128, 128 Kallaugher John, 119 Kallio Markku, 138, 138 Kamgarpour Maryam, 144 Kamoutsi Angeliki, 183 Kamzolov Dmitry, 156 Kan Takahiro, 115 Kanade Varun, 148 Kang Sung Ha, 186 Kanzow Christian, 187 Kaplan Haim, 127 Kapoor Sayash, 194 Kapralov Michael, 119, 119 Karaca Orcun, 126, 144 Karas Elizabeth, 144, 154 Karbasi Amin, 187 Karbstein Marika, 46, 160, 196 Karhi Shlomo, 160 Karimi Sahar, 42, 159 Karimi-Nasab Mehdi. 162 Karimireddy Sai Praneeth, 137, 161, 167 Karmitsa Napsu, 193, 193, 193 Karrenbauer Andreas, 122, 191 Karrer Brian, 191 Kash Ian, 123 Kasperski Adam, 171 Kathuria Tarun, 195 Kato Jun, 161 Katsirelos George, 182 Katz Ricardo, 117 Kazachkov Aleksandr, 166, 188 Kazempour Jalal, 148, 148 Kedad-Sidhoum Safia, 134, 169, 191 Keller Philipp, 190 Keller Wolfgang, 169 Kenny Angus, 185 Keriven Nicolas, 183 Kerivin Hervé, 188 Kerr-Delworth Paul, 179 Kesselheim Thomas, 148, 170 Keswani Vijay, 195 Keutchayan Julien, 105 Key Peter, 123 Khabazian Aein, 138 Khalil Elias, 117 Khamlichi Hanane, 107 Khammahawong Konrawut, 138 Khan Akhtar, 174 Khan Arindam, 147 Khan Kamil, 44, 44, 148, 158, 158 Khaniyev Taghi, 144, 144 Khanna Sanjeev, 119 Khassiba Ahmed, 145

Khodamoradi Kamyar, 180 Khuller Samir, 178 Kilinc-Karzan Fatma, 41, 119, 167, 167 Kim Anthony, 124 Kim Donghwan, 155 Kim Jongeun, 181 Kim Kibaek, 46, 46, 47, 159, 159, 168 Kim Michael, 127, 194 Kim Sunvoung, 125 Kim Youngdae, 179 Kimiaei Morteza, 148 Kinable Joris, 121, 121 Király Tamás, 181 Kirches Christian, 39, 40, 179, 179, 187 Kirlik Gokhan, 149 Kirst Peter, 172, 191 Kis Tamás, 177, 195 Kitahara Tomonari, 133, 152 Kjølstad Poulsen Niels, 107 Klamroth Kathrin, 165, 165 Klapp Mathias, 161 Klasing Ralf, 156 Kleer Pieter, 120 Klein Kim-Manuel, 107 Kleinert Thomas, 128, 154 Klemm Fabian, 167 Klep Igor, 147 Klibi Walid, 153 Klimm Max, 170 Klotz Benjamin, 105 Knueven Bernard, 133 Kobayashi Kazuhiro, 146, 146 Kobori Shingo, 121 Koch Patrick, 178 Koch Thorsten, 45, 119, 135 Kochetov Yury, 121 Kocuk Burak, 135, 181 Kocvara Michal, **125**, 141 Kocyigit Cagil, 106 Koenemann Jochen, 104, 120, 120, 131, 182 Koh Zhuan Khye, 120 Kohn Wolf, 174, 174 Koichi Shungo, 146 Kojima Masakazu, 125 Kolter J. Zico, 151 Kolvenbach Philip, 114 Komal Somayya, 108 Kones Ishai, 112 Kong Qingxia, 170 Kong Weiwei, 165 Konnov Igor, 108, 108 Koppel Alec, 162 Korn Ralf, 199 Koshevoy Gleb, 160 Koster Arie, 139, 139, 149 Kostina Ekaterina, 40, 179 Kostyukova Olga, 132 Kotov Vladimir, 160 Kotsialou Grammateia, 197 Kotthoff Lars, 159 Kouri Drew. 143 Kovacova Gabriela, 184 Kovacs Reka Agnes, 108

Kowalczyk Daniel, 154, 182 Kozma László, 156 Kramer Hugo Harry, 115 Krasko Vitaliy, 128 Kratsch Stefan, 147 Kreber Dennis, 115 Krebs Vanessa, 132 Krennrich Gerhard, 119 Kriel Tom-Lukas, 147 Krinninger Sebastian, 122 Krishnamoorthy Mohan, 185 Krishnamurthy Dvijotham, 142, 151 Krishnaswamy Ravishankar, 135 Kritter Julien, 107 Kronqvist Jan, 173, 173, 173 Kroshnin Alexey, 147 Kruber Markus, 117 Kucera Antonin, 117 Kucukyavuz Simge, <u>27</u>, <u>39</u>, **41**, <u>41</u>, **119**, <u>127</u>, <u>131</u>, <u>140</u> Kuhlmann Renke, *41*, *170*, **186** Kuhn Daniel, 32, 106, 109, 124, 124, 170, 184, 190, 190, 190, 198 Kukreja Navjot, 129 Kumam Poom, 108, 113, 138, 139, 139, 197 Kumam Wiyada, 139 Kumar Amit, 144, 172 Kumar Pawan, 130, 184 Kumar Raunak, 148 Kumaran Krishnan, 104 Kungurtsev Vyacheslav, 149 Kunisch Karl, 105 Kurennov Aleksey, 103 Kuroki Yuko, 145, 145 Kurpisz Adam, 126, 140 Kurtz Jannis, 154, 154 Kuru Nurdan, 197 Kuryatnikova Olga, 177, 177 Kuttich Anja, 176 Kvillum Vilde, 107 L'Ecuyer Pierre, 105, 152 Löhndorf Nils, 42, 165 Lübbecke Marco, 107, 117, 120, 129, 144 Lüthen Hendrik, 182 Lévai Balázs, 177 Léveillé Nicolas, 131 López Claudia, 128 López Ruben, 174 López-Ramos F., 138 Laaziz El Hassan, 198 Labbé Martine, 36, 121, 132, 132, 185 Lacoste-Julien Simon, 43, 165, 173 Lacour Renaud, 165 Lacroix Mathieu, 162 Laekhanukit Bundit, 181 Lage Clara, 196 Lagos Felipe, 161 Lahrichi Nadia, 166 Laird Carl, 111, 194 Laiu Paul, 152 Lallouet Arnaud, 136, 136 Lam Henry, 130, 189 Lam Xin Yee, 110

Lamadrid Alberto, 107, 107, 164 Lamas Patricio, 157 Lambert Amélie, 40, 109, 143, 164 Lambin Xavier, 148 Lampariello Lorenzo, 145, 189 Lamperski Jourdain, 157 Lan Guanghui, 105, 158 Lancini Emiliano. 162 Landi Germana, 178 Lange Julia, 169 Lange Michael, 129 Laporte Gilbert, 195 Lapucci Matteo, 194 Larroyd Paulo, 42, 172 Larson Jeffrey, 148, 155, 187 Larsson Torbjörn, 175 Lasserre Jean, 101 Latafat Puya, 128 Laurent Monique, 28, 147, 163, 163, 186 Lavaei Javad, **43**, **141**, **186** Lavlinskii Sergey, 121 Lazaar Nadjib, 136 Lazare Arnaud, 109 Lazic Ranko, 117 Le Ba Khiet, 197 Le Bodic Pierre, 45, 188 Le Digabel Sébastien, 101, 109, 109, 116, 125, 176 Le Do Duc, 173, 173 Le Jean Alexandre, 114 Le Pape Claude, 134 Le Tien-Nam, 156 Leal Marina, 139 Leal-Palazon Marina. 173 Leblond Rémi, 165 Leclère Vincent, 41, 42, 42, 106, 165, 172, 181, 181, 189 Leclercq Etienne, 166 Lee Ching-pei, 173 Lee Dabeen, 135, 158, 158 Lee Dongchan, 142, 179 Lee Euiwoong, 181 Lee Jason, 167 Lee Jon, **34**, 40, <u>40</u>, **140**, 164, <u>164</u> Lee Kuang-chih, 138 Lee Kyungsik, 115 Lee Robert, 119 Lee Soomin, 167 Lee Yin Tat, 125 Lee Younsoo, 115, 115 Lefebvre Thierry, 116 Legat Benoît, 42, 165 Lehuédé Fabien, 166 Leitner Markus, 155 Lejeune Miguel, 111, 150, 150, 150 Lemaire Pierre, 177 Lemery Marion, 192 Lenoir Arnaud, 42, 181 Lenz Ralf, 173 Lenzen Christoph, 122 Lepaul Sébastien, 129 Leppänen Samuli, 140 Lesaja Goran. 183 Lessard Laurent, 155, 155 Letchford Adam, 34, 127, 127, 163, 176

Letocart Lucas, 101, 109, 150, 166, 176, 199 Letsios Dimitrios, 46, 119, 196 Leus Roel, 154, 182 Levato Tommaso, 144, 194 Levin Asaf, 112, 112 Levron Yoash, 195 Levy Kfir, 143 Lewandowski Mateusz. 181 Lewis Adrian, 149, 149 Leyffer Sven, 40, 40, 47, 117, 131, 149, 149, 168, 187, 193.193 Li Bin, 197 Li Chong, 118 Li Duan, 133 Li Guoyin, 126 Li Jason, 181 Li Jonathan, 104 Li Lihong, 174 Li Min, 110, 142 Li Minghua, 142 Li Pu. 162 Li Shan, 170 Li Xudong, 110, 158, 171 Li Yuanzhi, 125 Li Zhening, 138 Li Zhize, 198 Liang Jingwei, 149 Liberti Leo, 102, 167, 167 Lichocki Pawel, 151 Lieder Felix, 161 Liers Frauke, 47, 103, 128, 149, 149 Lilienthal Patrick, 129 Lim Andrew, 127 Lim Cong Han, 162 Lim Jaeyoong, 114 Lim Lek-Heng, 108 Lin Hongzhou, 146 Lin Meixia, 170 Lin Qihang, 136, 136, 158, 178 Lin Tianvi. 161 Linderoth Jeff, 44, 148, 162, 194 Lindroth Peter. 191 Linhares Andre, 181 Lisser Abdel, 135, 135 Liti Chiara, 126 Liu Andrew, 192, 192 Liu Chao, 198 Liu Haoyang, 121 Liu Jia, 135 Liu Jingcheng, 102 Liu Junvi, 144 Liu Limeng, 193 Liu Nan, 170 Liu Ning, 134 Liu Shuai, 171 Liu Tianxiang, 103, 111 Liu Xin, 118, 126, 136, 157, 164, 164, 184 Liu Xin-Wei, 112 Liu Xinwei, 126 Liu Ya-Feng, 136 Liu Yanchao, 168, 168 Liu Yanli, 158 Liu Yong-Jin, 170

Liu Zhen. 174 Liuzzi Giampaolo, 126, 132, 144, 178 Ljubic Ivana, **134**, *134* Lobato Rafael, 156 Lobos Ruiz Alfonso, 138 Locatello Francesco, 161, 166 Lodi Andrea, 34, 117, 127, 140, 147, 161, 166, 183, 188 Loho Georg, 113 Loizou Nicolas. 180 Lokhov Andrey, 179 Lolakapuri Phani, 120 Lombardi Michele, 156 Lopes Helio, 115 Lopes Ronaldo, 161 Lopez Genaro, 195, 195 Lopez Jheisson, 159 Lopez Pierre, 195 Lopez Sofia, 46, 112 Lopez-Paz David, 116 Lorca Alvaro, 123, 168 Lorca Xavier, 159 Lorenz Dirk, 102 Loris Ignace, 178 Lotz Martin, 117, 117 Louboutin Mathias, 129 Lourenco Bruno, 133, 133 Lovett Shachar, 195 Lozano Leonardo, 114, 191 Lu Haihao, 111, 111, 166 Lu Lin, 193 Lu Shu, 180 Lubberts Zacharv, 178 Lubin Miles, 172, 172, 182 Lucambio Perez Luis, 151 Lucchi Aurelien, 148 Luce Robert, 151 Lucet Yves, 125 Lucidi Stefano, 108, 132, 153, 178 Lucier Brendan, 127, 170 Luedtke Jim, 35, 117, 151, 162, 162, 162, 163, 175, 188 Luke Russell, 126, 126 Lundell Andreas, $1\overline{73}$ Luppold Arno, 189 Lusby Richard, 198 Lux Kerstin, 199 Lygeros John, 126, 183, 184 Lynch Kevin, 155 Lyra Christiano, 115, 192 Mäkelä Marko, 193 Mömke Tobias, 144, 156, 156 Mühlenthaler Moritz, 150, 151 Mühmer Erik, 107 Müller Benjamin, 103 Müller Dirk, 195 Müller Johannes, 151 Mütze Torsten, 145 Múnera Danny, 159 Ma Cong, 184 Ma Ding, 179 Ma Runchao, 158 Ma Shiqian, 111, 118, 136, 158 Ma Will, 167

Maack Marten, 107 Macchia Antonio, 116 Mach Frantisek, 178 Machado Francisco, 154 MacPhee Kellie, 149 Maculan Nelson, 46, 106, 129, 195 Madani Ramtin, 186 Madeira Jose. 132 Madore David, 192 Madriz Eleazar, 177, 177 Madry Aleksander, 125, 125 Madsen Henrik, 107 Maeght Jean, 143 Maehara Takanori, 130 Maggioni Francesca, 135 Mahéo Arthur, 134 Maher Stephen, 46, 119, 120, 159 Mahey Philippe, 192 Mahmutogullari Irfan, 120 Mahoney Michael, 128, 131, 196 Mai Tien, 152 Mairal Julien, 146, 146, 183 Majewski Kurt, 176, 176 Majlesinasab Nahidsadat, 118 Majmudar Jimit, 43, 173 Majumdar Anirudha, 124 Makarychev Konstantin, 141 Makarychev Yury, 141, 181 Malaguti Enrico, 134, 142, 142 Malick Jerome, 105, 119, 163, 180 Malinovic Igor, 172 Malitsky Yura, 134 Malkin Peter, 157 Malkovsky Nikolay, 153 Mallach Sven, 156, 156 Mallmann-Trenn Frederik, 148 Mamino Marcello, 117 Mancilla-David Fernando, 139 Mancinska Laura, 163 Manlove David, 171 Mannino Carlo, 152 Mannor Shie, 110 Manns Paul, 40, 187 Mansoori Fatemeh, 118 Manurangsi Pasin, 152, 181 Maqrot Sara, 199, 199 Marín Alfredo, 121 Marañón-Ledesma Hector, 171 Marandi Ahmadreza, 130, 141 Marchand Alexia, 105 Marcinkowski Jan, 167 Marcotte Etienne, 132 Marcotte Patrice, 132, 188 Marecek Jakub, 141, 141 Margot Francois, 150, 156 Marinelli Fabrizio, 176, 176 Marion Pierre, 193 Markót Mihály, 177 Marques Guillaume, 198 Margues Jair, 191 Marron J.S., 110 Martínez Diego, 199 Marteau Benjamin, 132

Martin Alexander, 47, 103, 149 Martin Kipp, 182 Martin Sebastie, 134 Martin Sebastien, 122, 172 Martinelli Rafael, 126, 151, 151, 180 Martinon Pierre, 108 Martins Joaquim, 116 Marumo Naoki, 184 Maschietto Gabriela, 142, 161 Masmoudi Oussama, 134 Mastrolilli Monaldo, 107, 140, 140, 172 Masuyama Hiroyuki, 175 Matiussi Ramalho Guilherme, 196 Matni Nikolai, 162 Matsuda Yusa, 145 Matsui Tomomi, 145 Matsui Yasuko, 152 Matsypura Dmytro, 122 Matter Frederic, 102 Matthews Jason, 147 Matuschke Jannik, 120 Maximov Yury, 114, 179 Mazumder Rahul, 44, 130, 148 Mazurenko Stanislav, 134 McClintock Jessica, 133 McCord Christopher, 108, 108 McCormick Tom, 109 McCreesh Ciaran, 159 McCullough Scott, 147 McKinnon Ken, 168, 192 Medina Moti, 178 Megow Nicole, 107, 132 Meißner Julie, 107, 132 Meier Dennis, 185 Meireles Lucas, 164 Melloul Sakina, 199 Melo Jefferson. 165 Melo Rafael. 115 Mencarelli Luca, 106 Mendoza Jorge, 195 Mendoza Smith Rodrigo, 130, 130 Meng De, 147 Meng Kaiwen, 118, 142 Mengi Emre, 193 Menickelly Matt, 125 Mensch Arthur, 183 Mercier Quentin, 199, 199 Merkert Maximilian, 47, 103, 169, 173, 173 Mertens Nick, 47, 103 Mertikopoulos Panayotis, 155 Messine Frederic, 121, 122 Mestre Julian. 133 Meszaros Csaba, 46, 112 Metson Genevieve, 190 Meyer Christian, 41, 160, 170 Meyn Sean, 144, 174 Meza Juan, 176, 176 Michaels Dennis, 47, 103, 151 Michel Sophie, 107 Middleton Richard, 153 Migliorini Gabriela, 168 Mihalak Matus. 160 Milano Michela, 136, 156

Milzarek Andre, 173, 173 Minion Michael, 150 MIPLIB-team The, 45, 135 Mira Nuno, 175 Mirrokni Vahab, 114, 114, 166, 170, 190 Misener Ruth, 46, 119, 158, 196 Mishchenko Konstantin, 181 Misic Velibor. 130 Misra Sidhant, 110 Mistry Miten, 119 Mitchell John, 139 Mito Leonardo, 107 Mitridati Lesia. 148 Mitrovic Slobodan, 187 Mitsos Alexander, 176 Mittal Areesh, 125 Mittelmann Hans, 45, 45, 135, 150 Miyashiro Ryuhei, 152 Miyauchi Atsushi, 115 Mohabbati Nasrin, 154 Mohajerin Esfaha Peyman, 170, 190, 198, 198, 198 Mohammad-Nezhad Ali, 114 Mohammadi Masoumeh, 182 Mohr Robert, 146 Molero-Río Cristina, 142 Molinaro Marco, 30, 101, 135, 135, 181, 188 Molzahn Daniel, 193 Monaci Michele, 143 Monasse Pascal, 122 Mongeau Marcel, 145 Monnet Dominique, 122 Montanher Tiago, 177 Monteiro Renato, 165, 174 Morén Björn, 175 Morabito Reinaldo, 139 Morais Hugo, 195 Morales Juan, 107, 109, 109, 109 Moran Diego, 181, 181 Morancey Morgan, 127 Mordukhovich Boris. 138 Moreno Alfredo, 139 Moreno Eduardo, 160 Moreno Rodrigo, 123 Moret Fabio, 124 Morgan Jacqueline, 145, 161 Moriguchi Satoko, 135, 135 Morin Martin, 112 Morini Benedetta, 122 Morita Hiroshi, 115 Morlier Joseph, 116 Morton David, 42, 127, 144, 181 Moseley Benjamin, 120, 132, 170 Mottet Clementine, 189 Mouquet David, 161 Moura Scott, 166 Mouret Sylvain, 45, 143 Mourrain Bernard, 101 Mouslim Hocine, 199 Moustrou Philippe, 192 Mozafari Yasaman, 195 Muñoz Gonzalo, 172, 188 Muangchoo-in Khanitin, 139 Mucha Marcin, 112

Mudigere Dheevatsa, 116 Mukherjee Anirbit, 196 Munari Pedro, 139 Munger David, 105 Munoz Francisco, 123 Munoz Zuniga Miguel, 109 Muramatsu Masakazu, 133, 169 Murota Kazuo, 113, 135 Murrav Rilev. 187 Murthy Karthyek, 111, 167, 198 Muter Ibrahim, 147, 175 Muts Kateryna, 189 Muts Pavlo, 141, 141 Mutzel Petra, 156 Nägele Martin, 130 Nadarajah Selvaprabu, 136 Nagarajan Harsha, 105, 194 Nagarajan Viswanath, 135, 172 Nair Vinod, 151 Najman Jaromil, 176 Nakano Shin-ichi, 152 Nakao Hideaki, 149, 188 Nakayama Shummin, 163 Nannicini Giacomo, 197 Naor Seffi, 178, 178, 178, 187 Naoum-Sawaya Joe, $\overline{137}$ Narayanan Sri Hari, 44, 136 Narkiewicz Adam, 189, 190 Narushima Yasushi, 163, 198 Nasini Stefano, 46, 106, 138, 138 Natarajan Karthik, 138, 167, 189 Nattaf Margaux, 154, 195 Necoara Ion, 43, 128, 159, 180, 181, 181 Nedich Angelia, 105, 153, 167, 186, 186 Negahbani Maryam, 164 Negreiros Marcos, 129 Negrete-Pincetic Matias, 123 Nemhauser George, 168 Nemoto Toshio, 113 Neogy Samir, 150, 150, 150 Nesbitt Peter. 157 Nesello Vitor, 175 Nesterov Yurii, 111, 175 Neu Gergely, 160 Neumaier Arnold, 148, 177 Neumann Christoph, 165 Neveu Bertrand, 122 Newman Alantha, 156, 165 Newman Alexandra, 157, 157, 157 Newton David, 112 Ng Yeesian, 110 Ngueveu Sandra U., 134, 134 Nguyen Chu, 130 Nguyen Hung, 142 Nguyen Huu, 138 Nguyen Khoa, 113 Nguyen Lam, 128, 148 Nguyen Phuong, 128, 148 Nguyen Thanh, 171 Nguyen Tri-Dung, 169, 183 Nguyen Tu, 188 Nguyen Viet Anh, 109, 170, 190, 198

Ni Qiang, 127 Nicholson Bethany, 111 Nie Jiawang, <u>101</u>, <u>108</u>, **109**, *109*, 169 Nielsen Lars, 149 Nikolov Aleksandar, 195 Nikolov Aleksander, 172 Nikolova Mila, 158 Ninin Jordan, 122 Nino-Mora Jose. 113 Nitsche Sabrina, 133 Niu Dunbiao, 194 Niu Yi-Shuai, 115 Nizard David, 143 Nocedal Jorge, 115, 116, 131, 131, 178, 178 Noguchi Masashi, 107 Nohadani Omid, 138, 150, 170, 170 Nonobe Koji, 185 Norouzi Fard Ashkan, 120, 180 Nowak Ivo, 141, 141, 141 Nowak Robert, 113 Noyan Nilay, 150 Nygreen Bjørn, 107 O'Sullivan John, 161 Obozinski Guillaume, 189, 190 Ochs Peter, 134 Oertel Timm, 110, 110 Oggioni Giorgia, 133, 192 Okuno Takayuki, 107, 108 Olivares Daniel. 123 Oliveira Aurelio, 46, 112, 153 Oliveira Fabricia, 138 Oliveira Fabricio, 166 Oliveira Jose, 114 Oliveira Paulo, 164 Olivier-Meunier Jean-Phil., 131 Ollis John, 47, 168 Olver Neil, 181, 182, 188 Omer Jeremy, 145 ONeill Michael, 131 Ongie Greg, 113, 117, 197 Onsod Wudthichai, 139 Oosterwijk Tim, 127 Oquab Maxime, 116 Orabona Francesco, 148 Orban Dominique, 178, 179 Ordoñez Fernando, 121 Ordoudis Christos, 109, 148 Orecchia Lorenzo, 125 Oriolo Gianpaolo, 123 Orlinskaya Galina, 164 Orlov Andrei, 191 Ortega Gloria, 190 Orvain Marie, 142 Osborne Michael, 112 Oshiro Márcio, 153 Ossorio-Castillo Joaquín, 199 Otemissov Adilet, 157 Otsuki Kensuke, 130 Ottaviano Giuseppe, 191 Ouali Abdelkader, 182 Oudani Mustapha, 153, 153, 189 Oudjane Nadia, 139

Oufaska Kenza, 107, 130, 153, 189 Ouorou Adam, 105 Ouzidan Abdessamad, 177 Oveis Gharan Shayan, 102, 102 Overton Michael, **149**, 149 Oxberry Geoffrey, 153 Ozdaglar Asu, 104, 114 Ozdemir Senav, 175 Oztoprak Topkaya Figen, 45, 143 Pál László, 177 Paat Joseph, 104, 110, 133 Pacaud François, 42, 42, 172, 181 Padmanabhan Divya, 167, 167 Paes Leme Renato, 135 Pagnoncelli Bernardo, 35, 106, 106, 157, 163 Paias Ana, 175 Pakkaranang Nuttapol, 113 Palagi Laura, 149 Palaiopanos Gerasimos, 120 Palermo Pedro, 168 Palkar Prashant, 187 Paluch Katarzyna, 167 Pan Kai, 177 Pan Stefania, 199 Panageas Ioannis, 120 Pancholi Aditya, 129 Pang Jeffrey, 138, 138 Pang Jong-Shi, 128, 163 Panigrahi Debmalya, 124 Papadimitriou Dimitri, 137, 137 Papageorgiou Dimitri, 104 Papailiopoulos Dimitris, 167 Papakonstantinou Athanasios, 124 Papp David, 125 Paquette Courtney, 119, 149 Pardalos Panos, 153, 159, 198 Park Sungsoo, 114, 151 Parmentier Axel, 117, 189, 189 Paronuzzi Paolo, 134, 143 Parpas Panos, 193, 193 Parriani Tiziano, 156, 156 Parrilo Pablo, 104, 114, 116, 147, 147 Pascual Valerie, 44, 158 Pashkovich Kanstantsin, 120, 181 Pasiliao Eduardo, 122 Passacantando Mauro, 145 Passos Yuri, 177 Pasupathy Raghu, 112, 112 Pataki Gabor, 102, 116, 133, 157 Patel Viresh, 102 Patrascu Andrei, 43, 159 Patrinos Panos, 128 Paul Alice, 124 Paul Julia, 42, 172 Pauphilet Jean, 114 Pauwels Edouard, 119, 119, 119 Paz Ami, 144, 144 Pecher Arnaud, 161 Pecin Diego, 189 Pedregosa Fabian, 43, 136, 136, 165, 173 Peipei Tang, 169, 194 Peis Britta, 197

Pelegrin Blas, 122 Pena Javier, 116, 157, 157, 157 Pena-Ordieres Alejandra, 117, 117 Penas David, 199 Peng Pan, 119 Peng Shen, 135 Peralta Jeinny, 114 Perez-Aros Pedro, 115 Pericaro Gislaine, 154 Perini Tyler, 189, 189 Permenter Frank, 139, 139 Perregaard Michael, 45, 150 Perscheid Bernd, 191 Pesavento Marius, 102 Pesenti Raffaele, 123, 151 Pessoa Artur, 126, 171, 175 Peters Han, 102 Petkovic Milena, 192 Petra Noemi, 122 Petrik Marek, 146 Pettersson William, 171, 171 Peypouquet Juan, 137 Peyrard Nathalie, 197 Peyre Gabriel, 104, 180, 183 Pferschy Ulrich, 143 Pfetsch Marc, 37, 40, 102, 102, 109, 126, 149, 182, 186, 187 Pflaum Peter, 134 Phillips Austin, 159 Philpott Andy, 28, 106, 124, 139, 161, 163 Phusingha Saranthorn, 153 Piazza Adriana, 157, 190 Piccialli Veronica, 123, 126, 150 Picheny Victor, 116 Pichler Alois, 117 Pierre Carpentier, 42, 172, 181, 196 Piliouras Georgios, 120 Pillaud-Vivien Loucas, 128 Pillutla Krishna, 128 Pimentel-Alarcon Daniel, 113 Pinar Mustafa, 107, 107 Pineda Morente Salvador, 109 Pinson Pierre, 109, 124, 148 Pinto André, 47, 168 Pioro Michal, 183 Piovesan Teresa, 28, 186 Pira Clement, 139 Pisciella Paolo, 123 Pizzuti Andrea, 176 Placek Philip, 174, 174 Planiden Chayne, $1\overline{71}$ Plein Fränk. 121 Ploskas Nikolaos, 119 Pock Thomas, 134 Poggi Marcus, 115, 115, 180 Poggiolini Laura, 127 Poirion Fabrice, 199 Poirrier Laurent, 45, 166, 188 Pokutta Sebastian, 108, 172, 181, 187, 196, 196 Polik Imre, 45, 45, 135, 143 Pollet Valentin. 174 Poloczek Matthias, 144, 144 Pong Ting Kei, 103, 103, 103, 111, 126, 153

Poon Clarice, 183 Pope Scott, 178 Porcelli Margherita, 131, 131 Porcheron Marc, 139, 161 Porumbel Daniel, 123 Poss Michael, 145, 154, 171, 183, 192, 195 Postek Krzysztof, 124 Potra Florian, 122, 183 Potschka Andreas. 150 Potts Chris, 190, 190 Pougkakiotis Spyridon, 178 Pourmousavi Ali, 107 Povh Janez, 47, 147, 168 Pozo David, 133 Pozzi Matteo, 156 Price Eric, 119 Priem Rémy, 116 Prieur Christophe, 160 Pritchard Geoffrey, 136 Prokopyev Oleg, 41, 122, 127 Prosser Patrick, 159 Prudente Leandro, 151 Pruente Jonas, 154 Pruhs Kirk, 132 Puchert Christian, 119 Puerto Justo, 139, 173, 173, 194 Pupyrev Sergey, 191 Oian Huajie, 130 Qihe Liang, 114 Qin Jing, 118 Qiu Yuzhuo, 153 Qu Qing, 121 Quadri Dominique, 143, 143 Quanrud Kent, 131 Quesnel Frédéric, 182 Quesnel Gauthier, 199 Queyranne Maurice, 108, 108 Ouezada Franco, 191 Outtineh Nils-Hassan. 190 Rätsch Gunnar. 161 Röglin Heiko, 141 Raghunathan Arvind, 121, 141 Rahimian Hamed, 35, 127, 163 Rahman Aron, 192 Raj Anant, 161 Rajawat Ketan, 162 Ralph Daniel, 123 Ralphs Ted, 46, 159 Ramírez-Cobo Pepa, 142 Ramón-Lumbierres Daniel, 177, 177 Ramalho Guilherme, 42, 172 Rambau Jörg, 145 Ramirez Hector, 185 Ramirez Pico Cristian, 160 Ramirez Santos Alvaro, 150 Ramos Natanael, 175 Ramos-Castillo Manuel, 142 Rangamani Akshay, 196 Ranibar Mohammad. 164 Rao Xu. 167 Ras Charl, 152

Rau Malin, 107, 147 Rauls Anne-Therese, 160 Rault Gwénaël, 145 Raupp Fernanda, 146 Rautenberg Carlos, 112, 119, 143 Ravi Ramamoorthi, 165, 182 Raymond Annie, 109 Re Chris. 160 Rebegoldi Simone, 177 Rebennack Steffen, 128 Recht Benjamin, 162, 162 Reddy Varun, 137 Regev Oded, 141 Regts Guus, 102 Reingold Omer, 194 Rendl Franz, 102, 116 Renegar James, 43, 132 Requejo Cristina, 195 Resende Mauricio, 165 Restrepo Maria, 182, 182 Reuther Markus, 146, 174 Revallier Agathe, 142 Revels Jarrett, 172 Rey David, 145 Rey Pablo, 199 Rezapour Mohsen, 180 Ribeiro Ademir, 190 Riccardi Rossana, 129 Riccietti Elisa, 122 Rice Eric. 130 Richard Jean-Philipp, 181 Richtarik Peter, 43, 104, 117, 134, 143, 148, 159, 180, 181 Richter Alexander, 171 Ridzal Denis, 150, 150 Riedl Wolfgang, 154 Riener Cordian, 192 Rigaut Tristan, 196, 196 Rigollet Philippe, 121 Rinaldi Francesco, 108, 132, 155, 166, 178, 178 Rivera-Letelier Orlando, 142 Roald Line, 110 Roberson David, 163 Roberts Lindon, 132 Robertsson Anders, 106, 162 Robinius Martin, 47, 110 Robins Sinai, 157, 157, 192 Robinson Daniel, 116, 149, 178 Rodríguez-Chía Antonio, 194 Rodrigo Frédéric, 145 Rodrigues Filipe, 195 Rodriguez Santiago, 111 Rodriguez-Heck Elisabeth, 109, 109 Rogozin Alexander, 153, 153 Rohwedder Lars, 169 Rojas Angel, 44, 136 Rojas Frank, 132 Roma Massimo, 122, 122, 151 Romeijnders Ward, 41, 127, 161 Romero Gonzalo, 129 Romero Morales Dolores, 128, 128, 142 Rommel Cédric, 108 Ron Dana, 178
Rondepierre Aude, 180 Rong Yue, 197 Rontsis Nikitas, 111 Roodbergen Kees Jan, 161 Roos Ernst, 112 Roos Kees, 185, 198 Roosta Fred, 131 Roosta-Khorasani Farbod, 196 Ropke Stefan, 198 Rosasco Lorenzo, 137, 159, 160, 160, 180 Rose Daniel. 190 Rosehart William, 195 Roshchina Vera, 157 Rossi Fabrizio, 176 Rost Matthias, 183 Rostami Borzou, 127, 153, 161 Rota Bulo Samuel, 155 Rothberg Edward, 45, 151, 188 Rothvoss Thomas, 32, 124, 172, 195 Rotter Daniel, 195 Rottner Cecile, 126 Rouis Yesmine, 123, 123 Roulet Vincent, 121 Roupin Frederic, 109, 166 Rousseau Louis-Martin, 166, 166, 166, 182 Roustant Olivier, 155 Rowland Mark, 187 Royer Clément, 102, 131, 155 Royset Johannes, 190 Rozenknop Antoine, 139 Ruan Feng, 121 Rudi Alessandro, 128, 183 Rudloff Birgit, 184 Rudolf Gabor, 150 Ruffieux Jonathan, 191 Ruffini Manon, 182 Ruggiero Valeria, 178 Ruiz Manuel, 101, 143, 176 Ruiz-Lacedelli Octavio, 103 Rujeerapaiboon Napat, 184, 190 Rumpf Martin, 143 Rusmevichientong Paat, 103, 130 Ruszczynski Andrzej, 120, 120, 120, 163 Ruthotto Lars, 40, 193 Ryan Chris, 152, 182 Rybicki Bartosz, 167 Ryu Ernest, 158 Ryu Jaehyeon, 151 Ryu Minseok, 188, 188 Sánchez J.-Anton, 154 Sabach Shoham, 104, 104 Sabbadin Régis, 197 Saberi Amin, 106, 114, 114 Saccardi Pietro, 196 Sachine Mael, 190 Sachs Ekkehard, 122, 122 Saddoune Mohammed, 182 Sadykov Ruslan, 115, 126, 126, 171, 175, 198 Saee Bostanabad Mina, 153 Saez-Gallego Javier, 109 Safak Ozge, 162 Safarina Sena, 133, 133

Sagan April, 139 Sagastizabal Claudia, 27, 124, 144, 156, 171, 171, 171, 196 Sager Sebastian, 39, 40, 40, 129, 129, 129, 173, 179, 186, 187, 193 Sagnol Guillaume, 145 Sagot Marie-France, 175 Sagratella Simone, 189 Sahinidis Nikolaos, 35, 119, 163 Sahraei Ardakani Mostafa, 102 Sakaue Shinsaku, 175 Sakiyama Koei, 107 Salas David, 197, 197 Salaun Michel, 155 Salavatipour Mohammad, 141, 180 Salehi Farnood, 194 Salim Adil, 147 Salmerón Jose Manuel, 141 Salmon Joseph, 189, 190 Salvagnin Domenico, 45, 46, 126, 188, 196 Salzo Saverio, 196 Sama Miguel, 174 Samal Robert, 163 Samaras Nikolaos, 119 Sampaio Phillipe, 142, 142, 161 San Segundo Pablo, 134 Sanders Peter, 170 Sang Yuanrui, 102 Sanità Laura, 104, 104, 120, 172 Sankaranarayanan Sriram, 104, 188 Sano Yoshio, 198 Santanna Luiz, 190 Santiago Beatriz, 115 Santos Andrea, 147 Santos Daniel, 122 Santos Fernando, 151 Santos Haroldo, 191 Santos Joao. 175 Santos Luiz, 184 Santos Luiz-Rafael, 184 Santos Sandra, 161, 161, 171, 190 Sarpatwar Kanthi, 155 Sartor Giorgio, 152 Saruwatari Yasufumi, 197 Saunders Michael, 178, 179 Saunderson James, 109, 116, 196 Savard Gilles, 132 Savelsbergh Martin, 168, 189, 199 Sawada Kiyoshi, 122 Sayin Serpil, 149 Scaglione Anna, 186 Scarlett Jonathan, 187 Schäfer Aguilar Paloma, 167 Schäfer Guido, 120 Schölkopf Bernhard, 161 Schönefeld Klaus, 103 Schürmann Achill, 157 Schachinger Werner, 155 Schade Stanley, 146, 174 Schaefer Andrew, 41, 127, 154 Schalekamp Frans, 131 Schalk Enrico, 129 Schaller Manuel, 119

Schaudt Oliver, 151 Schaudt Stefan, 190 Scheck Wladimir, 187 Scheifele Rudolf, 195 Scheinberg Katya, 148, 158, 187, 187 Schepler Xavier, 107, 123, 174 Schewe Lars, 47, 47, 47, 103, 103, 110, 110, 132, 147, 164,173 Schewior Kevin, 148, 148, 156 Schieber Baruch, 155 Schiela Anton. 118 Schienle Adam, 152 Schiex Thomas. 182, 182 Schiffer Max, 169 Schild Aaron, 191 Schindler Kilian, 184 Schlöter Miriam, 152 Schlag Sebastian, 170 Schlechte Thomas, 146, 174 Schloeder Matthias, 40, 179 Schmand Daniel, 170, 197 Schmid Stefan, 183 Schmidt Daniel, 156 Schmidt Mark, 128, 148, 178 Schmidt Martin, 47, 103, 110, 128, 132, 147, 154, 164, 173 Schmidt Melanie, 141 Schmidt Patrick, 162 Schmitt Andreas, 149 Schmitt Johann, 167, 167 Schneider Christopher, 183 Schneider Oskar, 108, 149, 169 Schoen Fabio, 199 Schoenlieb Carola, 134 Schorr Ulrike, 105 Schramm Tselil, 141 Schultz Ruediger, 115, 133, 143 Schulz Andreas, 107 Schulz Christian, 170 Schulze Britta, 165 Schuverdt Maria, 132 Schwartz Alexandra. 138 Schwartz Roy, 172 Schweiger Jonas, 173, 173 Schweighofer Markus, 140, 147, 192 Schwele Anna, 148 Schwiegelshohn Chris, 120 Schymura Matthias, 157 Sciandrone Marco, 144, 184, 193, 194 Scieur Damien, 166 Scotto Alexandre, 155 Scutari Gesualdo, 118 Sebo Andras, 131 Secchin Leonardo, 132, 187 Sechi Giovanni, 136 Sedzro Kwami, 107 Seeger Alberto, 174 Segev Danny, 179, 179 Semerjian Guilhem, 159 Sen Bodhisattva, 128 Sen Suvrajeet, 41, 127, 144, 185 Serafini Paolo, 145 Serra Thiago, 121

Serrano Felipe, 103, 127, 173 Sessa Pier Giusepp, 144 Sevaux Marc, 177 Severini Simone, 163 Shachnai Hadas, 155 Shafieezadeh Soroosh, 170, 198 Shakhlevich Natalia, 192 Shalita Alon, 191 Shanbhag Udav. 131 Shapiro Alexander, 42, 120, 165, 180 Sharma Kartikey, 150 Sharma Meenarli, 40, 193 Shaw Albert, 174 Shemetov Dmitry, 179 Shen Siqian, 111, 149, 149, 188 Shen Xiangkun, 172 Shen Xin, 139 Shen Yuan, 184 Shen Zixin, 114 Sheu S.-L., 157 Shi Hao-Jun, 116 Shi Jianming, 198, 198 Shi Wei, 186 Shi Zhan, 43, 159 Shi Zheyuan, 159 Shima Tal, 127 Shinano Yuji, 46, 46, 159, 159 Shioura Akiyoshi, 135, 135, 192 Shirvani Pooyan, 114 Shmoys David, 124, 124, 125 Shmyrev Vadim, 189 Shoemaker Christine, 193 Sholokhov Alex, 114, 114 Shtern Shimrit, **142**, *142* Shtof Alexander, 195 Shukla Apurv, 110, 179 Shun Julian, 196 Shupo Asaf, 184, 184 Siddigui Sauleh, 154, 154 Siebenborn Martin, 40, 193 Siemon Michel, 169, 169 Silva Felipe, 153 Silva Marco, 195 Silva Paulo, 161, 187 Silva Ricardo, 165 Silva Thiago, 185 Sim Chee Khian, 174 Sim Melvyn, 32, 124 Simões Lucas, 171 Simanchev Ruslan, 177 Simchi-Levi David, 167 Simonato Jean-Guy, 131 Simoncini David, 182 Simonetti Luidi, 176 Simonetto Andrea, 192, 192 Sinclair Alistair, 102 Sindhwani Vikas, 187 Singh Bismark, 162, 162 Singh Gaurav, 185 Singh Mohit, 41, 109, 119, 172, 187 Singh Rohit. 159 Singh Vikas, 135 Singla Sahil, 135

Sinha Makrand, 118 Sinoquet Delphine, 102, 102, 109 Sioshansi Ramteen, 133 Sipeki Levente, 157, 157 Sivan Balasubraman, 114 Skipper Daphne, 40, 164 Skolfield J. Kyle, 177 Skomra Mateusz, 117 Skopalik Alexander, 152, 170, 197 Skowron Piotr, 129 Skutella Martin, 132, 145 Slevogt Gerrit, 133 Sliwak Julie, 101, 176 Smeers Yves, 124 Smith Amanda, 175 Smith Cole, 139, 191, 191 Smith Robert, 152 Smolny Frieder, 39, 145, 145 So Anthony, 103, 118, 180 Sobral Francisco, 141 Sofer Laurel, 145 Soheili Negar, 116, 136 Sohler Christian, 119 Sojoudi Somayeh, 193, 193 Solodov Mikhail, 103, 171, 187, 196 Soltanolkotabi Mahdi, 121 Soma Tasuku, 189 Song Dogyoon, 116 Song Enbin, 194 Song Guopeng, 154, 154 Song Le, 117, 174 Sonobe Tomohiro, 115 Sorgatz Stephan, 173 Sornat Krzysztof, 129, 164 Sosa Wilfredo, 146 Sossa David, 150, 174, 174 Sotirov Renata, 141 Soto José, 106, 106 Soubies Emmanuel, 104 Soudry Daniel, 167 Souli Georgia, 176 Soumis Francois, 137, 182, 182, 182 Soutil Eric, 143 Speakman Emily, 102 Spieker Helge, 136 Spieksma Frits, **160**, 160 Spirkl Sophie, 196 Spoerhase Joachim, 164, 181 Spuerkel Kai, 115, 115 Spyrides Georges, 115 Srebro Nathan, 167 Sremac Stefan, 133 Srivastava Piyush, 102 Stötzner Ailyn, 160 Staudigl Mathias, 155 Stechlinski Peter, 44, 158 Steck Daniel, 187 Steffensen Sonja, 145 Steimle Lauren, 149 Stein Clifford, 132 Stein Oliver, 146, 166, 172, 191 Steinbach Marc, 190, 190 Stellato Bartolomeo, 129, 129, 133

Stephen Tamon, 162 Stich Sebastian, 137, 161, 167 Stiglmayr Michael, 165, 165, 165 Still Georg, 139 Stiller Sebastian, 171 Stock Gregory, 120 Stolten Detlef, 47, 110 Stonvakin Fedor, 156 Stott Nikolas, 183 Strömberg Ann-Brith, 191 Strasdat Nico. 103 Straszak Damian, 195 Street Alexandre, 133, 139 Strekalovskiy Alexander, 191 Strusevich Vitaly, 192 Stursberg Paul, 147 Sturt Bradley, 142 Subramanian Anand, 151 Subramanyam Anirudh, 154, 154 Sudakov Benny, 130 Sudan Madhu, 119 Sudermann-Merx Nathan, 166 Sukegawa Noriyoshi, 115 Sumida Mika, 103 Sun Andy, 42, 135, 168, 181 Sun Cong, 110, 157, 164, 194 Sun Defeng, 110, 170, 170, 170 Sun Hailin, 180, 180 Sun Jie, 126, 176 Sun Ju, 121 Sun Ying, 118 Sun Yuejiao, 158 Sundar Kaarthik, 105, 194 Sundararajan Akhil, 155 Svensson Anton, 129 Svensson Ola, 120, 165, 165, 172, 180 Swamy Chaitanya, 120, 120, 124, 158, 181, 182 Sykora Ondrej, 151 Szántó Richárd, 171 Tönnis Andreas, 148, 170 Ta Thuy Anh, 105, 152 Tack Guido, 176 Taheri Sona, 193, 193 Tahir Adil, 137 Tahiri Issam, 126, 175 Tajbakhsh Sam, 114 Takac Martin, 104, 104, 141, 148, 148, 166, 181 Takahashi Satoshi, 145 Takahashi Tomohiro, 130 Takamatsu Mizuyo, 130, 146 Takazawa Kenjiro, 130 Takeda Akiko, 103, 111, 125 Takemura Kei, 169 Talmon Ohad, 178 Talwar Kunal, 195 Tam Matthew, 126, 195 Tambe Milind, 130 Tamura Akihisa, 135 Tan Pauline, 158 Tan Vincent, 158 Tanaka Mirai, 113, 146 Tang Ping Tak, 116

Tang Ziye, 159 Tanner Jared, 117 Tano Masaya, 152 Tantipongpipat Uthaipon, 172 Tao Min, 163 Tardella Fabio, **135**, *135* Tarnawski Jakub, 165 Tas Engin. 175 Taslimi Bijan, 181 Tatarenko Tatiana, 186 Tauer Bjoern, 197 Tavaslioglu Onur, 41, 127 Tawarmalani Mohit, 43, 141, 181 Taylor Adrien, 43, 155, 155, 173, 192, 192, 192 Taylor Joshua, 107 Tchamitchian Marc, 199 Tchemisova Tatiana, 132 Teboulle Marc, 27, 124 Telgarsky Matus, 166 Telikepalli Kavitha, 144, 144 Teo Chung Piaw, 106, 170 Terca Goncalo, 41, 165 Terlaky Tamás, 114, 114 Terranova Simone, 123 Tesch Alexander, 159 Tetruashvili Luba, 195 Tetschke Manuel, 129 Thünen Anna, 145 Thürauf Johannes, 47, 110 Thanh Hue. 130 Thao Nguyen, 126 Thapper Johan, 140 Thera Michel, 138 Thevenin Simon, 131, 131 Thirion Bertrand, 183 Thiruvady Dhananjay, 185 Thomä Simon, 105 Thomann Jana, 144 Thomas Christopher, 154 Thomas Rekha, 109, 116 Thomassé Stéphan, 156 Thomopulos Dimitri, 156 Thompson Andrew, 117 Thompson Philip, 116, 134, 184 Thrampoulidis Christos, 116 Tian Ye, 118 Tigli Luca, 199 Tillmann Andreas, 102, 102 Timmermans Veerle, 120, 197, 197, 197 Titouna Chafiq, 183 Tits Andre, 152, 152 Tjandraatmadja Christian, 121 Toader Bogdan, 117 Todd Michael, 156, 156 Toffolo Túlio, 180 Toh Kim-Chuan, 110, 110, 110, 125, 170, 171 Toint Philippe, 132 Tokcan Neriman, 101 Tomasgard Asgeir, 156, **171**, 171 Tomczak Nicole, 195 Tonelli Matteo. 198 Tono Katsuya, 111 Topaloglu Huseyin, 103

Toraldo Gerardo, 177 Toriello Alejandro, 135, 161 Torrico Alfredo, 135, 187 Toscano-Palmerin Saul, 155 Toth Justin, 120 Touati Nora, 199 Towle Eli, 187, 188 Tramontani Andrea, 45, 150 Tran Benoît, 174 Tran Ngoc Nguyen, 153, 178 Tran Trac. 196 Tran-Dinh Quoc, 102, 143, 194 Tran-Thanh Long, 159 Traonmilin Yann, 183 Traub Vera, 131, 165, 195 Travacca Bertrand, 165, 166 Traversi Emiliano, 101, 150, 166, 176 Tribes Christop, 125, 148 Trichakis Nikos, 112, 122 Trindade Renan, 192, 192 Trinder Phil, 159 Troeng Olof, 107 Trombettoni Gilles, 122 Tropp Joel, 43, 173 Truchet Charlotte, 159, 159 Tschuppik Sebastian, 149 Tsia Yong, 157 Tsoukalas Angelos, 146, 146 Tsuchiya Takashi, 133 Tuncel Levent, 116 Turitsyn Konstantin, 142, 179 Turkieltaub Abner, 106 Turner Mark. 152 Turner Richard, 187 Turnes Aurèle, 179 Tyagi Hemant, **111**, *117* Tytov Alexander, 156 Tyurin Alexander, 155 Ucha Jose. 194. 194 Uchoa Eduardo, 126, 190 Udell Madeleine, 43, 173 Udwani Rajan, 189 Uetz Marc, 170, 170 Ukai Takamori, 197 Ulbrich Michael, 111, 118, 119, 119, 173 Ulbrich Stefan, 40, 105, 114, 131, 150, 160, 167, 176, 182, 187 Umboh William, 135 Umetani Shunji, 115, 175 Urazova Inna, 177 Uribe Cesar, 105, 153, 167, 186 Uschmajew Andre, 112 Vaisbourd Yakov, 104 Valkonen Tuomo, 134 Vallentin Frank, 28, 186, 192, 192 van Ackooij Wim, 116, 156, 195, 196 van de Geer Sara, 121 van der Laan Niels, 41, 127 van Dijk Marten, 128, 148 van Haveren Rens, 186 van Hoeve Willem-Jan, 121, 121

van Iersel Leo, 115 Van Mai Vien, 137 Van Parys Bart, 114 Van Scoy Bryan, 155, 155 Van Vyve Mathieu, 191 van Zuylen Anke, 131, 131 Vanaret Charlie, 117, 149 Vandaele Arnaud, 152, 152 Vandenberghe Lieven, 130, 137 Vanderbeck Francois, 115, 126, 153, 161, 171, 175, 195, 198 Vandereycken Bart, 112 Vanderpooten Daniel, 165 Vanier Sonia, 113 Vanli Nuri, 104, 114 Vannieuwenhoven Nick, 111 Vargas Koch Laura, 197 Varoquaux Gaël, 183 Varvitsiotis Antonios, 163 Vavasis Stephen, 42, 42, 43, 43, 159, 159, 173, 173 Vayanos Phebe, **130**, <u>130</u> Vaz A Ismael, 178 Vaz Daniel, 181 Vegh Laszlo, 165, 188 Velasco Mauricio, 168 Velingker Ameya, 119 Velloso Alexandre, 133 Veneroni Marco, 160 Ventura Paolo, 123 Vera Jorge, 162 Vera Juan, 177, 177 Verdugo Victor, 106, 148 Veremyev Alexander, 122 Verloop Ina Maria, 113 Veron Maël, 131 Verschae Jose, 107, 132 Viana Daiana, 108 Viaud Quentin, 115 Vicari Robert, 105 Vicente Luis Nunes, 33, 132, 140, 141, 178 Victorio Miluzca, 46, 106 Vidal Thibaut, 151, 180, 180, 180 Vieira Alexandre, 160, 160 Vielma Juan Pablo, 41, 170, 182, 182, 182 Vigerske Stefan, 103 Vigerust Anne Marit, 107 Vijayalakshmi Vipin, 152 Vijayaraghavan Aravindan, 141, 141 Vilches Emilio, 197 Villa Silvia, 137, 180 Villani Marco, 178 Villanueva Mario, 158 Vinci Cosimo, 197 Vinel Alexander, 154 Vinga Susana, 175 Vinyals Oriol, 151 Vinzant Cynthia, 102 Viola Marco, 178 Vishnoi Nisheeth, 194, 194, 195 Vohra Rakesh, 171 Volcic Jurii, 147 Volz Marcus, 152 vonNiederhäusern Léonard, 129

Vredeveld Tjark, 127 Vu Bang, 112 Vucinic Jelena, 182 Vuffray Marc, 179 Vygen Jens, 131, 131, 165, 182, 195 Wada Junichiro, 113 Waechter Andreas, 117, 117, 174 Wai Hoi To. 186 Wainwright Martin, 121 Wajc David, 178 Waldherr Stefan, 160 Wallace Ian. 168 Wallace Mark, 176 Walter Anna, 160 Walter Matthias, 144, 151 Walteros Jose, 123 Walther Andrea, 44, 129, 136 Walther Grit, 169 Walther Tom, 188 Walton Neil, 144 Waltz Richard, 45, 143 Walvin Jake, 117 Wang Chengjing, 169, 194 Wang Chenhao, 137 Wang Fei, 113 Wang Guanyi, 44, 148, 182 Wang Hao, 190 Wang Hongyi, 167 Wang Jiashan, 190 Wang Jiawei, **123**, *123* Wang Joshua, 120 Wang Kaizheng, 184 Wang Liping, 165 Wang Mengdi, 158, 174, 197 Wang Shuanglong, 138 Wang Site, 194 Wang Xiao, 110 Wang Xiaoyu, 110 Wang Yanfei, 165 Wang Yuzhu, 169 Wang Z.W., 118 Wang Zi, 116 Ward Justin, 120, 187 Warme David, 162, 162 Warnes Xavier, 129 Waterer Hamish, 113, 147, 147, 197 Watson Jean-Paul, 118, 133, 162, 194 Wauters Tony, 180 Weber Christoph, 128 Weber Tobias, 40, 187 Weed Jonathan, 121 Wegscheider Fabian, 103 Wehenkel Louis, 110 Wei Ermin, 118, 118 Wei Yuting, 121 Weismantel Robert, 44, 110, 133, 133, 148 Weiss Alan, 179 Weiss Pierre, 104, 104 Weisser Tillmann, 105 Welder Lara, 47, 110 Weldeyesus Alemseged, 125 Weller Adrian, 187

Weltge Stefan, 118, 118, 118, 133 Wen Bo, 126 Wen Zaiwen, 173 Wen Zheng, 138 Weninger Dieter, 147, 147 Wennergren Uno, 190 Wesselmann Franz, 45, 143 Wiebe Amy, 116 Wiederrecht Sebastian. 161 Wiegele Angelika, 47, 102, 109, 168 Wiese Andreas, 132, 147, 147 Wiese Sven, 109, 109 Wiesemann Wolfram, 106, 130, 130, 146, 154, 184, 190 Wild Stefan, 33, 109, 116, 125, 140, 148, 155, 155, 187 Wilder Bryan, 130 Willamowski Felix, 129, 129 Willett Rebecca, 113 Williamson David, 124, 140 Wilson Ashia, 162 Winkler Michael, 45, 45, 135, 150 Wirth Anthony, 133 Witt Jonas, 107, 120, 144 Woerdeman Hugo, 133 Wolfler Calvo Roberto, 139, 162, 199 Wolkowicz Henry, 113, 116, 133 Wollner Winnifried, 182 Wolsey Laurence, 108, 135 Wong Elizabeth, 146, 149 Woodruff David, 119 Woods Kevin, 157 Wozabal David, 41, 165 Wright John, 121 Wright Stephen, 31, 101, 131, 162, 173 Wu Hao-Hsiang, 41, 119 Wu Tingting, 118 Wu Wei, 185 Wu Zhongming, 110 Wunderling Roland, 46, 196 Xavier Alinson, 45, 188 Xiao Lin, 137, 174, 174, 178 Xiao Xiantao, 173 Xie Fulin, 190 Xie Qiaomin, 170 Xie Weijun, 172 Xiong Peng, 32, 124 Xu Chao, 181 Xu Fengmin, 110 Xu Guanglin, 167 Xu Huifu, 104, 180 Xu Luze, 40, 164 Xu Peng, 131 Xu Wanting, 111 Xu Yi, 128 Y. Hamedani Erfan, 194 Yabe Hiroshi, 163 Yamaguchi Yutaro, 161 Yaman Hande, 135 Yamanaka Katsuhisa, 152 Yamashita Makoto, 125, 133, 169 Yamashita Nobuo, 153 Yamauchi Tatsuki, 146

Yan Zhenzhen, 167, 170 Yang Boshi, 125, 125 Yang Fan, **121** Yang Haoxiang, 144 Yang Junfeng, **194** Yang Ray, 191 Yang Tianbao, **128**, 158 Yang Xiaoqi, 118, 142, 142 Yang Xinmin, 176 Yano Candace, 157 Yansori Sina. 106 Yao Qiang, 176 Yaroslavtsev Grigory, 141 Yashtini Maryam, 186 Ye Chun, 179 Ye Jane, 142 Ye Ke, 108 Ye Yinyu, 102, 156, 156 Yildirim E. Alper, 156 Yildirim Sinan, 197 Yildiz Baris, 199 Yildiz Sercan, 125 Yin Wotao, 158, 158, 158, 165, 165 Ying Cui, 128, 194 Yokoi Yu, 113, 113 Yoon Do Young, 112, 112 Yoshida Yuichi, 189 Yoshise Akiko, 169 Yousefian Farzad, 112, 118 Yu Peiran. 103 Yu Wei, 178 Yu Xilin, 181 Yu Yang, 180 Yu Yaoliang, 43, 137, 159 Yuan Xiaoming, 142 Yuan Yancheng, 110 Yuan Yaxiang, 37, 110, 157, 157, 164, 173, 186 Yue Man-Chung, 103, 180 Yugma Claude, 115, 154 Yun Seyoung, 110 Yurtsever Alp, 43, 143, 166, 173 Zöttl Gregor, 128, 132, 164, 173 Zabinsky Zelda, 174 Zachariasen Martin, 152 Zadik Ilias, 182 Zadimoghaddam Morteza, 106, 114, 190 Zak Eugene, 114, 114 Zakeri Golbon, 42, 124, 136, 139, 139, 161, 181 Zambelli Giacomo, 104, 188 Zang Wenan, 161 Zarpellon Giulia, 166 Zaslavski Alexander, 108 Zeighami Vahid, 182, 182 Zeile Clemens, 39, 40, 179, 187 Zemkoho Alain, 113, 185 Zenklusen Rico, 105, 118, 130, 133, 155 Zey Bernd, 156 Zhan Ping, 198 Zhan Yang, 138 Zhang Abraham, 106 Zhang Anru, 158 Zhang Binwu, 198, 198

Zhang Chao, **110** Zhang Dejiao, 197 Zhang Dewei, 114 Zhang Fan, 111, 198 Zhang Hongchao, 178 Zhang J., 118 Zhang Jeffrey, 194 Zhang Junyu, **111** Zhang Liwei, 180 Zhang Min, 176 Zhang Ning, 170 Zhang Pengxiang, 198 Zhang Richard, 43, 141, 186, 193 Zhang Shuzhong, 111, 118, 161 Zhang Wei, 185, 198 Zhang Xinhua, 43, 137, 159 Zhang Xinyu, 189 Zhang Xinzhen, 169 Zhang Yanfang, 118 Zhang Yangjing, 170 Zhang Yiling, **111** Zhang Yingqiu, 41, 127 Zhang Yu, 186 Zhang Yuyu, 117 Zhang Zaikun, 141, 141, 193 Zhang Zheng, 188 Zhao Junyao, 187 Zhao Lei, 136, 175 Zhao Liang, 157 Zhao Qiulan, 161 Zhao Renbo, 158 Zhao Sixiang, 131

Zhao Xinyuan, 194 Zhao Zhihua, 110 Zhen Jianzhe, 112, 130, 146 Zheng Chen Zheng, 119 Zheng Peng, 136 Zheng Zhichao, 106, 106 Zhi Chen, 32, 124 Zhong Zhaoyu, 127 Zhou Anwa, 169 Zhou Cunlu, 108 Zhou Yuan, 123, 123 Zhou Zirui, 103, 180 Zhu DaoLi, 136, 175 Zhu Haoran, 44, 148 Zhu Wei, 186 Zhu Yuzixuan, 102 Zhuang Richard, 191 Zidani Hasnaa, 127, 144 Zielinski Pawel, 171 Zinchenko Yuriy, 114 Zink Daniel, 196 Zisserman Andrew, 184 Zivny Standa, 113, 140 Zolan Alexander, 127 Zombori Dániel, 177 Zou Jikai, 42, 181 Zouadi Tarik, 107, 189 Zoumpoulis Spyros, 123 Zuddas Paola, 136 Zuluaga Luis, 107, 164, 164, 177 Zyryanov Alexander, 121 Zytnicki Matthias, 182

















