

Lettre Mode, Avril 2019

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Site officiel et twitter SMAI-MODE

<http://smi.emath.fr/spip.php?article330>
https://twitter.com/smai_mode

- 1) Doctoral scholarships of the program Lisbon Mathematics

De : Jean-Baptiste Caillau
Lien : <https://lismath.ulisboa.pt>

Call for applications for Doctoral scholarships of the program Lisbon Mathematics PhD (LisMath Call 2019)

Main research field: Mathematics

Scholarship description:

Under the terms set in the Statute of the Scientific Research Fellow approved by Law 40/2004 of 18 August, in its present wording, and the Regulations for Research Grants of FCT, IP, the LisMath Governing Board opens a call for applications to scholarships for the LisMath 2019 edition. In this call, nine scholarships are made available. The actual number of awarded scholarships may be less, depending on the overall merit of the candidates. The duration of the scholarship is one year in length, renewable for up to a total of four years, and cannot be awarded for periods of less than three consecutive months [...]

The scholarship period is expected to start in September of 2019.

Period of the Call: from 06 March 2019 until 20 April 2019 at 14h00 (Lisbon time).

See also the LisMath web site for further details: <https://lismath.ulisboa.pt>

2) One year postdoctoral position in the ANR MAGA

De : Rida Laraki
Lien : Boris.Thibert@univ-grenoble-alpes.fr

Location : Grenoble, France

Discipline : Computational aspects of optimal transport and applications

Supervisor : Boris Thibert

Duration : no later than Oct 2019 (could also be May or June 2019)

Salary : around 2,000 euros/month, net of social taxes (might be a bit more, depending on the experience).

MAGA (Monge-Ampère and Computational Geometry) is a research project funded by the French ANR (Agence Nationale de la Recherche) for 2016-2020. It involves researchers from several institutions, including a group at Labo- ratoire Jean Kuntzmann in Grenoble. The main topics of this project are discrete and computational aspects of optimal transport, and applications of optimal transport to economics, engineering and natural sciences. More information on this research project can be found browsing its MAGA site.

The group in Grenoble seeks a post-doctoral researcher, to be hired for one academic year, 2019/2020. The selected post-doc will work under the supervision

of Boris Thibert, but collaborations with other members of the MAGA project or from the Laboratoire Jean Kuntzmann will be encouraged. In particular, depending on the chosen topic, the post-doc might also be working in collaboration with Edouard Oudet, Ludovic Me´tivier or Quentin Me´rigot. The researcher will be employed by Universite´ Grenoble Alpes, under a fixed-term contract of one year. No teaching duty is associated to this position. Professional travel expenses will be covered by the MAGA project.

Applications are welcome by any scientist with experience in the above-mentioned fields, holding a Doctoral degree, or expecting to get it by the starting date of the contract. In order to apply, candidates must send their complete CV, the list of their publications with links to retrieve them on the web, and a short research project (at most one page) to Boris.Thibert@univ-grenoble-alpes.fr. Applications must be received by May 30, 2019. The research project must be related to the activities of MAGA and to the research interests of the group based at Grenoble, i.e.

- computational aspects of optimal transport
- discretization of variational problems involving Laguerre diagrams ;
- applications of optimal transport or prescribed jacobian equations (economics, seismology,...) – Inverse problems in optics, especially involving extended light sources.

The applicants are welcome to contact Boris Thibert in order to prepare their research project.

3) PhD position: Formal methods in control (Munich, Germany)

De : Jean-Baptiste Caillau

PhD position: Formal methods in control (Munich, Germany)

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We invite applications for a doctoral researcher position in the field of formal methods in control. The successful candidate is expected to advance the state of the art of abstraction-based synthesis and verification, to facilitate routine and efficient application of the approach to nonlinear continuous-state plants and complex specifications. Depending on background and interests of the candidate, the research focus will be either on algorithms and software development, or on theoretical foundations.

Required qualifications:

- * MSc degree (or equivalent, giving access to doctoral studies) in Mathematics, Systems and Control, Computer Science, or a related field. Students about to complete their MSc will also be considered.
- * Strong theoretical or mathematical background, and a strong interest in dynamical or control systems.
- * Programming skills.
- * Efficient communication skills in English.

In addition, an intended focus on algorithms and software requires past exposure to and strong interest in professional-grade software development, while for a focus on theoretical foundations a strong mathematical or theoretical background is needed. Experience in one of the following fields would be a plus but is not necessarily required: Set-valued or validated numerics; dynamic programming; formal methods in control; reactive synthesis; information-based complexity / optimal recovery.

The position is full-time and paid according to pay scale ``TVOeD Bund, E 13''. Initial appointment is for two years, with possible extension contingent on availability of funds and research performance. The position is open to applicants worldwide; no special security clearance necessary.

Your complete application consists of the following documents, which should be sent as a single PDF file to the email address given below (deadline: May 5, 2019):

- * CV with photo
- * One-page cover letter (clearly indicating available start date as well as relevant qualifications, experience and motivation)
- * University certificates and transcripts (both BSc and MSc degrees)
- * Contact details of up to three referees
- * Possibly an English language certificate and a list of publications

All documents should be in English or German.

Gunther Reissig
<http://www.reiszig.de/gunther/>
Email: gunther2016@reiszig.de, Subject: PhD ref 9xfb6

Bundeswehr University Munich, Germany
Department of Aerospace Engineering
Institute of Control Engineering

4) PhD Position: INP-ENSEEIH-IRIT, Université de Toulouse

De : Olivier Cots

Position:

We are looking for a Ph.D. student in applied mathematics to work on an interdisciplinary project. The student would be situated in the Institut de recherche en Informatique de Toulouse (<https://www.irit.fr/?lang=en>) supervised by Professor Joseph Gergaud and Nataliya.Shcherbakova. The overarching project is multidisciplinary (with collaboration with chemical and process engineering teams)

and focuses on the calculation of thermodynamical diagram. This requires some concepts in geometrical geometry and knowledge in ordinary differential equation. The objectif is to develop a software based on path-following algorithms in the context of ode couple with automatic differentiation of thermodynamical models.

Candidate:

Eligible candidates for the position must have a Masters or equivalent degree in mathematics. The candidate is expected to have a solid background in applied mathematics and computer science with experience in numerical analysis, linear algebra, dynamical system, and programmation. Having done a masters thesis, bachelors project, or other such work in ordinary differential equation and programmation field would be an asset, and strong consideration will be given to such candidates.

Application:

Application packages need to contain a CV, a letter of motivation, copies of degree certificates, and relevant course transcripts along with contact details of at least two academic referees.

Materials should be sent by email to: gergaud@enseeiht.fr, nshcherb@ensiacet.fr

5) Post-Doctoral research position at Imperial College London

De : Michel Thera

Lien : <https://www.imperial.ac.uk/jobs/description/ENG00790/research-associate-machine-learning>

Applications are invited for a Post-Doctoral research position to be held jointly with the Department of Computing and the Department of Mathematics at Imperial College London.

The research associate will work on the theoretical foundations of stable machine learning algorithms.

The position is funded through a JP Morgan AI Research Faculty Award: "Dynamics, Control and Uncertainty Quantification for Stable Machine Learning Algorithms."

The researcher will work directly with Dr. P. Parpas, Dr. N. Kantas, Professor G.A. Pavliotis at Imperial College and the AI research Team in JP Morgan.

They will join a large, vibrant research team working on problems related to machine learning, optimization, stochastic optimal control, partial differential equations, quantitative finance, statistical mechanics and stochastic differential equations.

The position is full time for 12 months with the possibility of extension.

Interested candidates should submit an application electronically via [https://www.imperial.ac.uk/jobs/description/ENG00790/research-associate-machine-](https://www.imperial.ac.uk/jobs/description/ENG00790/research-associate-machine-learning)

learning

6) Postes ingénieur calcul scientifique Inria Sophia

De : Jean-Baptiste Caillau

Lien : <https://iww.inria.fr/sed-sophia/fr/amdt>

2 postes ingénieur calcul scientifique Inria Sophia (24 et 12 mois) :

<https://jobs.inria.fr/public/classic/fr/offres/2019-01512>

<https://jobs.inria.fr/public/classic/fr/offres/2019-01502>

Page web qui illustre les réalisations de l'équipe de dev :

<https://iww.inria.fr/sed-sophia/fr/amdt>

Contact : T. Kloczko (<mailto:thibaud.kloczko@inria.fr>)

7) 13th International Conference on Fixed Point Theory and Its Applications, China, 2019

De : Michel Thera

Lien : <http://www.htu.edu.cn/fpt/>

The 13th International Conference on Fixed Point Theory and Its Applications (ICFPTA2019) which will be held at Henan Normal University, Xinxiang, China from July 9-13, 2019.

<http://www.htu.edu.cn/fpt/>

Plenary/Keynote Speakers: Tomas Dominguez-Benavides (Spain), William A. Kirk (USA), Anthony To-Ming Lau (Canada), Boris Mordukhovich (USA), Zuhair Nashed (USA), Simeon Reich (Israel), R. Tyrrell Rockafellar (USA), Wataru Takahashi (Japan), Christiane Tammer (Germany), Zongben Xu (China)

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.

- 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
- 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
- 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>

9) Conference "Mean-Field Games and Related Topics - 5", on September 9-13, 2019

De : Michel Thera

Lien : <https://events.math.unipd.it/mfgt5/>

on September 9-13, 2019 it will be held at Levico Terme, among the activities of CIRM,
the conference "Mean-Field Games and Related Topics - 5":

<https://events.math.unipd.it/mfgt5/>

The meeting will be a continuation of the series of workshops “Mean Field Games and Related Topics”, that have been organised every two years since 2011 with the aim of discussing recent advances in the modeling, analysis and numerical approximation of Mean Field Games systems as well as some related, even if different, approaches to the description of macroscopic behaviors in collective dynamics.

Applications from young researchers wishing to deliver short communications are strongly encouraged. Deadline for submitting an abstract is April 30, 2019 (see <https://events.math.unipd.it/mfgt5/node/35>).

I would be grateful if you could forward this announcement to interested people.

If you need further information, please do not hesitate to contact me.

10) FGS'2019: DEADLINE EXTENSION

De : Jean-Baptiste Caillau
Lien : <https://fgs-2019.sciencesconf.org>

FGS'2019: DEADLINE EXTENSION

**** Submissions (talks & MS): EXTENDED to May 15, 2019 ****

**** Registrations early bird deadline: June 30, 2019 ****

The 19th French-German-Swiss conference on Optimization will take place in Nice from September 17 to 20, 2019. This series of conferences began in 1980 at Oberwolfach and has gathered since French and German colleagues in optimization every other year. It is customary to invite a third country to participate.

In 2019, the invited country is Switzerland.

These conferences usually gather from 100 to 150 mathematicians and are the main meeting of European researchers in optimization in the broad sense. The 2019 edition is organized by LJAD and I3S labs from CNRS, and by Inria Sophia Antipolis Méditerranée center. The conference will be located on the Valrose campus of Université Côte d'Azur, on the heights of Nice.

A limited number of grants has been planned to cover the registration fees for students (undergraduate, graduate or postdoc). Students wanting to apply for these grants shall

- send an email to fgs-2019@sciencconf.org including a cv and asking for a grant
- submit a talk (contributed or within a mini-symposium)

before May 15, 2019.

More information: fgs-2019.sciencesconf.org

- Didier Auroux & Jean-Baptiste Caillau, chairs of FGS'2019

11) Appel à projets du PGMO

De : Rida Laraki

Lien : <https://www.fondation-hadamard.fr/fr/pgmo-calls-projects/call-project>

Cher.e.s collègues

L'appel à projets du PGMO ci-dessous peut vous intéresser,

- pour les membres du groupe MAS, a priori concernant le programme IRSDI (sciences des données pour l'industrie),
- pour les membres du groupe MODE, a priori concernant les programmes PRMO (programme blanc en optimisation et recherche opérationnelle) et IROE (autour de l'utilisation des méthodes d'optimisation dans le domaine de l'énergie).

Cet appel à projets est financé par du mécénat d'entreprises : EDF, Thales et Orange.

Les appels IRSDI et IROE sont destinés à des projets académiques en lien avec une entreprise, mais ils ne supposent pas de contribution financière de cette dernière. On peut notamment les voir comme une opportunité de mûrir un projet plus engageant (contrat de collaboration ou thèse CIFRE).

N'hésitez pas à me contacter pour toute question
Gilles (membre du bureau du PGMO)

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Dear colleague,

The new call for projects of the Gaspard Monge Program for Optimization, Operations research, and their interactions with data sciences, is now published on the PGMO web site:

<https://www.fondation-hadamard.fr/fr/pgmo-calls-projects/call-project>

The 2019 call for projects is composed of 3 sub-calls:

- PRMO: general research projects
 - IROE: optimisation and energy, supported by EDF
 - IRSDI: data science for industry, supported by EDF and THALES
- Projects can be submitted till May 13, 2019, 23:59 (anywhere on Earth).

Do not hesitate to contact us if you have any question.

Best regards,

The PGMO Executive Board

Fin de la lettre MODE
