

SMAI-MODE 2020: JOURNÉES SMAI-MODE 2020

PROGRAM AUTHORS KEYWORDS

PROGRAM

Days: [Monday, September 7th](#) [Tuesday, September 8th](#)
[Wednesday, September 9th](#)

Monday, September 7th

View this program: [with abstracts](#) [session overview](#) [talk overview](#)

08:45-09:00 Session MW: Introduction/Welcome

CHAIRS:

[Marianne Akian](#) (INRIA and CMAP, CNRS, Ecole polytechnique, IPP, France)

[Hasnaa Zidani](#) (ENSTA Paris, France)

LOCATION: [Amphitheater](#)

09:00-10:00 Session MP1: Exposé plénier/Plenary talk

CHAIRS:

[Marianne Akian](#) (INRIA and CMAP, CNRS, Ecole polytechnique, IPP, France)

[Jerome Bolte](#) (Universite Toulouse 1 Capitole, France)

LOCATION: [Amphitheater](#)

09:00 [Claire Mathieu](#) (CNRS, France)

Two-sided matching markets with correlated random preferences have few stable pairs ([abstract](#))

10:00-10:30 Pause/ Break

10:30-12:30 Session MM1: Variational and Nonsmooth analysis

CHAIRS: [Jerome Bolte](#) (Universite Toulouse 1 Capitole, France)

[Hasnaa Zidani](#) (ENSTA Paris, France)

LOCATION: [Room 1](#)

10:30 [Rodolfo Rios-Zertuche](#) (Artificial and Natural Intelligence Toulouse Institute, France)

Long term dynamics of the subgradient optimization method in the non-smooth and non-convex case ([abstract](#))

11:00 [Michel De Lara](#) (Ecole des Ponts ParisTech, CERMICS, France)

[Jean-Philippe Chancelier](#) (Ecole des Ponts ParisTech, CERMICS, France)

Constant Along Primal Rays Conjugacies Suitable for Functions of the Support ([abstract](#))

11:30 [Florent Nacry](#) (University Perpignan Via Domitia, France)

Prox-regular sets: separation and metric properties ([abstract](#))

12:00 [Othmane Jerhaoui](#) (ENSTA/UMA, France)

[Hasnaa Zidani](#) (ENSTA/UMA, France)

HJB equations on stratified domains ([abstract](#))

10:30-12:30 Session MM2: Stochastic Optimization and Learning

CHAIRS: [Vincent Leclere](#) (ENPC, France)

[Vianney Perchet](#) (ENS Paris-Saclay, France)

LOCATION: [Room 2](#)

10:30 [Kimon Antonakopoulos](#) (INRIA, France)

[Panayotis Mertikopoulos](#) (CNRS, France)

[E. Veronica Belmega](#) (ETIS / ENSEA - Université de Cergy-Pontoise - CNRS, France)

Online and Stochastic Optimization Beyond Lipschitz Continuity: A Riemannian Approach ([abstract](#))

11:00 [Paul Javal](#) (EDF RD, France)

[Wim van Ackooij](#) (EDF RD, France)

[Sophie Demassez](#) (CMA, Mines ParisTech, France)

[Hugo Morais](#) (Técnico Lisboa, Portugal)

[Wellington de Oliveira](#) (Mines ParisTech, France)

[Bhargav Swaminathan](#) (EDF RD, France)

A nonlinearly-constrained bundle method for nonconvex chance-constrained problems ([abstract](#))

11:30 [Pierre-Cyril Aubin-Frankowski](#) (MINES ParisTech, France)

[Zoltan Szabo](#) (CNRS, Ecole Polytechnique, France)

Hard Shape-Constrained Kernel Regression ([abstract](#))

10:30-12:30 Session MM3: Economy and Games

CHAIRS:

[Marianne Akian](#) (INRIA and CMAP, CNRS, Ecole polytechnique, IPP, France)

[Rida Laraki](#) (Université Dauphine - CNRS, France)

LOCATION: [Room 3](#)

10:30 [Jean-Marc Bonnisseau](#) (Université Paris 1 Panthéon-Sorbonne, France)
[Achis Chéry](#) (Université d'Etat d'Haiti, (LS2E), Port-au-Prince, Haiti et
CREGED, Université Quisqueya, Haiti)

Stability of marketable payoffs with re-trading ([abstract](#))

11:00 [Michel Grabisch](#) (Université Paris I Panthéon-Sorbonne, Paris School of
Economics, France)

[Agnieszka Rusinowska](#) (Paris School of Economics, CNRS, France)

[Xavier Venel](#) (Université Paris I Panthéon-Sorbonne, Paris School of
Economics, France)

Diffusion on large networks ([abstract](#))

11:30 [Julien Fixary](#) (Université Paris 1 Panthéon-Sorbonne, France)

[Philippe Bich](#) (Université Paris 1 Panthéon-Sorbonne, France)

Sequential network formation: new stability concepts ([abstract](#))

12:30-14:00 Repas/ Lunch

14:00-15:30 Session MA11: Optimal control and applications

CHAIRS:

[Jean-Baptiste Caillaud](#) (Université Côte d'Azur, CNRS, Inria, LJAD, France)

[Hasnaa Zidani](#) (ENSTA Paris, France)

LOCATION: [Room 1](#)

14:00 [Terence Bayen](#) (University of Avignon, France)

[Francis Mairet](#) (IFREMER Nantes, France)

**Parameter Estimation for Dynamic Resource Allocation in
Microorganisms: A Bi-level Optimization Problem** ([abstract](#))

14:30 [Yannick Viossat](#) (Université Paris-Dauphine, France)

[Robert Noble](#) (ETH Zurich, Switzerland)

**Optimization of Palliative Cancer Therapy: the Logic of Containing
Tumors** ([abstract](#))

15:00 [Kenza Boumaza](#) (Univ Montpellier, INRA, France)

[Alain Rapaport](#) (INRA, France)

[Sébastien Roux](#) (INRA, France)

About optimal crop irrigation planing under water scarcity ([abstract](#))

14:00-15:30 Session MA21: Numerical Optimization/Sochastic Gradient
method 1

CHAIRS:

[Marianne Akian](#) (INRIA and CMAP, CNRS, Ecole polytechnique, IPP, France)

[Vincent Leclere](#) (ENPC, France)

LOCATION: [Room 2](#)

14:00 [Olivier Fercoq](#) (Télécom Paris, France)

[Ahmet Alacaoglu](#) (Ecole Polytechnique Fédérale de Lausanne,
Switzerland)

[Volkan Cevher](#) (Ecole Polytechnique Fédérale de Lausanne,
Switzerland)

**Sur la convergence de la méthode du gradient hybride primal-dual
stochastique** ([abstract](#))

14:30 [Franck Iutzeler](#) (Univ. Grenoble Alpes, France)

**a Randomized Proximal Gradient Method with Structure-Adapted
Sampling** ([abstract](#))

15:00 [Anas Barakat](#) (Télécom Paris, France)

[Pascal Bianchi](#) (Télécom Paris, France)

**Convergence and Dynamical Behavior of the ADAM Algorithm for
Non Convex Stochastic Optimization** ([abstract](#))

16:00-17:30 Session MA12: Optimal control and Hamilton-Jacobi equations

CHAIRS:

[Jean-Baptiste Caillaud](#) (Université Côte d'Azur, CNRS, Inria, LJAD, France)

[Hasnaa Zidani](#) (ENSTA Paris, France)

LOCATION: [Room 1](#)

16:00 [Ana Paula Chorobura](#) (ENSTA Paris, France)

[Hasnaa Zidani](#) (Ensta Paris, France)

**Multi-objective infinite horizon optimal control problems:
characterization of the Pareto fronts and reconstruction of optimal
trajectories** ([abstract](#))

16:30 [Hafid Lalioui](#) (Université Ibn Zohr, Equipe aide à la decision, ENSA,
Agadir, Morocco, Morocco)

[Brahim El Asri](#) (Université Ibn Zohr, Equipe aide à la decision, ENSA, Agadir, Morocco, Morocco)

Two-player zero-sum deterministic differential game in infinite horizon involving impulse controls with a new QVI ([abstract](#))

17:00 [Hamza Ennaji](#) (Limoges University, France)

Primal-Dual algorithm for Lambertian Shape from Shading ([abstract](#))

16:00-17:30 Session MA22: Numerical Optimization/Stochastic Gradient method 2

CHAIRS:

[Marianne Akian](#) (INRIA and CMAP, CNRS, Ecole polytechnique, IPP, France)

[Vincent Leclere](#) (ENPC, France)

LOCATION: [Room 2](#)

16:00 [François Pacaud](#) (Artelys, France)

Interior point methods for logistic regression ([abstract](#))

16:30 [Stephane Chretien](#) (National Physical Laboratory and Laboratoire ERIC, Université Lyon 2, UK)

A stochastic Lanvegin sampling approach to Median of Means estimation ([abstract](#))

17:00 [El Houcine Bergou](#) (INRA, France)

[Youssef Diouane](#) (ISAE-SUPAERO, France)

[Vyacheslav Kungurtsev](#) (Czech Technical University in Prague, Czechia)

[Clément Royer](#) (Université Paris-Dauphine, France)

A stochastic Levenberg-Marquardt Method Using Random Models ([abstract](#))

Tuesday, September 8th

View this program: [with abstracts](#) [session overview](#) [talk overview](#)

09:00-10:00 Session TP1: Exposé plénier/Open plenary talk

CHAIRS:

[Marianne Akian](#) (INRIA and CMAP, CNRS, Ecole polytechnique, IPP, France)

[Filippo Santambrogio](#) (Université Claude Bernard - Lyon 1, France)

LOCATION: [Amphitheater](#)

09:00 [Francis Bach](#) (Inria et ENS, France)

Optimisation convexe et non-convexe pour l'apprentissage statistique ([abstract](#))

10:00-10:30 Pause/ Break

10:30-12:30 Session TM1: Numerical methods in Optimal Control and Optimal Transport

CHAIRS: [Quentin Mérigot](#) (Université Paris-Sud, France)

[Hasnaa Zidani](#) (ENSTA Paris, France)

LOCATION: [Room 1](#)

10:30 [Thibault Séjourné](#) (DMA, ENS, France)

Sinkhorn Divergences for Unbalanced Optimal Transport ([abstract](#))

11:00 [Hicham Janati](#) (INRIA, France)

[Marco Cuturi](#) (Google, France)

[Alexandre Gramfort](#) (INRIA, France)

Spatial DTW: Optimal transport in space and time ([abstract](#))

11:30 [Olivier Bokanowski](#) (Laboratoire Jacques Louis Lions, Université Paris-Diderot and UMA, Ensta ParisTech, France)

[Nidhal Gammoudi](#) (UMA ENSTA PARISTECH, France)

[Hasnaa Zidani](#) (UMA, ENSTA ParisTech, France)

Optimistic planning algorithm for some state-constrained optimal control problems ([abstract](#))

12:00 [Marianne Akian](#) (INRIA and CMAP, CNRS, Ecole polytechnique, IPP, France)

[Stéphane Gaubert](#) (INRIA and CMAP, Ecole polytechnique, France)

[Zheng Qu](#) (The University of Hong Kong, Hong Kong)

[Omar Saadi](#) (CMAP, Ecole polytechnique and INRIA, France)

Solving Perfect Information Mean Payoff Zero-sum Stochastic Games by Variance Reduced Deflated Value Iteration ([abstract](#))

10:30-12:30 Session TM2: Numerical Optimization

CHAIRS: [Pierre Carpentier](#) (ENSTA, France)

[Vincent Leclere](#) (ENPC, France)

LOCATION: [Room 2](#)

10:30 [Robert Luce](#) (Gurobi, Germany)

Nonconvex Quadratic Optimization with Gurobi ([abstract](#))

- 11:00 [Yassine Laguel](#) (Université Grenoble Alpes, France)
A DC approach for chance constrained problems ([abstract](#))
- 11:30 [Gilles Bareilles](#) (Laboratoire Jean Kuntzmann, France)
[Franck Iutzeler](#) (Univ. Grenoble Alpes, France)
On the Interplay between Acceleration and Identification for the Proximal Gradient algorithm ([abstract](#))
- 12:00 [Yu-Guan Hsieh](#) (LJK, Univ. Grenoble Alpes, France)
Convergence Analysis of Single-call Extra-Gradient Methods ([abstract](#))

10:30-12:30 Session TM3: Thematic session: Games

CHAIRS:

[Marianne Akian](#) (INRIA and CMAP, CNRS, Ecole polytechnique, IPP, France)
[Vianney Perchet](#) (ENS Paris-Saclay, France)

LOCATION: [Room 3](#)

- 10:30 [Emilien Macault](#) (HEC Paris, France)
[Marco Scarsini](#) (Luiss, Italy)
[Tristan Tomala](#) (HEC School of Management, France)
Learning in Dynamic Routing Games with Symmetric Incomplete Information ([abstract](#))
- 11:00 [Christina Pawlowitsch](#) (University Panthéon-Assas, Paris 2, France)
[Josef Hofbauer](#) (University of Vienna, Austria)
The evolutionary dynamics of costly signaling ([abstract](#))
- 11:30 [Benjamin Roussillon](#) (UGA, France)
[Patrick Loiseau](#) (UGA, INRIA, CNRS, LIG, France)
Optimal classifiers for adversarial settings under uncertainty ([abstract](#))
- 12:00 [Felipe Garrido-Lucero](#) (LAMSADE Université Paris Dauphine, France)
[Rida Laraki](#) (CNRS; LAMSADE Université Paris Dauphine, France)
Stable Matching Games ([abstract](#))

12:30-14:00 Repas/ Lunch

14:00-15:00 Session TP2: Exposé plénier industriel/Industrial plenary talk

CHAIRS: [Wim Vanackooij](#) (EDF R&D, France)
[Hasnaa Zidani](#) (ENSTA Paris, France)

LOCATION: [Amphitheater](#)

- 14:00 [Nadia Oudjane](#) (EDF-Lab, France)
Some optimization issues in the new electrical system ([abstract](#))

15:00-15:30 Pause/ Break

15:30-17:30 Session TA1: Session industrielle/Industrial session

CHAIRS: [Olivier Fercoq](#) (Télécom Paris, France)
[Vincent Leclere](#) (ENPC, France)

LOCATION: [Room 1](#)

- 15:30 [Manuel Ruiz](#) (RTZ, France)
[Jean Maeght](#) (RTE, France)
[Amélie Lambert](#) (CNAM CEDRIC, France)
[Sourour Elloumi](#) (UMA CEDRIC, France)
[Hadrien Godard](#) (RTE, France)
Solving Alternative Current Optimal Power Flow to Global Optimality with Quadratic Reformulation Using Semi-Definite Programming and Branch-and-Bound ([abstract](#))
- 16:00 [Clément Calauzènes](#) (Criteo AI Lab, France)
Optimization in Repeated Mechanisms: Challenges ([abstract](#))
- 16:30 [Erling Andersen](#) (Mosek ApS, Denmark)
A practical primal-dual interior-point algorithm for nonsymmetric conic optimization ([abstract](#))

Wednesday, September 9th

View this program: [with abstracts](#) [session overview](#) [talk overview](#)

09:00-10:00 Session WP1: Exposé plénier/Plenary talk

CHAIRS: [Clémence Alasseur](#) (EDF R&D, France)
[Vincent Leclere](#) (ENPC, France)

LOCATION: [Amphitheater](#)

- 09:00 [Antonin Chambolle](#) (CMAP, CNRS, École polytechnique, IPP, France)
How to discretize the total variation? ([abstract](#))

10:00-10:30 Pause/ Break

10:30-12:30 Session WM1: Optimal control

CHAIRS: [Terence Bayen](#) (University of Avignon, France)
[Hasnaa Zidani](#) (ENSTA Paris, France)

LOCATION: [Room 1](#)

10:30 [Jean-Baptiste Caillau](#) (Université Côte d'Azur, CNRS, Inria, LJAD, France)

Maximisation de déterminants de Sturm-Liouville ([abstract](#))

11:00 [Gaurav Dhar](#) (Université de Limoges, France)

Pontryagin maximum principle for optimal sampled-data control problems ([abstract](#))

11:30 [Boris Wembe](#) (IRIT-UPS Toulouse, France)

Abnormal Trajectory in Optimal Control with Application in Hydrodynamics and Geometry ([abstract](#))

10:30-12:30 Session WM2: Multistage Stochastic Optimization

CHAIRS: [Clémence Alasseur](#) (EDF R&D, France)
[Michel De Lara](#) (Ecole des Ponts ParisTech, CERMICS, France)

LOCATION: [Room 2](#)

10:30 [Thomas Bittar](#) (EDF / Ecole des Ponts ParisTech, France)

[Pierre Carpentier](#) (ENSTA Paris, France)

[Jean-Philippe Chancelier](#) (CERMICS, France)

[Jerome Lonchamp](#) (EDF, France)

A Decomposition Method by Component for the Optimization of Maintenance Scheduling ([abstract](#))

11:00 [Marianne Akian](#) (INRIA & CMAP, France)

[Jean-Philippe Chancelier](#) (Ecole des Ponts ParisTech, France)

[Benôit Tran](#) (Ecole des Ponts ParisTech, France)

Tropical dynamic programming for stochastic optimal control ([abstract](#))

11:30 [Adrien Seguret](#) (EDF R&D, France)

[Nadia Oudjane](#) (EDF R&D, France)

[Frédéric Bonnans](#) (CMAP Inria, France)

[Clémence Alasseur](#) (EDF R&D, France)

[Antonio De Paola](#) (Bath University, UK)


[Vincenzo Trovato](#) (Imperial College London, UK)

Decomposition of a high dimensional stochastic optimization problem and application to flexible devices in the context of Smart Grids ([abstract](#))

12:00 [Maël Forcier](#) (Ecole des Ponts, France)

[Stéphane Gaubert](#) (Ecole polytechnique, France)

[Vincent Leclère](#) (Ecole des Ponts, France)

The polyhedral structure and complexity of multistage stochastic linear programming with general cost distribution ([abstract](#)) 

10:30-12:30 Session WM3: Thematic session: Games

CHAIRS:

[Marianne Akian](#) (INRIA and CMAP, CNRS, Ecole polytechnique, IPP, France)

[Guillaume Vigeral](#) (Université Paris-Dauphine, France)

LOCATION: [Room 3](#)

10:30 [Guillaume Vigeral](#) (Université Paris-Dauphine, France)

Païement d'équilibres algébriques de jeux finis à païement entier. ([abstract](#))

11:00 [Rida Laraki](#) (CNRS (Dauphine-PSL) and University of Liverpool, France)

[Srihari Govindan](#) (University of Rochester, United States)

[Lucas Pahl](#) (University of New South Wales, Australia)

On Sustainable Equilibria ([abstract](#))

11:30 [Frédéric Koessler](#) (CNRS, PSE, France)

[Marie Laclau](#) (CNRS, HEC Paris, France)

[Jérôme Renault](#) (Université Toulouse 1, TSE, France)

[Tristan Tomala](#) (HEC Paris, France)

Long Information Design ([abstract](#))

12:30-14:00 Repas/Lunch Break

14:00-15:30 Session WA1: Thematic session: Mean Field Games

CHAIRS: [Clémence Alasseur](#) (EDF R&D, France)

[Hasnaa Zidani](#) (ENSTA Paris, France)

LOCATION: [Room 1](#)

14:00 [Alekos Cecchin](#) (Université Côte d'Azur, France)

[François Delarue](#) (Université Côte d'Azur, France)

Finite State Mean Field Games: Common Noise and Selection of Equilibria ([abstract](#))

- 14:30 [Julien Claisse](#) (Université Paris-Dauphine, France)
Mean Field Games with Branching ([abstract](#))
- 15:00 [Clément Sarrazin](#) (Institute of Mathematics of Orsay, France)
A lagrangian discretization for mean field games with congestion
([abstract](#))
- 15:30 [Bonnans Frédéric](#) (CMAP, France)
[Lavigne Pierre](#) (CMAP, France)
[Laurent Pfeiffer](#) (CMAP, France)
Discrete-time MFGs with risk-averse agents ([abstract](#))
- 14:00-16:00** Session WA2: Thematic session: Geometry and Optimization
CHAIRS: [Xavier Allamigeon](#) (Inria and CMAP, France)
[Sourour Elloumi](#) (ENSTA, France)
LOCATION: [Room 2](#)
- 14:00 [Nikolas Stott](#) (LocalSolver, France)
Calcul de bornes dans LocalSolver pour des problèmes non-linéaires mixtes et multi-objectifs ([abstract](#))
- 14:30 [Simon Boulmier](#) (LocalSolver, France)
Unconstrained relaxations and duality in global optimization
([abstract](#))
- 15:00 [Daniel Dadush](#) (CWI Amsterdam, Netherlands)
[Sophie Huiberts](#) (CWI Amsterdam, Netherlands)
[Bento Natura](#) (London School of Economics, UK)
[László A. Végh](#) (London School of Economics, UK)
A scaling-invariant algorithm for linear programming whose running time depends only on the constraint matrix ([abstract](#))
- 15:30 [Antoine Deza](#) (McMaster University, Canada)
Algorithmic, Combinatorial, and Geometric Aspects of Linear Optimization ([abstract](#))
- 14:00-15:30** Session WA3: Optimization and Modeling
CHAIRS: [Pierre Carpentier](#) (ENSTA, France)
[Panayotis Mertikopoulos](#) (IMAG CNRS, France)
LOCATION: [Room 3](#)
- 14:00 [Thomas Martin](#) (CERMICS, Ecole des Ponts ParisTech, France)
A dynamic formulation for the crude oil procurement problem
([abstract](#))
- 14:30 [Adrien Le Franc](#) (Cermics ENPC, France)
[Pierre Carpentier](#) (ENSTA Paris, France)
[Jean-Philippe Chancelier](#) (CERMICS, France)
[Michel De Lara](#) (Ecole des Ponts ParisTech, CERMICS, France)
EMSx: an Energy Management System numerical benchmark
([abstract](#))
- 15:00 [Quentin Bertrand](#) (Université Paris-Saclay, Inria, Cea, France)
[Quentin Klopfenstein](#) (Université de Bourgogne, France)
[Joseph Salmon](#) (Université de Montpellier, France)
[Mathieu Blondel](#) (Google, France)
[Samuel Vaiter](#) (CNRS, France)
[Alexandre Gramfort](#) (Université Paris-Saclay, Inria, Cea, France)
Hyperparameter selection for the Lasso with gradient descent
([abstract](#))
- 16:00-17:00** Pause/ Break
- 17:00-17:30** Prix Dodu/Dodu Prize
CHAIRS: [Jerome Bolte](#) (Universite Toulouse 1 Capitole, France)
[Stephane Gaubert](#) (Inria & CMAP, France)
[Filippo Santambrogio](#) (Université Claude Bernard - Lyon 1, France)
LOCATION: [Amphitheater](#)