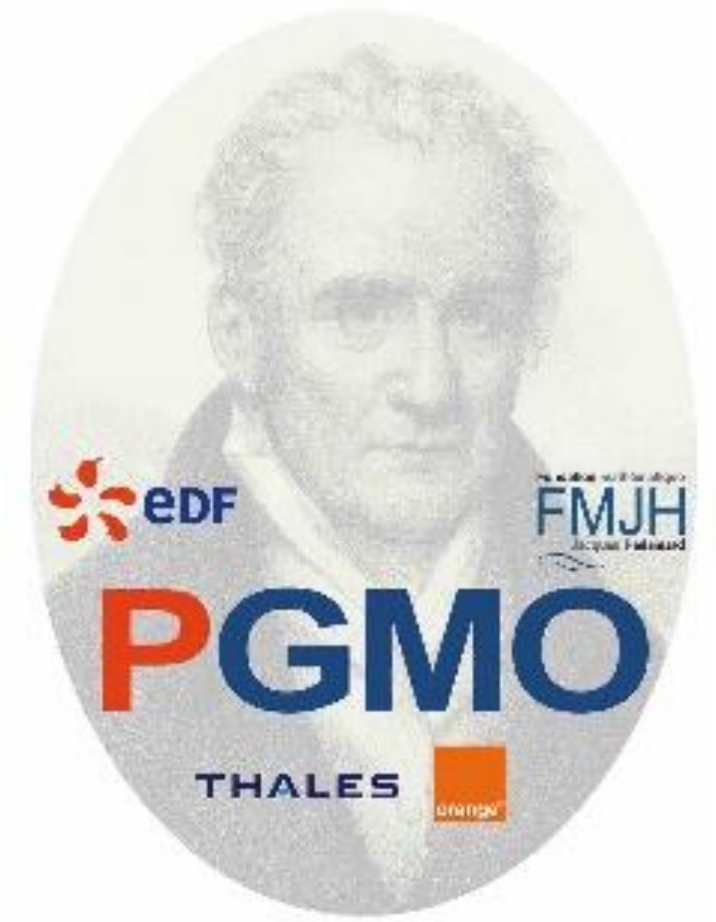


Gaspard Monge Program for Optimisation, operations research, and their interactions with data sciences

2017 Review

PGMO Days 2017
November 13, 2017

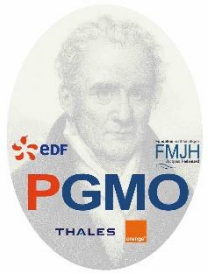
Sandrine Charousset
Stéphane Gaubert
Gilles Stolz
Georges Hébrail – Michel Prenat

Agenda

- About PGMO
- Invited Professors
- Scientific events
- PGMO funding opportunities
- Review of PGMO Projects

https://www.fondation-hadamard.fr/fr/pgmo/pgmo

What is PGMO?



A joint initiative of EDF (founding member), Thales and Orange and the Jacques Hadamard Mathematical Foundation (FMJH)

A new kind of research partnership

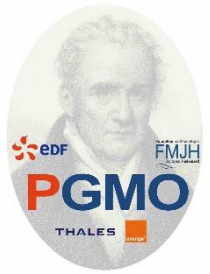
- Based on corporate patronage (non-profit support)
- Optimization / operations research / their interactions with data sciences
- Involving academic and industrial researchers

Main objectives

- Develop a research community
- Stimulate joint research projects
- Support and improve education in optimization
- Promote job opportunities for students in this field

https://www.fondation-hadamard.fr/fr/pgmo/pgmo

FMJH – Fondation mathématique J. Hadamard



Bringing together the mathematicians of the Saclay campus in order to form a top research community in pure and applied mathematics and their interfaces with sciences.

Members:

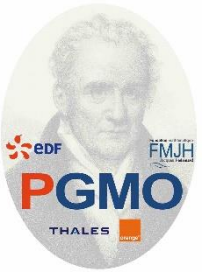
- Founding members : Math departments of the ENS-Cachan (CMLA), Université Paris-Sud (LMO), École Polytechnique (CMAP and CMLS), IHÉS , CNRS
- Associated Members : UVSQ, CentraleSupelec, Ensta ParisTech, UEVE, ENSIEE, INRA, AgroParisTech…
- Hosted by the Fondation de Coopération Scientifique of the Paris-Saclay campus.

Main objectives

- Become a worldwide recognized center on the campus, highly visible and competitive for the best graduate students and mathematicians
- Promote openess and exchanges between mathematics and other disciplines and between mathematics and the economic world
- Promote a shared scientific policy, with a reactive governance,
- Develop joint research and training actions
- Contribute to break the fronteers between University, Grandes Écoles and companies
- Develop job opportunities for young mathematicians in companies
- Enhance the mathematical background of engineers

https://www.fondation-hadamard.fr/fr/pgmo/pgmo

Organization of PGMO



Gaspard Monge Program for Optimization, operations research and their interactions with data sciences

Coordinator: Stéphane Gaubert

« Mathematical Research on Optimisation » (PRMO)

Education
Research projects
Seminars and Conferences

Research Initiative « Optimization and Energy » (IROE)
Managing Officer: Sandrine Charousset
Joint research projects

Research Initiative « Data Sciences for Industry » (IRSDI)
Managing Officers: Gilles Stoltz, Georges Hébrail, Michel Prenat
Joint research projects

Future Research Initiatives

Master classes, training, scholarships

Seminars, conferences, Web site

Academic research projects, publications, Joint applied research projects, algorithms and open software, …

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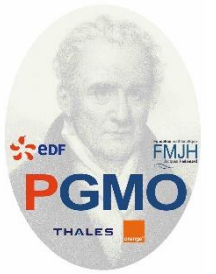
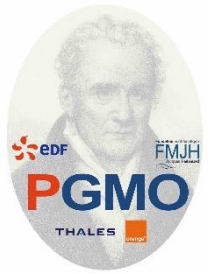
Organization of PGMO / continued



- **Optimisation and Energy Research Initiative (IROE)**
  - Focus on industrial applications in the field of energy
  - Created at the instigation of EDF in 2012
  - Projects = EDF members + academic members
- **Research Initiative in Industrial Data Science (IRSDI)**
  - Focus on the many ways data science can help industry
  - Created at the instigation of EDF and Thales Optronique in 2016
  - Projects = pairs {academic researcher(s), partner company}
- **Other research initiatives welcome!**
  - At the instigation of present or new members of PGMO
  - New companies may join PGMO, they will then be associated to the scientific animation of PGMO, will appoint a member in the executive board, and they may propose a specialized research initiative.

https://www.fondation-hadamard.fr/fr/pgmo/pgmo

Governance



Executive Board	Scientific Committee		Steering Committee
Frédéric Bonnans, INRIA and Ecole Polytechnique, Pierre Carpentier, ENSTA ParisTech, Sandrine Charousset, EDF R&D Marie-Christine Costa, ENSTA ParisTech Stéphane Gaubert, Coordinator, INRIA and Ecole Polytechnique Eric Gourdin, ORANGE Georges Hebrail, EDF R&D Michel Prenat, THALES OPTRONIQUE Gilles Stoltz, CNRS and Université Paris-Sud Emmanuel Vazquez, Centrale-Supélec	Grégoire Allaire, Ecole Polytechnique Walid Ben Ameur, Institut Télécom Paris-Sud Nadia Brauner, Université Grenoble Alpes Luce Brotcorne, INRIA Lille Jean-Baptiste Caillau, Université Côte d'Azur & CNRS/Inria Antonin Chambolle, Chairman, Ecole Polytechnique Johanne COHEN, CNRS Université Paris-Sud Claudia D'Ambrosio, CNRS, Ecole Polytechnique Michel De Lara, ENPC Antoine Girard, CNRS, Centrale-Supelec	Balàzs Kegl CNRS, Ecole Polytechnique Jérome Malick, CNRS, Université de Grenoble Mathilde Mougeot, Université Paris Diderot Vianney Perchet, Vice-chairman, Ecole Normale Supérieure Paris-Saclay Patrice Perny, Université Pierre & Marie Curie Frédéric Roupin, Université Paris 13 Joseph Salmon, Télécom Paris, Filippo Santambrogio, Université Paris-Sud Pierre Senellart, Ecole Normale Supérieure Paris	Walid Benzarti, Thales Frédéric Bonnans, INRIA and Ecole Polytechnique Laurent Dumas, Laboratoire de Mathématiques de Versailles Sourour Elloumi, UMA ENSTA ParisTech Stéphane Gaubert, INRIA and Ecole Polytechnique, Bertrand Maury, Laboratoire de Mathématiques d'Orsay, Pierre Pansu, FMJH Nancy Perrot, Orange (Invited Member), Marc Ringeisen, EDF

PGMO is working closely with related organizations:
Roadef, SMAI (Mode groupe), ICODE, GDR Jeux, GDR MOA

https://www.fondation-hadamard.fr/fr/pgmo/pgmo

Invited Professors and Courses (PRMO)

https://www.fondation-hadamard.fr/fr/pgmo/pgmo

Past courses and invitations

2017

Marc Teboulle (Tel-Aviv) (january 2017)
First Order Optimization Methods

Gleb Koshevoy (Moscow) (february-march 2017)
Discrete convexity

Costis Daskalakis (MIT) (march 2017)
Algorithmic game theory

Tim Rougharden (Stanford) (september 2017)
Data Driven Optimal Auction Theory

2012-16

Giuseppe Buttazzo (U.Pisa)
Laurent El Gahoui (Berkeley) (2013)
Arkadii Nemirovsky (Georgia Tech)
Georg Pflug (Vienna) (2014)
Youri Nesterov (Louvain) (2016)
Jean-Bernard Lasserre (LAAS Toulouse) (2016)

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Invited Professors and Courses 2018

Jan 24-27, 2018. **Jacek Gondzio** (Edinburgh), Interior Point Methods for Very Large Scale Optimization

March 13-14, 2018. **Sébastien Bubeck** (Microsoft), Bandit Convex Optimization

Scientific Events

Supported by PGMO

https://www.fondation-hadamard.fr/fr/pgmo/pgmo

Last events

NewTOVAA
- General Information
  - Accommodation
  - Conference venue
  - How to ...
  - Social events
  - Transportation
- The Conference
  - Committees
  - Conference themes
  - Contact
  - Participants

NewTOVAA

New trends in Optimization and Variational Analysis for Applications

Quy Nhon, December 7-10, 2016

An international confere

Journées annuelles 2017 des GdR MOA et MIA

Dates et lieu

Du 17 au 20 octobre 2017

Institut de Mathématiques de Bordeaux

351 Cours de la liberation, 33405 Talence Cedex, France.

Conference dedicated to the memory of Jon Borwein

Feb 10, 2017
IHP, Paris

"Visualising Mathematics for Greater Understanding"

NETWORK GAMES, CONTROL AND OPTIMIZATION
NETGCOOP
AVIGNON - 2016

November 23-25, 2016, Avignon

18th ROADEF Conference : 22-24 feb. 2017, Metz

https://www.fondation-hadamard.fr/fr/pgmo/pgmo

Announcements

26-27 Mars 2018, Grenoble

https://www.fondation-hadamard.fr/fr/pgmo/pgmo

Announcements

Workshop ``**Variational analysis: challenges in energy**'', 4-6 June 2018, Castro Urdiales, (Spain),
Organized by Claudia Sagastizabal and Michel Thera

https://www.fondation-hadamard.fr/fr/pgmo/pgmo

Announcements

Paris Symposium on Game Theory, 12-15 June, 2018, IHP. Joon Kwon, Marie Laclau, Panayotis Mertikopoulos, Vianney Perchet, Xavier Venel et Guillaume Vigeral

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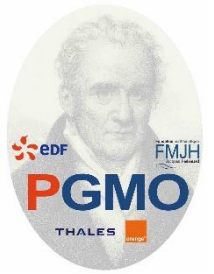
Announcements

ROADEF 2018, 21-23 Feb, Lorient, deadline for abstracts 17 Nov, http://roadef2018.labsticc.fr/wp/?page_id=44

https://www.fondation-hadamard.fr/fr/pgmo/pgmo

PGMO seminars of 2017

- Cheng Wan (Shangai)
  Centralisation, decentralisation and competition in network congestion games
- Alejandro Jofre (U.Chile)
  Equilibrium analysis of electricity auctions
- Nicolas Beldiceanu (Mines Nantes)
  Handling combinatorial aspects of time-series constraints based on regular expressions characteristics
- Islam Abdin (CentraleSupelec)
  Technico-economic modeling of power system design including high share of distributed energy resources
- Jon Lee (U.Michigan)
  A geometric view of some relaxations in non-convex optimization



Research Projects

https://www.fondation-hadamard.fr/fr/pgmo/pgmo

PGMO call for projects

3 kinds of projects

A: internships, material, trips, invitations, cofunded PhD (open to all academic teams) / PRMO + IROE + IRSDI

B: Post-doc (open to all academic teams) / IROE

C: Invited professor program (in Saclay laboratories)

Criteria for selected projects

- Scientific quality at the highest international level
- Cooperation and networking between different teams
- Projects organizing seminars and workshops in Saclay
- Projects with young researchers
- Applications to industry
- Projects can be of various sizes
- No geographic limitation. Project leader need not work in France. However, impact for the French industrials and research community is evaluated. Some specific co-funding (Labex Hadamard and ICODE) were dedicated to Saclay projects in 2017.

Note: due to the non-profit character of the corporate (EDF / Thales / Orange) patronage, all results of projects are made freely available to the community

Next call for projects

February/April 2018, with decisions in July 2018 for a start in September 2018

2012-2016 Projects

144 projects (2012-2017)

- **2012 : 21 projects (7 PRMO, 14 IROE)**
- **2013 : 14 new projects (10 PRMO, 4 IROE) +14 renewed projects**
- **2014 : 17 new projects (13 PRMO, 4 IROE) + 20 renewed projects**
- **2015 : 26 new projects (18 PRMO, 8 IROE) + 11 renewed projects**
- **2016 : 30 new projects (13 PRMO, 8 IROE, 9 IRSDI) + 17 renewed projects ; ; Among these, 7 PRMO were supported by Labex Hadamard**
- **2017 : 29 new projects (15 PRMO, 5 IROE, 9 IRSDI) + 17 renewed projects ; Among these, 7 PRMO, 1 IROE, and 2 IRSDI projects, were supported by Labex Hadamard, 3 IROE projects were supported by IRS ICODE.**

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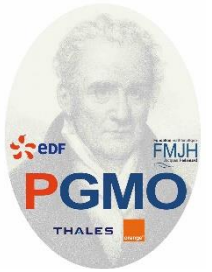
IROE Projects

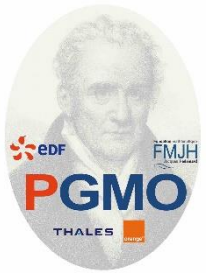
https://www.fondation-hadamard.fr/fr/pgmo/pgmo

Traditional Energy Management Problems



- Challenging mixed integer nonlinear programming problems for the maintenance planning for hydropower plants (New)
  - ANJOS Miguel - École Polytechnique de Montréal,
  - with Claudia D'Ambrosio - LIX (E Polytechnique)
- Shortest Path Problem variants for the Hydro Unit Commitment Problem
  - D'Ambrosio Claudia - LIX (Ecole Polytechnique)
  - With Leo Liberti; Sonia Toubaline; Raouia Taktak; Dimitri Thomopulos - LIX (Ecole Polytechnique), LAMSADE (Paris Dauphine), ISIMS & LT2S/CRNSCRNS (Sfax University)
- Data-base of linear cuts for short term unit rescheduling
  - BELDICEANU Nicolas - LS2N, Université de nantes
  - with Ekaterina Arafailova, Helmut Simonis - Insight (university college Cork)
- Benders decomposition in synergy with Dantzig-Wolfe and application to long term electricity production planning under uncertain
  - VANDERBECK François, Institut de Mathématiques de Bordeaux & Realopt team, Inria Bordeaux-Sud-Ouest ReAlOpt
  - With F. Clautiaux, B. Detienne, R. Sadykov, I. Tahiri

Energy Management and Uncertainty



- (OptStab) Optimization & stability of stochastic bilevel problems.
  - THERA Michel - QUARTZ (université de Limoges)
  - with Claudia Sagastizabal, René Henrion, Wellington de Oliveira, Alexander Kruger - IMPA (Bresil), CIAO (Ballarat), XLIM (Limoges), Weirstrass Institute
- Incorporating Model Error in the Management of Electricity Portfolios (new)
  - PFLUG Georg, Department of Statistics and Operations Research, University of Vienna
  - With Mounir Haddou - INSA Rennes

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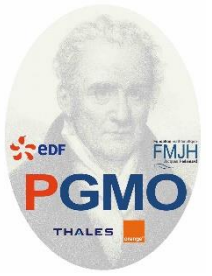
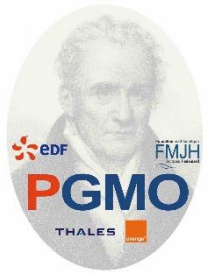
Local Energy Management Problems



- Conception d'un câblage robuste pour un parc éolien.
  - COSTA Marie-Christine
  - with Cédric bentz, Alain Hertz, Thomas ridremont , Camille Zakhour
  - UMA (ENSTA Paris-Tech), CEDRIC (CNAM), GERAD (Montréal)
- From single to multiple domestic consumers in smart grid management
  - TALBI El-Ghazali, CRISTAL (Centre de Recherche en Informatique, Signal et Automatique de Lille)
  - With Phd Mrs Zineb Garroussi.
- Le e-bison futé du véhicule électrique (new)
  - Quadri Dominique
  - With MARTIN Steven (LRI), HAYEL Yezekael et JIMENEZ Tania (LIA)
  - LIA Laboratoire d'Informatique d'Avignon et LRI Laboratoire de Recherche en Informatique
  - Funded by Labex Hadamard

Decentralised Energy Management



- Distributed control of flexible loads (new)
  - Stoltz Gilles & Busic Ana
  - LMO, Université Paris Sud ; INRIA Paris
  - Fundd by IRS Icode
- Jeux de pilotage de flexibilités de consommation électrique : dynamique et aspect composite (new)
  - Lasaulce Samson, L2S (CentraleSupelec)
  - With Stéphane Gaubert, Sylvain Sorin, Cheng Wan, Paulin Jacquot - CMAP (Polytechnique), Institut de Mathématiques de Jussieu, Shanghai University of Finance and Economic
  - Funded by IRS Icode
- Numerical analysis of bilevel and multi-leader-follower games : application to best response estimation in electicity market model (new)
  - DEMPE Stephan- Institut für Numerische Mathematik und Optimierung (Institute of Computational Mathematics and Optimization) - Technical University Bergakademie Freiberg
  - with Didier Aussel; Gemayqzel Bouza - University of Perpignan; University of La Havana, Cuba
- COSMIC - COordination Schemes for local and global Market InteraCtions
  - LE CADRE Hélène, Markets and Strategy, Energyville
  - With Anthony Papavasiliou, Ilyès Mezghani, Hanspeter Höschle - EnergyVille, KULeuven, CORE UCLouvain

IRSDI Projects

https://www.fondation-hadamard.fr/fr/pgmo/pgmo

IRSDI projects with EDF

- Dynamique de l'information et nouveauté dans les flux de textes
  - Julien Velcin , ERIC Lyon2
  - With Delphine Lagarde
- EDF Machine Learning in Real Time: Competition and Challenges
  - Albert Bifet , LTCI (Telecom parisTech)
- Exploring and summarizing large scale functional data for prediction purpose with statistical learning tools
  - Julien Jacques
  - With Charles Bouveyron, Laurent Bozzi, Francois-Xavier Jollois, Camille Baysse and Michel Prenat
  - ERIC Univ. Lyon 2, UFR Math. Info. Univ. Paris Descartes

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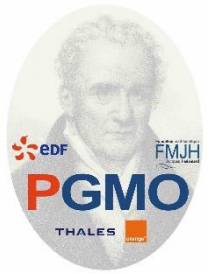
IRSDI project with EDF and THALES



- Exploring and summarizing large scale functional data for prediction purpose with statistical learning tools
  - Julien Jacques
  - With Charles Bouveyron, Laurent Bozzi, Francois-Xavier Jollois, Camille Baysse and Michel Prenat
  - ERIC Univ. Lyon 2, UFR Math. Info. Univ. Paris Descartes

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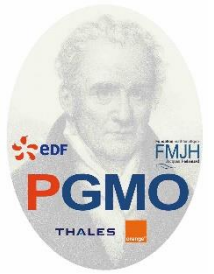
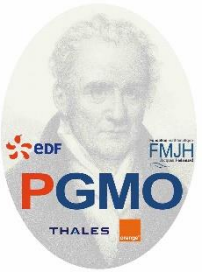
IRSDI projects with THALES



- Optimisation de stratégies de maintenance par les processus markoviens déterministes par morceaux
  - François Dufour
  - With Benoite de Saporta and Huilong Zhang
  - INRIA Bordeaux Sud-Ouest (équipe CQFD); Université de Montpellier (IMAG)
- From monitoring data to predictive maintenance for a guaranteed service level on a fleet
  - Antoine Grall
  - Institut Charles Delaunay (Troyes), Gipsa-Lab (Grenoble)
- Classification de séries temporelles appliquée aux trajectoires estimées d'aéronefs
  - Sylvère Bonnabel
  - With Jesus Angulo and Frederic Barbaresco
  - CAOR, centre de Robotique (Mines ParisTech)
- Cloud dataset augmentation through texture synthesis
  - Erwan Le Pennec - CMAP Ecole Polytechnique
  - With Michel Prenat

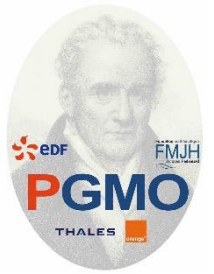
IRSDI project with ORANGE



- Etudes de l'apport des modèles hybrides dans le cadre de la prévision d'indicateurs de séries temporelles
  - Simon Malinowski
  - With Thomas Guyet, Vincent Lemaire
  - IRISA

https://www.fondation-hadamard.fr/fr/pgmo/pgmo

IRSDI project with AIRBUS



- Anomaly detection based on functional physical data for predictive maintenance of aircraft fleet
  - Stephan Clémençon
  - With A. Sabourin, F. D'Alché-Bux, V. Feuillard
  - LTCI, Telecom ParisTech, Université Paris Saclay
  - Funded by Labex Hadamard

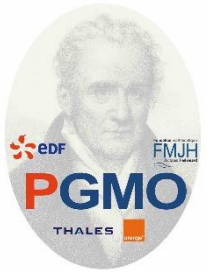
https://www.fondation-hadamard.fr/fr/pgmo/pgmo

PRMO Projects

A wide range of different optimization techniques

https://www.fondation-hadamard.fr/fr/pgmo/pgmo

Combinatorial Optimization

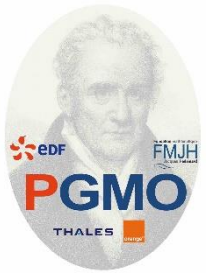


- Most Critical Elements for Multiobjective Optimization Problems,
  - BAZGAN Cristina, LAMSADE - Université Paris-Dauphine,
  - with Sonia Toubaline, Daniel Vanderpooten
- Exploiting Antagonistic Relations in Signed Networks under the Structural Balance Hypothesis.
  - FIGUEIREDO Rosa, Lab. Informatique d'Avignon
  - with Vincent LABATUT; Zacharie ALES; Sébastien DESTERCKE; Yuri FROTA; Guillaume MARREL; Pierre Henri MORAND
  - Lab. Informatique d'Avignon; Lab. Biens, Normes, Contrats; Heudiasyc; Inst. de Computaçao (Brazil); Unité de Math. Appliquées
- Rich Graph Coloring Problems with applications to resource allocation
  - FURINI Fabio, LAMSADE (Paris Dauphine University) and DEI (University of Bologna)
- Optimizing energy allocation using lot sizing models (OPAL)
  - NGUEVEU Sandra Ulrich, LAAS-CNRS (Toulouse)
  - with Christian ARTIGUES, Nabil ABSI, Safia KEDAD-SIDHOUM, Pierre LOPEZ.
  - LAAS-CNRS (Toulouse), LIP6 (Paris 6), LIMOS (Saint-Etienne)
- New approaches for solving Max-Cut and related problems in sparse graphs,
  - NGUYEN Viet Hung with Michel MINOUX - , LIP6, Paris 6,

Combinatorial optimization / solvers

- BENMIP: A Generic Bender Decomposition-based (Mixed) Integer Programming Solver,
  - GELAREH Shahin, Portsmouth Business School, University of Portsmouth
  - Dylan Jones, Said Hanafi, with Rahimeh Neamatian Monemi, Ted Ralph
  - Department of Mathematics, University of Portsmouth , LAMIH-CNRS université de Valenciennes; CORMSIS, Business School of Southampton , Department of Industrial and Systems Engineering, Lehigh University, US

Robust Optimization

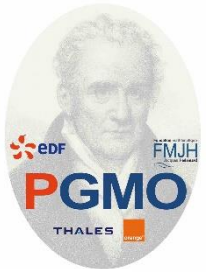


- Robust Energy Offering under Market Equilibrium Constraints,
  - FORTZ Bernard,
  - with Fabio D'Andreagiovanni, Luce Brotcorne
  - Graphes et Optimisation Mathématique (GOM), Département d'informatique GOM (Université Libre de Bruxelles), "Heudiasyc" UMR CNRS 7253 (Université de Technologie de Compiègne), and INOCS (INRIA)

- Robust network design subject to uncertain link capacities
  - NACE Dritan
  - With Jacques Carlier, David Savourey, Marinela Shehaj, and Michal Pioro.
  - Laboratoire Heudiasyc - UMR 7253 (University of Technology of Compiègne) and Warsaw University of Technology.

- Extensions of classical robust combinatorial optimization,
  - POSS Michael
  - with Jannis Kurtz, Marc Goerigk, Artur Pessoa, Marcos Roboredo, Marco Silva
  - LIRMM LIRMM, UFF (Brazil), TU Dortmund (Germany), Lancaster University (UK)

Optimization, games and learning

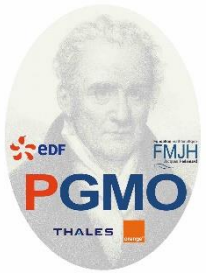


- Combining Optimization and Stochastic Algorithms for large scale Learning. (COSAL)
  - GADAT Sébastien, Toulouse School of Economics
  - with J. Bolte, G. Fort, I. Gavra, A. Iouditsky, F. Panloup, M. Rousset, S. Saadane, P.A. Zitt
  - TSE-R (Toulouse 1 Capitole) / Institut de Mathématiques de Toulouse (Toulouse 3 Paul Sabatier) / Laboratoire Angevin de Recherche en Mathématiques (Angers) / Laboratoire d'Analyse et de Mathématiques Appliquées (Paris Est) / IRMAR Aspi (Inria Rennes) / Laboratoire Jean Kuntzmann (Grenobles Alpes)

- Optimization and analysis of heavily congested networks (HEAVY.NET)
  - MERTIKOPOULOS Panayotis Laboratoire d'Informatique de Grenoble,
  - With Roberto Cominetti and Marco Scarsini,
  - Adolfo Ibáñez, Chile; LUISS university of Rome

- Variational and PDE methods in Mean Field Games (VarPDEMFG),
  - Tonon Daniela CEREMADE Dauphine,
  - with Cardaliaguet, Hadikanloo, Ziliotto, Santanbrogio, Lavenant, Dweik, Mazanti, Silva, Blanchet, Jimenez, Gangbo, Meszaros, Cirant, Carlini
  - CEREMADE Dauphine, LSO Orsay, XLIM-DMI Limoges, LMBA Brest, TSE Toulouse, UCLA Los Angeles, Università di Padoue et Rome
  - Supported by LABEX Hadamard

Large scale optimization



- Multi-level Methods in Constrained Optimization,
  - KOCVARA Michal School of Mathematics, University of Birmingham;
  - with Serge Gratton, Nicholas I.M. Gould, Alexander Brune
  - School of Mathematics, University of Birmingham; 2. University of Toulouse, INPT-IRIT; 3. Rutherford Appleton Laboratory, UK

Optimal control and verification of dynamical systems

- Optimal control of partial differential equations
  - Kroener Axel CMAP, Ecole polytechnique;
  - With J. F. Bonnans, M.D. Chekroun, H. Liu –
  - Institut f. Mathematik, HU Berlin; Dep. of Mathematics, Virginia Tech; Dep. Atmosph. & Oceanic Sc., UCLA,
  - Supported by LABEX Hadamard.

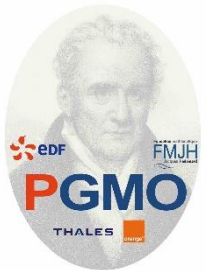
- Algebro-geometric techniques with applications to global optimal control for Magnetic Resonance Imaging
  - COTS Olivier, IRIT Toulouse
  - with Bonnard, Bernard; Gergaud, Joseph; Nolot Alice; Rouot, Jérémy; Verron, Thibaut –
  - IMB (Bourgogne), IRIT (Toulouse), LAAS-CNRS (Toulouse)

- Robust optimization for control
  - NOLL Dominikus,
  - with P. Apkarian, P. Mercorelli, J. Oberrath, L. ravanbod, R. de Aguiar, H.T. Nguyen
  - Institut de Mathématiques de Toulouse, ONERA Toulouse, Universität Lüneburg (Allemagne),

- Feasible and Optimal Semi-Definite Programs for Piecewise Affine Systems Verification,
  - ADJE Assalé, LAMPS,
  - With Pierre-Loïc Garoche; Guillaume Davy; Raphaël Cohen; Paul Rouse
  - LAMPS (Perpignan); ONERA

- Global Algebraic Shooting Method in Optimal Control and Applications
  - SAFEY EL DIN Mohab, LIP6
  - With Berthomieu, Cerf, Faugère, Trélat, Tsigaridas
  - Laboratoire d'Informatique de Paris 6 , Laboratoire Jacques Louis Lions (paris 6) , Univ. Waterloo (Canada)

Optimization of stochastic systems



- Optimisation et Comparaison Stochastique (OCS)
  - Fourneau Jean-Michel, (UVSQ-SACLAY),
  - with Nihal Pekergin, Yann Strozecki, David Auger, Thierry Mautor, Pierre Coucheney, Farah Ait Salaht
  - DAVID (UVSQ-SACLAY), LACL (UPEC), LIP6 (UPMC)
  - Supported by LABEX Hadamard.
- Bornes et Bid Prices dans le But d'Economiser Energie (BOBIBEE)
  - CASTEL-TALEB Hind, SAMOVAR LIP6,
  - with Emmanuel Hyon

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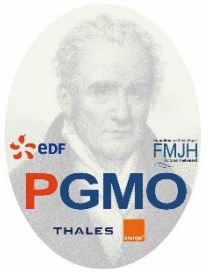
On line and dynamic optimization



- On-line algorithms with random order,
  - MATHIEU Claire , ENS
  - with Christoph Dürr, Chien-Chung Huang, Nguyen Kim Thang, Neal Young
  - DIENS (École normale supérieure), LIP6 (Université Pierre et Marie Curie), and IBISC (Université Évry Val d'Essonne)
  - Supported by LABEX Hadamard
- Bijective and stochastic dominance in online computation,
  - ANGELOPOULOS Spyros , LIP6
  - with Christoph Dürr, Pascal Schweitzer, and Marc Renault
  - LIP6, Paris 6; Informatik 7, RWTH Aachen; Dept of CS, U Wisconsin
- Stability versus Optimality in Optimization over Time
  - ESCOFFIER Bruno, LIP6
  - with Bampis, Giannakos, Lampis, Monnot, Paschos
  - LIP6 (UPMC) and Lamsade (Universite Paris Dauphine)

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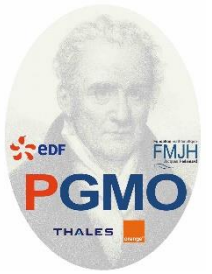
Black box optimization



- Self-Adjusting Parameter Choices in Heuristic Optimization (SAPCHO)
  - Doerr Carola , LIP6
  - With Benjamin Doerr, Timo KÖtzing, Johannes Lengler, Régis Makhmara, Pietro S. Oliveto, Carsten Witt, Jing Yang Heuristic
  - LIP6, LIX, HPI Potsdam, ETH Zurich, University of Sheffield, Technical University of Denmark
  - Supported by LABEX Hadamard
- AESOP: Algorithms for Expensive Simulation-Based Optimization Problems
  - Brockhoff Dimo, INRIA and CMAP
  - With A. Auger, N. Hansen, D. Gaudrie, R. Le Riche, V. Picheny, S. Da Veiga, T. Tušar, T.Glasmachers, G. Rudolph
  - RandOpt team CMAP and Inria Saclay, Ecole de Mines St. Etienne, INRA Toulouse, Safran Tech, Jožef Stefan Institute (SL), RU Bochum & TU Dortmund (DE)
  - Supported by LABEX Hadamard

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