

Lettre Mode, Novembre 2019

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## Inscription et désinscription

Ecrire à [lettre-mode-smai-request@emath.fr](mailto:lettre-mode-smai-request@emath.fr), en mettant suivant le cas subscribe ou unsubscribe dans l'objet.

## Contributions

Envoyez vos contributions en format simple texte en remplissant le formulaire à l'adresse suivante :

<http://www.lettremode.ovh>,

ou par mail à l'adresse suivante :

[contact@lettremode.ovh](mailto:contact@lettremode.ovh). Prière d'indiquer "pour la lettre MODE" dans l'objet du mail.

## Site officiel et twitter SMAI-MODE

<http://smi.emath.fr/spip.php?article330>

[https://twitter.com/smai\\_mode](https://twitter.com/smai_mode)

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## 1) DIMACS postdoctoral associateship positions

De : Rida Laraki

Lien : <https://jobs.rutgers.edu/postings/103779>

DIMACS, the Center for Discrete Mathematics and Theoretical Computer Science, based at Rutgers University, invites applications for postdoctoral positions associated with the Center.

DIMACS will have four positions available:

a) DIMACS - Institute for Advanced Study (IAS) Postdoc. This is a two-year postdoctoral associateship with the first year (2020-2021) spent at DIMACS, and the second year (2021-2022) spent at IAS in Princeton. There is a requirement to teach one course during the first year. Applicants should be recent PhDs with interest in theoretical computer science and/or discrete mathematics. Research areas include but are not limited to: computational complexity, algorithms, optimization, cryptography, combinatorics, graph theory, and discrete probability. For this postdoc, applicants must apply both to DIMACS and IAS.

b) Economics and Computation Research area of Artificial Intelligence Postdoc, in collaboration with the Department of Computer Science at Rutgers University. This is a one-year position with the possibility of renewal. Topics include but are not limited to: algorithmic game theory, auctions, crowdsourcing, information elicitation, machine learning in economics, mechanism/market design, and prediction markets. Applicants should be recent PhD graduates in computer science, economics, information science, operations research, or a related field, preferably with a focus in artificial intelligence or theory.

c) DATA-INSPIRE Postdoc. This position is in a new transdisciplinary (TRIPODS) Institute based at DIMACS on Data Science for INtelligent Systems and People Interaction that integrates Computer Science, Mathematics, and Statistics with a focus on data science principles and the emerging convergence of humans with machines. Applicants should be recent PhDs in computer science, math, or statistics, with a demonstrated interest in working across these disciplines.

d) Simons A&G Postdoc. This is a one- or two-year position, part of the Simons Collaboration on Algorithms and Geometry, which aims to address fundamental questions at the interface of mathematics and theoretical computer science. Applicants should be recent PhDs with interest in theoretical computer science and/or discrete mathematics. Research areas include but are not limited to: computational complexity, algorithms, optimization, cryptography, combinatorics, graph theory, and discrete probability.

All positions provide salary, health benefits, and an allowance for domestic travel.

Applicants should provide a cover letter specifying which postdoctoral position(s) they are applying for, a curriculum vitae, a research statement highlighting their past and planned future research, optionally a teaching statement, and the names & email addresses of three references.

DIMACS is a consortium of several universities (Rutgers, Columbia, Georgia Tech, NJIT, Princeton, RPI, and Stevens) and corporate research labs (AT&T, Avaya, IBM, Microsoft, NEC, Nokia, and Perspecta). Research and education areas at DIMACS include algorithms, combinatorics, complexity, privacy and security, discrete and computational geometry, optimization, graph theory, data science, artificial intelligence, and machine learning, with applications in sustainability, epidemiology, genetics, networks, transportation, security, and economics. Many DIMACS activities relate to specific topics of current interest represented by the DIMACS Special Focus programs. Postdoctoral Associates at DIMACS are encouraged to collaborate with DIMACS members and visitors and to participate in all of the research and educational activities of DIMACS.

We believe that research and society benefit from a diverse workplace, and strongly encourage applications from women, minorities, individuals with disabilities, veterans, and students with non-traditional backgrounds.

For more information: <http://jobs.rutgers.edu/postings/103779>

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## **2) Offre de stage de M2 / thèse, Graph Signal Processing, Dijon (IMB)**

De : Xavier Dupuis

Lien : <http://samuelvaiter.com/grava/#positions>

PhD position / Master internship on Variational methods for graph signal processing

Keywords: machine learning, networks, graph signal processing, optimization.

Supervision & contact:

- Samuel Vaiter (CNRS research associate) [samuel.vaiter@u-bourgogne.fr](mailto:samuel.vaiter@u-bourgogne.fr),
- Joseph Salmon (Full professor) [joseph.salmon@umontpellier.fr](mailto:joseph.salmon@umontpellier.fr).

Place: Institut de Mathématiques de Bourgogne, Université de Bourgogne, Dijon, France.

(Preferred) starting date:

- Master internship: March 2020 (up to 6 months). Available now.
- PhD position: September 2020 (3 years program). Available now.

Application: Send to [samuel.vaiter@u-bourgogne.fr](mailto:samuel.vaiter@u-bourgogne.fr) AND [joseph.salmon@umontpellier.fr](mailto:joseph.salmon@umontpellier.fr)

- Curriculum vitæ,
  - Contact details of one or two referees,
  - Recent university records.
- 

## **3) Postdoctoral fellow focused in Optimization and Road Design, COCANA, Canada**

De : Michel Thera

Lien : <http://ocana.ok.ubc.ca/>

The Center for Optimization, Convex Analysis, and Nonsmooth Analysis (COCANA, <http://ocana.ok.ubc.ca/>) is currently inviting applications for a postdoctoral fellow focused in Optimization and Road Design. COCANA is situated at the University of British Columbia, Okanagan Campus, in the beautiful city of Kelowna, Canada.

Road construction represents a significant portion of supporting an efficient road network. Reducing road construction costs while maintaining safety standards is a challenging and exciting area of modern research. This position is part of an ongoing project that won the 2019 EURO Operations Research Practice Prize.

The successful candidate will have completed, or be nearing completion, of a Ph.D. in Computer Science, Engineering, Mathematics, Statistics, or a related discipline. In addition, they must have strong software engineering and programming skills.

The problems in Road Design are wide and varied. As such the successful candidate will have skills and experience covering at least 2 of the following areas (listed alphabetically): Applied Optimization, Derivative-Free Optimization, Linear Programming, Mathematical Modeling (including Prototype modeling software), Network flow optimization, Surrogate Mathematical Modeling, Sensitivity Analysis, and/or Uncertainty Quantification. In addition, as this is a time sensitive client project, the following soft skills are desirable experience that should be highlighted with the application letter: communication skills with industrial collaborators, project management skill, supervision and mentoring of undergraduate and master's students.

To apply, submit a Cover Letter and CV to

[yves.lucet@ubc.ca](mailto:yves.lucet@ubc.ca)

The cover letter should clearly indicate, and justify, which areas of experience are applicable. In addition, arrange for 3 reference letters to be sent directly to the above.

This is a 1-year position with renewal for a 2nd year if warranted. Only successful candidates will be contacted. The preferred starting date is January 2020 but summer, fall or even January 2021 start date would be considered.

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#### **4) Poste de MCF, Statistique, Dijon**

De : Xavier Dupuis

Lien : <https://math.u-bourgogne.fr/import/campagne-de-recrutement-2020-a-limb.html>

Poste de MCF à pourvoir à l'Institut de Mathématiques de Bourgogne (Dijon), profil Statistique (section 26).

Contactez les responsables de l'équipe Hervé Cardot et Samuel Herrmann.

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## 5) Whittaker Research Fellow - University of Edinburgh - School of Mathematics

De : Jacek Gondzio

Lien : [https://www.vacancies.ed.ac.uk/pls/corehrrecruit/erq\\_jobspec\\_version\\_4.display\\_form](https://www.vacancies.ed.ac.uk/pls/corehrrecruit/erq_jobspec_version_4.display_form)

Whittaker fellowships at the University of Edinburgh - Deadline 21 Nov

The School of Mathematics in the University of Edinburgh wishes to appoint five WHITTAKER RESEARCH FELLOWSHIPS. We are seeking outstanding candidates to enhance the current strengths of the School, to connect existing areas of expertise within the School, or to pursue connections with application areas. The fellowships are each for three years and feature a 10% teaching duty.

The School intends to appoint at least one fellowship in each of its themes: Optimization, Operational Research and Statistics (OORS); Applied and Computational Mathematics (ACM); Analysis and Probability (AP); Structure & Symmetry (SS – featuring Algebra, Geometry, Mathematical Physics, Topology). Applications that sit between or beyond these themes or are based in Mathematical Sciences Education (MSE) are also welcome.

The closing date for applications is 5pm (UK time) on November 21st, 2019. Interviews will be held in December and you must be willing to take up the position on or before 1st July 2020. The starting salary will be in the range of £33,797 - £40,322, depending on experience.

For further details, including how to apply, see:

[https://www.vacancies.ed.ac.uk/pls/corehrrecruit/erq\\_jobspec\\_version\\_4.jobspec?p\\_id=050154](https://www.vacancies.ed.ac.uk/pls/corehrrecruit/erq_jobspec_version_4.jobspec?p_id=050154)

Potential candidates with academic questions are encouraged to contact Professor Iain Gordon (Head of School) by email: [hos@maths.ed.ac.uk](mailto:hos@maths.ed.ac.uk). Questions of an administrative nature should be directed to [hr@maths.ed.ac.uk](mailto:hr@maths.ed.ac.uk).

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## 6) 7th IMA Conference on Numerical Linear Algebra and Optimization

De : olivier cots

Lien : <https://ima.org.uk/12530/7th-ima-conference-on-numerical-linear-algebra-and-optimization/>

The IMA is pleased to announce the Seventh Biennial IMA Conference on Numerical Linear Algebra and Optimization.

The success of modern codes for large-scale optimization is heavily dependent on the use of

effective tools of numerical linear algebra. On the other hand, many problems in numerical linear algebra lead to linear, nonlinear or semidefinite optimization problems. The purpose of the conference is to bring together researchers from both communities and to find and communicate points and topics of common interest. This Conference has been organised in cooperation with the Society for Industrial and Applied Mathematics (SIAM).

Conference topics include any subject that could be of interest to both communities, such as:

Direct and iterative methods for large sparse linear systems.  
Eigenvalue computation and optimization.  
Large-scale nonlinear and semidefinite programming.  
Effect of round-off errors, stopping criteria, embedded iterative procedures.  
Optimization issues for matrix polynomials  
Fast matrix computations.  
Compressed/sparse sensing  
PDE-constrained optimization  
Distributed computing and optimization  
Applications and real time optimization  
Invited speakers  
Frank E. Curtis (Lehigh University)  
Moritz Diehl (University of Freiburg)  
Zlatko Drmac (University of Zagreb)  
Melina Freitag (University of Bath)  
David Silvester (University of Manchester)

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## 7) Annonces de séminaires

Une rubrique pour signaler quelques liens pour les séminaires ayant lieu ce mois-ci et organisés dans nos laboratoires.

N'hésitez pas à l'alimenter, préférentiellement via un lien vers la page du séminaire.

Pour cela, envoyez un mail à l'adresse [contact@lettremode.ovh](mailto:contact@lettremode.ovh).

- Séminaire Parisien d'Optimisation (IHP)  
<https://sites.google.com/site/spoihp/>
- Séminaire du programme PGMO  
<https://www.fondation-hadamard.fr/fr/pgmo-seminars/seminars>
- Groupe de Travail CalVa de Calcul de Variations (suivant les séances (lieu : voir site) :  
<https://www.ljll.math.upmc.fr/fr/seminaires/article/gdt-calcul-des-variations>
- Groupe de Travail Analyse Non-linéaire et EDP (ENS et UPMC)  
[http://www.math.ens.fr/-Seminaires-?id\\_seminaire=14](http://www.math.ens.fr/-Seminaires-?id_seminaire=14)
- Séminaire Pluridisciplinaire d'Optimisation de Toulouse (lieu : voir site)  
<http://projects.laas.fr/spot/>

- Séminaire SAMOCOD (séminaire Avignon Montpellier Optimisation Contrôle et Dynamique)

[http://www.i3m.univ-montp2.fr/index.php?option=com\\_content&view=article&id=59&catid=19&sem=618](http://www.i3m.univ-montp2.fr/index.php?option=com_content&view=article&id=59&catid=19&sem=618)

- Séminaire hebdomadaire de l'équipe MOD de l'Université de Limoges  
<https://indico.math.cnrs.fr/categoryDisplay.py?categId=36>
- Séminaire Parisien de Théorie des Jeux (IHP, salle 05, 201 ou 314)  
<https://sites.google.com/site/theoriesdesjeux/>
- Séminaire de Mathématiques Discrètes, Optimisation et Décision, Centre d'Economie de la Sorbonne et Université Paris 1  
<http://ces.univ-paris1.fr/membre/seminaire/MDOD/>
- Séminaire de géométrie sous-riemannienne - IHP  
<http://webusers.imj-prg.fr/~davide.barilari/seminar.php>
- Séminaire de l'équipe Statistique, Probabilités, Optimisation et Contrôle (SPOC) - IMB  
<https://math.u-bourgogne.fr/spip.php?page=seminairespoc>

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## **8) EUROPT - 18th workshop on advances in continuous optimization, Toulouse, France – July 1-3, 2020**

De : olivier cots

Lien : <http://europt2020.recherche.enac.fr>

In 2020, the annual event of the EUROPT continuous optimization working group of EURO (The Association of European Operational Research Societies) will take place in Toulouse, France.

It will be hosted at ENAC (Ecole Nationale de l'Aviation Civile), the french National School of Civil Aviation.

The scope of the workshop includes (but may not be restricted to) the following topics :

Linear and nonlinear optimization  
 Large-scale optimization  
 Multi- and many-objective optimization  
 Mixed integer nonlinear optimization  
 Optimization under uncertainty and applications  
 Derivative-free optimization  
 Semi-infinite optimization  
 Global optimization  
 Stochastic optimization  
 Complementarity and variational problems  
 Optimal control and applications

Conic and semidefinite optimization  
Optimization in industry, business and finance  
Complexity and efficiency of optimization algorithms  
Analysis and engineering of optimization algorithms  
Convex and non-smooth optimization  
Data driven optimization  
Nature inspired methods and algorithms  
Multilevel optimization  
Optimization for learning and data analysis  
Huge-scale optimization  
Artificial intelligence based optimization methods and applications

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## **9) Int. Conf. on Mathematical Optimization for Fair Social Decisions: A tribute to Michel Balinski**

De : Rida Laraki

Lien : <https://tombalinski.sciencesconf.org>

The 3rd and 4th of December 2019, with the CNRS and the Ecole Polytechnique, we are organizing an International Conference on Mathematical Optimization for Fair Social Decisions: A tribute to Michel Balinski

We invite you to attend and complete the registration form, which is free but mandatory (according to the CNRS rules, only registered people can have access).

REGISTRATION: <https://tombalinski.sciencesconf.org/registration>

SPEAKERS: Louis Billera (Cornell), Felix Brandt (Munich), Yann Brenier (ENS), Roberto Cominetti (Santiago), Alessandra Casella (Columbia), José Correa (Santiago), Gabrielle Demange (EHESS), Pradeep Dubey (Stony Brook), Curtis Eaves (Stanford), Edith Elkind (Oxford), Jon Lee (Michigan), Eric Maskin (Harvard), Claire Mathieu (ENS), Iain McLean (Oxford), Hervé Moulin (Glasgow), Vincent Pons (Harvard), Friedrich Pukelsheim (Augsburg), Chloé Ridet (Mieux Voter), Gautier Stauffer (Kedges), Clemens Puppe (Karlsruhe), John Weymark (Vanderbilt), Peyton Young (Oxford)

### SCIENTIFIC COMMITTEE

Honorary members: Robert Aumann, Ralph Gomory

Executive members: Alfred Auslender, Jamal Atif, Mourad Baïou, Rafael Correa, Françoise Forges, Claude Henry, Francis Kramarz, Rida Laraki, Jean-Pierre Ponsard, Sylvain Sorin

### ORGANIZATION COMMITTEE

Mourad Baïou (co-chair), Béatrice Bourdieu, Mokrane Bouzeghoub, Denis Cornaz, Olga Gorelkina, Yukio Koriyama, Rida Laraki (co-chair), Matias Nunez, Christina Pawlowitsch

### SPONSORS

CNRS INS2I, Ecole Polytechnique, Labex ECODEC, LAMSADE, LIMOS, GDR JEUX, GDR RO, GDR MOA, PGMO



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## 10) Journées SMAI-MODE - Appel à communication

De : Hasnaa Zidani

Lien : <https://smai-mode2020.inria.fr>

Appel à communication:

Les prochaines journées MODE de la société de mathématiques appliquées industrielles (SMAI) auront lieu

du 25 au 27 mars 2020 à Palaiseau sur le site de EDF-Lab Paris-Saclay.

Cette manifestation, qui a lieu tous les deux ans, permet de rassembler de nombreux chercheurs (jeunes et seniors) et d'échanger

sur les avancées récentes dans les domaines académiques et industriels autour de l'optimisation et de l'aide à la décision.

La conférence comporte 6 conférences plénières (dont celle du lauréat du prix Jean-Jacques Moreau),

des présentations orales ainsi que des présentations murales (poster). Un mini cours sera organisé le 23-24 mars 2020

sur le thème: "Problèmes d'optimisation à plusieurs joueurs et notions d'équilibre".

Les journées MODE sont aussi l'occasion de décerner le prix DODU au(x) meilleur(s) exposé(s) des jeunes chercheurs

(sponsorisé par EDF R&D, Orange et Thales, dans le cadre du PGMO).

Un prix sera aussi décerné au(x) meilleur(s) poster(s) (prix du groupe SMAI-MODE).

Ouverture des soumissions: 15 novembre 2019

Fin des soumissions: 15 décembre 2019

Ouverture des inscriptions: 1er décembre 2019

Site: <https://smai-mode2020.inria.fr>

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## 11) Le mois de l'optimisation à Limoges

De : Loïc Bourdin

Lien : <http://lemoisde.xlim.fr/>

Cher(e)s collègues,

Avec le soutien des GDR-CNRS « MOA : Mathématiques de l'Optimisation et Applications », « MIA : Mathématiques de l'Imagerie et de ses Applications », le programme Gaspard-Monge pour l'optimisation, l'académie de Limoges et le laboratoire xlim, nous organisons le mois de l'optimisation à Limoges. Il s'agit d'un cycle de 4 conférences autour de l'optimisation et de ses applications :

- La première conférence intitulée : «L'optimisation à travers l'histoire : son évolution et son développement » aura lieu le 07 novembre 2019 à la BFM (Salle de conférences).

- La seconde conférence intitulée : «Optimiser la forme » sera donnée par le Professeur

Antoine Henrot du l'Université de Lorraine. Elle aura lieu le 14 novembre 2019 à la BFM (Salle de conférences).

- La troisième conférence intitulée : «Tout est sous contrôle : les mathématiques optimisent le quotidien» sera donnée par le Professeur Emmanuel Trélat de la Sorbonne Université. Elle aura lieu le 21 novembre 2019 à la BFM (Salle de conférences).

- la quatrième conférence intitulée : «Optimisation et apprentissage » sera donnée par le Professeur Stéphane Canu du l'INSA de Rouen. Elle aura lieu le 28 novembre 2019 à la salle de cinéma du carrefour des étudiants.

Pour plus d'informations : <http://lemoisde.xlim.fr>

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## **12) MESS 2020 : Metaheuristics Summer School - Learning & Optimization from Big Data**

De : Michel Thera

Lien : <https://www.ants-lab.it/mess2020/>

1st Call for Participation (apologies for multiple copies)

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MESS 2020 - Metaheuristics Summer School  
~ Learning & Optimization from Big Data ~  
27-31 July 2020, Catania, Italy

<https://www.ANTs-lab.it/mess2020/mess.school@ANTs-lab.it>

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**\*\* APPLICATION DEADLINE: 5th March 2020 \*\***

MESS 2020 is aimed at qualified and strongly motivated MSc and PhD students; post-docs; young researchers, and both academic and industrial professionals to provide an overview on the several metaheuristics techniques, and an in-depth analysis of the state-of-the-art. The main theme of the 2020 edition is 'Learning and Optimization from Big Data?', therefore MESS 2020 wants to focus on (i) Learning for Metaheuristics; (ii) Optimization in Machine Learning; and (iii) how Optimization and Learning affect the Metaheuristics making them relevant in handling Big Data.

The courses will be held by world renowned experts in the field, and will be inspected practical aspects on complex combinatorial optimization problems, as well as examples of their successful real-world applications. The participants will have plenty of opportunities for debate and work with leaders in the field, benefiting from direct interaction and discussions in a stimulating environment. They will also have the possibility to present their recently results and/or their working in progress through oral or poster presentations, and interact with their

scientific peers, in a friendly and constructive environment.

MESS 2020 will involve a total of 36-40 hours of lectures, therefore in according to the academic system, all PhD and master students attending to the summer school will may get 8 ECTS points. Further, during the summer school the students will tackle homework, or project development.

MESS 2020 will take place at the ?Palazzo delle Scienze?, today place of the Department of Economics and Business of the University of Catania.

#### \*\* MESS 2020 Workshop

All participants may submit an abstract of their recent results, or works in progress, for presentation and having the opportunities for debate and interact with leaders in the field. Workshop Organizers and Scientific Committee will review the abstracts and will recommend for the format of the presentation (oral or poster). All abstracts will be published on the electronic hands-out book of the summer school.

The Abstracts must be submitted by \*March 5, 2020\*.

#### \*\* MESS 2020 Metaheuristics Competition

All participants to the school will be involved in the ?Metaheuristics Competition?, where each of them, individually or divided in working groups, they will must develop a metaheuristic solution on the given problem. The top three of the competition ranking will receive the MESS 2020 prize. Further, the students, whose algorithms will rank in the five top of the competition ranking, will be invited to submit a report/manuscript of their work to be published in the special MESS 2020 Volume of the AIRO Springer Series.

#### \*\* School Directors

- + Salvatore Greco, University of Catania, Italy
- + Ender Ozcan, University of Nottingham, UK
- + Mario Pavone, University of Catania, Italy
- + El-Ghazali Talbi, University of Lille 1, France
- + Daniele Vigo, University of Bologna, Italy

<https://www.ANTs-lab.it/mess2020/> -- [mess.school@ANTs-lab.it](mailto:mess.school@ANTs-lab.it)

Facebook Group: <https://www.facebook.com/groups/MetaheuristicsSchool/>

Twitter: [https://twitter.com/MESS\\_school](https://twitter.com/MESS_school)

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### 13) MINLP Workshop 2020, June 11- 12

De : olivier cots

Lien : <https://optimisation.doc.ic.ac.uk/minlp-workshop-2020-june-11-12/>

Mixed-integer nonlinear optimisation (MINLP) combines the modelling capabilities of mixed-integer linear programming with nonlinear programming into a flexible framework for dealing with a large variety of optimisation problems.

The MINLP Workshop brings together world-leading researcher in the field of mixed-integer nonlinear optimisation, and covers topics ranging from theoretical and algorithmic advances to industrial applications. The workshop is held at the South Kensington Campus at Imperial College right in the centre of London.

The workshop covers all aspects of MINLP optimisation and its applications, including:

Algorithm and solver design

Applications in various fields

Convex and nonconvex MINLP

Optimisation theory

Deterministic and heuristic algorithms

Talks will be given in two parallel session by a mixture of invited and contributed talks. If you have questions, please contact [minlp-2020@imperial.ac.uk](mailto:minlp-2020@imperial.ac.uk)

Invited speakers (confirmed so far)

Andrea Lodi (École Polytechnique de Montréal)

Andreas Lundell (Åbo Akademi University)

Angelika Wiegele (Alpen-Adria-Universität Klagenfurt)

Claudia D'Ambrosio (École Polytechnique)

Coralia Cartis (University of Oxford)

Dan Bienstock (Columbia University)

Fatma Kiliç-Karzan (Carnegie Mellon University)

Henrik Friberg (MOSEK)

Ignacio Grossmann (Carnegie Mellon University)

Inês Cecílio (Schlumberger)

Jeff Linderoth (University of Wisconsin-Madison)

Jon Lee (University of Michigan)

Lars Schewe (University of Edinburgh)

Leo Liberti (École Polytechnique)

Nick Sahinidis (Carnegie Mellon University)

Santanu Dey (Georgia Institute of Technology)

Sourour Elloumi (ENSTA Paris)

Sven Leyffer (Argonne National Laboratory)

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## 14) PGMODays 2019

De : Filippo Santambrogio

Lien : <http://www.fondation-hadamard.fr/fr/pgmo/pgmodays>

The annual meeting of the Gaspard Monge Program for Optimization and Operations Research and their interactions with Data Sciences, "PGMODays 2019", will take place on

December 03rd and 04th, 2019 At EDF Lab Paris Saclay.

The tentative program is available on : <https://www.easychair.org/smart-program/PGMODAYS2019/>

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### **15) ROADEF2020 - 21ème congrès - Recherche Opérationnelle et d'Aide à la Décision**

De : olivier cots

Lien : <https://roadef2020.sciencesconf.org>

Le congrès annuel de la société Française de Recherche Opérationnelle et d'Aide à la Décision (ROADEF) permet de regrouper chaque année des universitaires et industriels issus de plusieurs pays.

Le 21ème congrès (ROADEF2020) est organisé par l'équipe MAORE du Laboratoire LIRMM de l'Université de Montpellier. Il se déroulera à la faculté des sciences du 19 au 21 février 2020. Tous les thèmes de la Recherche Opérationnelle et de l'Aide à la Décision seront couverts par les membres des différents laboratoires présents chaque année (optimisation combinatoire, génie industriel, logistique, simulation à événements discrets, etc.).

L'objectif de ce congrès est de participer à la formation des jeunes chercheurs et favoriser les échanges et les collaborations entre chercheurs académiques et industriels évoluant dans la discipline. Avec le soutien de plusieurs sponsors, ce 21ème congrès de la ROADEF proposera un programme scientifique très riche :

Sessions plénières et Tutoriels  
Prix du Meilleur Article Étudiant  
Forum d'échanges et de communication  
Assemblée générale de la ROADEF  
Réunion annuelle du GDR RO

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### **16) SIAMOP20 - SIAM Conference on Optimization, May 26-29, 2020, Hong Kong**

De : Michel Thera

Lien : <https://www.polyu.edu.hk/ama/events/conference/op20/en/>

The minisymposium proposal call for presentations for the SIAM Conference on Optimization (OP20) is now open! Submissions for contributed lectures, poster and minisymposium abstracts will open in mid-November.

Conference: SIAM Conference on Optimization (OP20)

Sponsored by the SIAM Activity Group on Optimization

Location:

The Hong Kong Polytechnic University

Hung Hom Campus, Hong Kong

Dates: May 26-29, 2020

The Call for Presentations for this conference is available here.

Submission Deadlines:

November 7, 2019: Minisymposium Proposal Submissions

December 1, 2019: Contributed Lecture, Poster and Minisymposium Presentation Abstracts

Travel Fund Application Deadline:

December 12, 2019

Please visit the Submission and Deadlines page for detailed submission information.

Organizing Committee Co-Chairs:

Tamás Terlaky, Lehigh University, USA

Defeng Sun, The Hong Kong Polytechnic University, Hong Kong

Organizing Committee Members:

Xiaodong Hu, Chinese Academy of Sciences, China

Adil Bagirov, Federation University, Australia

Akiko Yoshise, University of Tsukuba, Japan

Peter Richtarik, KAUST, Saudi Arabia

Gabriele Eichfelder, Technische Universität Ilmenau, Germany

Fabio Schoen, University of Florence, Italy

Jean Bernard Lasserre, LAAS/CNRS, France

Henry Wolkowicz, University of Waterloo, Canada

Uday Shanbhag, Penn State University, USA

Genetha Gray, Salesforce, USA

Pietro Belotti, FICO, UK

#SIAMOP20

For additional information, contact Natalie Cheung.

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## 17) SIGOPT 2020 INTERNATIONAL CONFERENCE ON OPTIMIZATION

De : olivier cots

Lien : <http://www.wiwi.tu-dortmund.de/wiwi/ms/en/sigopt/index.html>

Scope and Topics

The SIGOPT conference covers theory and practice in all branches of mathematical optimization, e.g.,

Linear Programming

Discrete and Combinatorial Optimization

Nonlinear Programming

Mixed-Integer Non-Linear Optimization  
Optimal Control  
Stochastic Programming  
Multiobjective Programming  
Application of Optimization in Real-World Problems  
Optimization on Manifolds  
Robust Optimization  
Convex Optimization  
Conic Optimization  
Machine Learning

The SIGOPT 2020 encourages the collaboration of the different branches of optimization. So talks using ideas and methods from different branches are especially welcome.

Young researchers from all areas of optimization are especially encouraged to participate and to present their work. There will be a "Work in Progress" session. The conference will provide an excellent opportunity for exchanging ideas and for establishing contacts with colleagues in a friendly atmosphere.

#### Schedule

Start: Wednesday 4th March 2020 at 8:45

End: Friday 6th of March 2020 afternoon

#### Support

This conference is supported by the GOR - Gesellschaft für Operations Research e.V. and the Deutsche Forschungsgemeinschaft.

#### Invited Speakers

Christian Clason (Universität Duisburg-Essen)  
Peter Gritzmann (Technische Universität München)  
Laura Palagi (Sapienza Università di Roma)  
Sebastian Sager (Otto-von-Guericke-Universität Magdeburg)  
Angelika Wiegele (Alpen-Adria Universität Klagenfurt)

#### Organizing and Program Committee

Christoph Buchheim  
Mirjam Dür  
Anja Fischer  
Christian Meyer  
Peter Recht  
Ralf Werner

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### **18) SPOT 66 – Séminaires de Radu Ioan Bot et de Tomaso Cesari**

De : Marcel Mongeau

Lien : <https://perso.math.univ-toulouse.fr/spot/>

SPOT 66 - le 18 novembre à l'ENSEEIH, salle des thèses

14h - Radu Ioan Bot (University of Vienna)

## A primal-dual dynamical approach to structured convex minimization problems

In this talk we propose a primal-dual dynamical approach to the minimization of a structured convex function consisting of a smooth term, a nonsmooth term, and the composition of another nonsmooth term with a linear continuous operator. To this end we introduce a dynamical system for which we prove that its trajectories asymptotically converge to a saddle point of the Lagrangian of the underlying convex minimization problem as time tends to infinity. In addition, we provide rates for both the violation of the feasibility condition by the ergodic trajectories and the convergence of the objective function along these ergodic trajectories to its minimal value. Explicit time discretization of the dynamical system results in a numerical algorithm which is a combination of the linearized proximal method of multipliers and the proximal ADMM algorithm.

15h - Tomaso Cesari (IMT University of Toulouse)

## Non-convex optimization and bandit learning

(Subtitle: Making the right choices and feeling no regret)

In this presentation we will address the problem of finding a global maximizer of a (non-globally) Lipschitz multivariate function  $f$ , using as few (possibly noisy) evaluations of  $f$  as possible. Borrowing ideas and notation from the bandit learning literature, we derive new regret bounds for the classical Piyavskii–Shubert algorithm in both the deterministic setting (in which an exact value  $f(x)$  can be accessed whenever a point  $x$  is queried) and the stochastic setting (in which values are observed up to subgaussian perturbations). We show that the regret of the Piyavskii–Shubert not only matches the best bounds achieved by other known algorithms in terms of the near-optimality dimension of  $f$ , but it also shows better empirical performance in practice.

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## 19) Winter School: Data Science, Optimization and Operations Research

De : olivier cots

Lien : <http://transp-or.epfl.ch/zinal/program.php>

In the era of data, there is an increasing need for sound methodologies able to merge domain knowledge with data in an accurate and guaranteed manner. This course aims at introducing the attendee to the scenario approach, where data are used to make decisions in an uncertain environment while keeping control on the risk of underperformance and shortfalls. As we shall see, tight results on the level of risk can be rigorously established under virtually no prior assumptions on the environment.

After giving a broad presentation on optimization in the presence of uncertainty, we shall focus on scenario optimization, also backed by numerous application examples. Then, we shall delve into the mathematical aspects, provide precise statements on the reliability of the method and also present some fundamental machinery that is used in the proofs of the results.

In the third and last part of the course, we mean to apply the results to machine learning



problems and also open a more general discussion with the presentation of some recent theoretical advances.

Topics:

optimization in the presence of uncertainty;  
data-driven decision-making;  
theory of risk evaluation;  
problems in control, finance, machine learning;  
discussion on open problems.

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Fin de la lettre MODE  
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