PGMO DAYS 2016 - PROGRAM

GASPARD MONGE PROGRAM FOR OPTIMIZATION AND OPERATIONS RESEARCH

Tuesday, November 08th

Welcome coffee (starting at 08:30)
09:00 : Introduction by Jean-Paul CHABARD (Scientific Director EDF R&D) and Pierre Pansu (FMJH)
09:20 : Scientific Conference by Mérouane Debbah (Huawei)
10:10 : PGMO PhD prize ceremony part 1
10:20 : PhD Prize : talk 1 by Pauline Sarrabezolles
10:50 : Coffee Break
11:20 : Scientific conference by Giuseppe Calafiore (Politecnico di Torino)
12:10 : Industrial conference by Michel Prenat (Thales Optronique)
Lunch / Coffee (13:00 — 14:30)

14:30 : Scientific conference by Claire Mathieu (ENS)
15:20 : Scientific conference by Patrick Jaillet (MIT)
16:10 : Coffee Break
16:40 : PGMO PhD prize ceremony part 2
16:45 : PGMO PhD Prize : talk 2 by Bruno Ziliotto
17:15 : Review of the PGMO program, and of the IROE and IRSDI research initiatives, by Stéphane Gaubert, Gilles Stoltz, Sandrine Charousset, Georges Hébrail and Michel Prenat.

Breaks will be the opportunity for discussion around posters describing the activities of PGMO projects.

Wednesday, November 09th *Parallel sessions on PGMO main topics*

9:00/10:30

Amphithéâtre 1 : Mean Field Games (invited Session, organized by Daniela Tonon)
Daniela Tonon - On the variational formulation of some Mean field game systems
Yves Achdou - A Mean Field Equilibrium as a Model for Mining Industries
Luis Briceño-Arias, Dante Kalise, Francisco José Silva Alvarez - Proximal methods to solve stationary mean field game systems with local couplings

Room A140 : Decomposition methods
Halil Sen, Boris Detienne, Ruslan Sadykov, Francois Vanderbeck - Revisiting Benders decomposition
Shahin Gelareh - BENMIP-- A Generic Benders Decomposition Solver: Challenges and Progress
Kostas Tavlaridis-Gyparakis, Antonio Frangioni - SMS++: a Structured Modeling System with Application in Energy Optimization

Amphithéâtre 2 : Optimization, Games and Renewable Energy - OGRE 1 (invited Session summary organized by Michel De Lara)
Michel De Lara - Charting optimization problems with multiple agents and information
El-Ghazali Talbi - A Multiobjective Evolutionary Algorithm for Household Appliances Scheduling
Yezekael Hayel - Efficient Coupled Energy-Transport Management for Smart Cities

Room A139 : OR 1 - Graphs and Optimization (Invited Session, organized by Marie-Christine Costa, Sourour Elloumi)
Axel Parmentier - Lower bounds in resource constrained shortest path algorithms
Viet Hung Nguyen, Paul Weng - Efficient algorithm for fair perfect matching
Youcef Magnouche, Ali Ridha Mahjoub, Sébastien Martin - The multi-terminal vertex separator problem

Room A116 : Large Scale Optimization and Statistics 1
Vianney Perchet, Francis Bach - Highly-Smooth Zero-th Order Online Optimization
Dmitry Ostrovsky, Anatoli Juditsky, Zaid Harchaoui - Adaptive filtering by convex optimization
Rémy Degenne, Vianney Perchet - Combinatorial semi-bandit with known covariance

Room A128 : Control 1
Dario Prandi - Neuro-geometry of vision and applications to image processing
Jean-Baptiste Caillau, Jean-Baptiste Pomet, Jeremy Rouot - Averaging for minimum time control problems and applications
Achille Sassi, Hasnaa Zidani, Jean-Baptiste Caillau, Emmanuel Trélat, Max Cerf - Kernel Density Estimation applied to the chance-constrained Goddard problem

11:00/12:30

Amphithéâtre 1 : Games 1 (Invited Session of GdR « Théorie des jeux », organized by Guillaume Vigeral)
Rida Laraki - Acyclic Gambling Games
Saeed Hadikhanloo - Learning in Anonymous Games with Actions in Banach Spaces: Application in First Order Mean Field Games
Panayotis Mertikopoulos, Yannick Viossat - Imitation dynamics with payoff shocks

Room A140 : Industrial applications (Invited Session, organized by Sandrine Charousset)
Eric Gourdin - Location and routing problems in modern telecommunication networks
Mathieu Leconte, Ioannis Steiakogioannakis, Georgios Paschos - Distributed multi-commodity routing optimization in Software-Defined Networks
Bayram Kaddour, Olivier Beaude - Enedis strategic planning

Amphithéâtre 2 : Optimization, Games and Renewable Energy - OGRE 2 (Invited Session, organized by Michel de Lara)
Bernardo Pagnoncelli, Tito Homem-De-Mello, Rodrigo Carrasco, Mailyng Carrasco - Microgrid energy management with renewables and storage
Didier Aussel, Anton Svensson - Multi-leader-follower-games: a state of art of applications to energy problems and of their (global vs local) reformulations
Luce Brotcorne, Léonard von Niederhäusern - Energy Pricing Problems for Demand side and Revenue Management

Room A139 : OR 2 - Mathematical programming in Energy (Invited Session, organized by Marie-Christine Costa, Sourour Elloumi)
Sandra Ulrich Ngueveu - Piecewise linear bounding of energy conversion functions and resulting MILP-based solution methods
Thomas Ridremont, Cédric Bentz, Marie-Christine Costa, Pierre-Louis Poirion - Mixed-integer Bilevel programs for designing robust networks. An application to wind power collection.
Pierre-Louis Poirion, Cédric Bentz, Marie-Christine Costa, Thomas Ridremont, Camille Zakhour - Optimal design of a robust wind-farm under power constraints.

Room A116 : Large Scale Optimization and Statistics 2
Eugene Ndiaye, Olivier Fercoq, Alexandre Gramfort, Joseph Salmon - Gap Safe Screening Rules for Sparse-Group Lasso
Emilio Carrizosa, Amaya Nogales Gómez, Dolores Romero Morales - Clustering categories in support vector machines
Quoc Tran-Dinh, Olivier Fercoq, Volkan Cevher - A Smooth Primal-Dual Optimization Framework for Nonsmooth Composite Minimization

Room A128 : Semidefinite programming (Invited Session, organized by Xavier Allamigeon)
Didier Henrion, Simone Naldi and Mohab Safey El Din - Exact Algorithms for Linear Matrix Inequalities
Hamza Fawzi - Semidefinite programming lifts and sparse sums of squares
Xavier Allamigeon, Stephane Gaubert, Mateusz Skomra - Solving Generic Nonarchimedean Semidefinite Programs using Stochastic Game Algorithms

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13:45/15:15

Amphithéâtre 1 : Games 2 (Invited Session of GdR « Théorie des jeux », organized by Guillaume Vigeral)
Marie Laclau, Frédéric Koessler, Tristan Tomala - Competitive Information Design
Stefano Lovo - Markov Perfect Equilibria in Stochastic Revision Games
Sylvain Sorin - Limit value of dynamic zero-sum games with vanishing stage duration

Room A140 : Numerical methods for optimal transport (Invited Session organized by Quentin Mérigot)
Jean-Marie Mirebeau - Monotone and consistent discretizations of diffusion PDEs using Obtuse Superbases
Marco Cuturi - Algorithmic Wasserstein Distances and Applications to Histogram Regression
Boris Thibert - Semi-discrete optimal transport and applications in non-imaging optics

Amphithéâtre 2 : Energy 1
Claudia Sagastizábal, Wim van Ackooij, Rene Henrion, Alexander Kruger, Michel Thera, Welington de Oliveira - Bilevel Models for Unit Commitment with Demand-Side Management
Fabio D'Andreagiovanni, Giovanni Felici, Fabrizio Lacalandra - Zero-price Energy Offering by (Multiband) Robust Optimization
Mahbubeh Habibian, Golbon Zakeri, Anthony Downward, Miguel Anjos, Michael Ferris - Co-optimization of Demand Response and Reserve Offers

Room A139 : OR 3 - Combinatorial Optimization (Invited Session, organized by Marie-Christine Costa and Sourour Elloumi)
Bruno Escoffier - Reoptimization algorithms for combinatorial problems
Guillaume Sagnol, Thibaut Sauvage - A Completely-positive representation of the cone of flow matrices
Spyros Angelopoulos, Christoph Dürr, Thomas Lidbetter - The expanding search ratio of a graph

Room A116 : Black-Box Optimization
Benjamin Doerr, Carola Doerr, Timo Kötzing - Optimizing Multi-Valued Decision Variables with Evolutionary Algorithms
Anne Auger - Revisiting the Benchmarking of Derivative Free Optimization Algorithms
Carola Doerr, Johannes Lengler - Cost of Elitist Selection in Discrete Black-Box Optimization

Room A128 : Icode (Invited Session of the Institute for Control and Decision of the Idex Paris Saclay, organized by Yacine Chitour)
Paolo Mason - Optimal control methods for the stability of switched systems
Antoine Girard - Robust controllers for nonlinear systems with performance guarantees: an approach based on discrete abstractions.
Frédéric Jean - Inverse Optimal control: the sub-riemannian case

15:45/17:45

Amphithéâtre 1 : Games and Probabilities
Rene Henrion, Wim van Ackooij, Pedro Perez Aros - Aspects of Nonsmoothness for Gaussian Probability Functions
Piernicola Bettiol - Differential Games confined to path-wise constraints
Matteo Fischetti, Ivana Ljubic, Michele Monaci, Markus Sinnl - Interdiction Games and Monotonicity
Charles Bertucci - Optimal stopping in mean field games

Room A140 : OR 5
Margaux Nattaf, Christian Artigues, Pierre Lopez - An exact method for a continuous scheduling problem with concave efficiency functions
Stephane Chretien, Nathalie Herr, Jean-Marc Nicod, Christophe Varnier - Scheduling independent parallel machines with convex programming
Stephane Chretien, Paul Clarkson, Alistair Forbes - A convex relaxation of the optimal sensor placement problem in power grids
Jia Liu, Immanuel Bomze, Abdel Lisser, Jianqiang Cheng, Peter Dickinson - New formulations, relaxations and penalisations for mixed binary Qps

Amphithéâtre 2 : Energy Management and economic valuation (Invited Session, organized by Jean-Philippe Chancellier) – (15H45-17H15)
Teemu Pennanen - Asset valuation and optimal investment
François Pacaud - Optimization of a district microgrid
Tristan Rigaut - Energy Efficiency Investment and Management for Subway Stations

Amphithéâtre 2 : Energy 2 (17h15-17h45)
Rodolphe Griset - Nuclear Power Plant Outage Planning : an exact optimization approach to test robustness to demand variations and power plant availability

Room A139 : OR 4 - Robust and bilevel optimization (Invited Session, organized by Marie-Christine Costa and Sourour Elloumi)
Pierre-Louis Poirion, Sonia Toubaline, Claudia D'Ambrosio, Leo Liberti - On the Binary Bilevel Problem
Dritan Nace, Akli Fundo, David Savourey, Fatjon Gjata - The robust flight level assignment problem
Céline Gicquel, Safia Kedad-Sidhoum, Quan Vu - A multi-stage stochastic programming approach for remanufacturing planning under uncertainty

Room A116 : Tropical methods (Invited Session, organized by Xavier Allamigeon) - (15H45-17H15)
Anne Bouillard - Computing optimal worst-case performance bounds with Network Calculus
Laure Daviaud - About the description of functions computed by max-plus automata
Marianne Akian, Mustapha Bouhtou, Jean Bernard Eytard, Stéphane Gaubert - Price incentives in mobile networks: a tropical approach

Room A116 : Applications (17h15-17h45)
Bayarbaatar Amgalan - An integrated method for uncovering key effects on cancer-activated multi-dimensional network

Room A128 : Control 2
Dominikus Noll - Robust control for mixed system uncertainty
Francisco José Silva Alvarez, Joseph Frédéric Bonnans, Justina Gianatti - On the convergence of discrete optimal controls
Michael Orieux, Jean Baptiste Caillau, Jacques Féjoz - Problème de transfert en temps optimal