CURRICULUM VITÆ

Michel De Lara
École des Ponts ParisTech, France

April 28, 2025

Michel De Lara is a French applied mathematician, trained in stochastic processes and in control theory. After graduating as an engineer at École Polytechnique and at École nationale des ponts et chaussées (ENPC), he took a research position there. He started his career in the environment research center of ENPC, while working part time at the French ministry of the Environment. He is now in position at the mathematics research center, CERMICS, where he belongs to the Optimization team. There, he addresses both theoretical questions as well as different applications of mathematics, and publishes papers in such diverse fields as biology, economics, energy and mathematics.

Michel De Lara has headed national and international programs and managed scientific networks, made up of biologists, economists and mathematicians addressing quantitative methods in sustainable management. He was member of the Economic Council for Sustainable Development, at the invitation of the French Ministry of Sustainable Development, president of the scientific committee of the Excellence Laboratory Labex Corail, and member of the scientific committee of the Institute INERIS. He was President of the committee of experts in charge of the evaluation of the Laboratoire de Mathématiques Bretagne Atlantique, at the invitation of the French Haut Conseil de l'évaluation de la recherche et de l'enseignement supérieur (HCÉRES). He is associate editor of the journal *Environmental Modeling and Assessment* and member of the scientific committees of the Gaspard Monge Program for Optimization (PGMO).

In his current research, Michel De Lara addresses the handling of information in game theory and in causality, generalized convexity for sparse optimization, and decomposition-coordination methods in multistage stochastic optimization. Regarding applications, aside biodiversity management, he is going on working with energy companies on the optimization of new energy systems.

Personal data

Date of Birth: April 10, 1961.

Academic Affiliation: CERMICS (Mathematics and scientific computing teaching and research centre), École nationale des ponts et chaussées, IP Paris, 6 et 8 avenue Blaise Pascal, Cité Descartes, 77455 Marne la Vallée Cedex 2, France

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Current job: Professor and scientific investigator (Ingénieur général des ponts, des eaux et des forêts), member of the *Optimization and Systems* team at CERMICS.

Graduate Education

- ❦ *Habilitation à diriger des recherches en mathématiques*, university Paris-Sud, France, 2000.

- ❦ *PhD, Mathematics, Control Theory*, École nationale supérieure des mines de Paris, France, 1991.

- ❦ Engineer *École nationale des ponts et chaussées*, France, 1987.

- ❦ Engineer *École polytechnique*, France, 1984.

Professional activity

- ✓ Professor and scientific investigator, CERMICS, applied mathematics research center, 2000-present.

- ✓ Part time at *Institute for energy transition* EFFICACITY, 2014-2018.

- ✓ Part time at French Ministry of Environment (prospective and stategy), 1994-2000.

- ✓ Professor and scientific investigator, CEREVE, environmental research center of *École nationale des ponts et chaussées* (deputy-director 1991-1993), 1987-2000.

Awards, fellowships and external recognition

- ❦ 2018 Award by *Ecological Society of America* for Innovation in Sustainability Science for the article *To what extent should ecosystem services motivate protecting biodiversity?* (Dee, Laura; De Lara, Michel; Costello, Chris; Gaines, Steve), published in Ecology Letters (2017).

◈ Associate Editor of the journal *Environmental Modeling & Assessment* (*Springer*), 2007-present.

◈ Member of the scientific committee of INERIS, *Institut national de l'environnement industriel et des risques*, 2014-2020.

◈ Member of the scientific committee of *Institute for energy transition* EFFICACITY, 2014-2017; member of the scientific coordination committee of *Institute for energy transition* EFFICACITY, 2018-present.

◈ President of the scientific committee of the Labex CORAIL, Excellence Laboratory *Coral reefs facing planetary global change*, 2012-2019.

◈ Member of the scientific committee of the *Gaspard Monge Program for Optimization and operations research* (PGMO), Électricité de France (EDF) and the Jacques Hadamard Mathematical Foundation (FMJH), 2012-present.

◈ Member of the *French Economic Council for Sustainable Development*, 2008-2016.

Organisation of workshops and schools

◈ CIRM-Interface 2019 Winter Course *Stochastic Optimization for Large-Scale Systems*, 4 – 8 November 2019, Marseille, France (with Pierre Carpentier, Jean-Philippe Chancelier and Vincent Leclère)

◈ BIRS-CMO workshop *Multi-Stage Stochastic Optimization for Clean Energy Transition*, 22 – 27 September 2019, Casa Matemática Oaxaca, Mexico (with Onésimo Hernández-Lerma, Alejandro Jofre and Riadh Zorgati)

◈ Week SESO 2018 *Smart Energy and Stochastic Optimization*, 22 – 25 May 2018, ENSTA ParisTech and École des Ponts ParisTech, France (with Pierre Carpentier, Jean-Philippe Chancelier and Vincent Leclère)

◈ Week SESO 2017 *Smart Energy and Stochastic Optimization*, 29 mai – 2 June 2017, ENSTA ParisTech and École des Ponts ParisTech, France (with Pierre Carpentier, Jean-Philippe Chancelier and Vincent Leclère)

◈ Winter school SESO 2016, *Numerical Methods for Multistage Stochastic Optimization: Application to Energy Storage Management*, 2–7 November 2016, ENSTA ParisTech and École des Ponts ParisTech, France (with Pierre Carpentier, Jean-Philippe Chancelier and Vincent Leclère)

◈ Week SESO 2016 *Smart Energy and Stochastic Optimization*, 30 mai – 3 June 2016, ENSTA ParisTech and École des Ponts ParisTech, France (with Pierre Carpentier and Jean-Philippe Chancelier)

- ☘ Week SESO 2015 *Smart Energy and Stochastic Optimization*, 22–26 June 2015, ENSTA ParisTech and École des Ponts ParisTech, France (with Pierre Carpentier and Jean-Philippe Chancelier)

- ☘ Week SESO 2014 *Smart Energy and Stochastic Optimization*, 23–27 June 2014, ENSTA ParisTech and École des Ponts ParisTech, France (with Pierre Carpentier and Jean-Philippe Chancelier)

- ☘ CIRM school on *Stochastic Control for the Management of Renewable Energies*, 8–12 April 2013, Marseille, France (with Pierre Carpentier and Jean-Philippe Chancelier)

- ☘ Institut Henri Poincaré (IHP) thematic quarter *Mathematics of Bio-Economics*, 7 January – 5 April 2013, Paris, France (with Luc Doyen)

- ☘ CEA-EDF-INRIA Summer school *Stochastic Optimization*, 25 June – 6 July 2012, Cadarache, France (with Stéphane Gaubert)

Funded research projects (companies)

- ✓ Natixis [2025–].

- ✓ RTE (Réseau de transport d'électricité) [2021–].

- ✓ Pers-ee (Smart energy solutions) [2021–].

- ✓ TotalEnergies [2019–2021].

- ✓ Efficacity-Schneider [2019–2021].

- ✓ Sun'R Smart Energy SAS [2013–2016].

- ✓ Conseil Français de l'Energie (member of the World Energy Council) [2012–2014].

- ✓ SETEC Energy Solutions [2012].

- ✓ Électricité de France [2005–2008].

Funded research projects (public)

- ✓ Participation to (and national correspondent) of the project *Modeling, optimization and viability for epidemics control (MOVECO)*, supported by the regional cooperation program MATH-AmSud (CNRS, INRIA, French Foreign Affairs) between Colombia, Chile and France [2018–2019].

✓ In charge of the project *Optimization, games and renewable energy (OGRE)*, with Gaspard Monge Program for Optimization and operations research (PGMO) [2016–2018].

✓ In charge of the project *Softwares for the optimization of smart grids*, with Gaspard Monge Program for Optimization and operations research (PGMO) [2015–2016].

✓ Participation to the project *Riskergy: Forward-looking credit rating of sovereign risks integrating energy resilience as a key factor*, FUI (fonds unique interministériel) [2013–2016].

✓ In charge of the project *Scientific network on stochastic and robust optimization and applications (STORY)*, with Gaspard Monge Program for Optimization and operations research (PGMO) [2014–2015].

✓ In charge of the project *Centralized versus decentralized energy management in a stochastic setting*, with Gaspard Monge Program for Optimization and operations research (PGMO) [2014–2015].

✓ In charge of the project *Optimization and viability models in ecology and economics (ECOPTIM)*, with the Program PEERS 2012 of AIRD [2013–2015].

✓ In charge of the project *Latin America stochastic optimization network (LASON)*, with Gaspard Monge Program for Optimization and operations research (PGMO) [2013–2014].

✓ In charge of the project *Website for electronic courses on stochastic optimization (POCEOS)*, with Gaspard Monge Program for Optimization and operations research (PGMO) [2012–2013].

✓ Participation to the project *Modeling for scenarios and sustainable management of biodiversity, farming and forestry facing climate change (MOBILIS)*, Muséum d'histoire naturelle (responsible Luc Doyen), with Fondation pour la Recherche sur la Biodiversité and GDF-SUEZ [2011–2014].

✓ In charge of the action *Optimization and viability in mine exploitation*, supported by the regional cooperation program STIC-AmSud (CNRS, INRIA, French Foreign Affairs) between Peru, Chile and France [2011–2012].

✓ In charge of the action *Optimization and viability in mine exploitation*, supported by the regional cooperation program STIC-AmSud (CNRS, INRIA, French Foreign Affairs) between Peru, Chile and France [2011–2012].

✓ Participation to the project *The economics and psychology of risk taking, impatience and financial decisions: confronting survey, experimental and insurance data*, Paris School of Economics (responsible Jean-Marc Tallon), with AXA Research Fund, [2009-2011].

✓ In charge of the action *Viable control of discrete time systems and applications* supported by the program ECOS between Chile and France [2008–2010].

✓ In charge of the French pluridisciplinary thematic network (réseau thématique pluridisciplinaire CNRS) *Mathématiques et décision pour le développement durable* supported by the Centre national de la recherche scientifique (CNRS) [2008–2009].

✓ In charge of the action *Mathematics, informatics and fisheries management (MIFIMA)* supported by the regional cooperation program STIC-AmSud (CNRS, INRIA, French Foreign Affairs) between Peru, Chile and France [2006–2009].

✓ Participation to the French ANR blanche *RiskAttitude* [2005–2008].

✓ Participation to the French action *Marine reserves / Models for a sustainable management of biodiversity under uncertainty and global dynamics* supported by the Institut français de la biodiversité [2005–2007].

✓ Participation to the French action concertée incitative du ministère de la Recherche *Interprétation économique du développement durable. Invariance et préférences environnementales* [2005–2008].

Books (from 2004)

📖 J. Boutang and M. De Lara. *Les Biais de l'esprit. Comment l'évolution a forgé notre psychologie.* Odile Jacob, 2019.

📖 J. Boutang and M. De Lara. *The Biased Mind. How Evolution Shaped our Psychology, Including Anecdotes and Tips for Making Sound Decisions.* Springer-Verlag, Berlin, 2015.

📖 Pierre Carpentier, Jean-Philippe Chancelier, Guy Cohen and Michel De Lara. *Stochastic Multi-Stage Optimization. At the Crossroads between Discrete Time Stochastic Control and Stochastic Programming.* Springer-Verlag, Berlin, 2015.

📖 Brigitte d'Andréa-Novel and Michel De Lara. *Control Theory for Engineers. A primer.* Springer-Verlag, Berlin, 2013.

📖 Michel De Lara and Luc Doyen. *Sustainable Management of Natural Resources. Mathematical Models and Methods.* Springer-Verlag, Berlin, 2008.

Articles (from 2004)

2025

Jean-Philippe Chancelier, Michel De Lara, *A Unified View of Polarity for Functions.* In Journal of Convex Analysis, accepted for publication, Volume 32, 2025.

2024

Seta Rakotomandimby, Jean-Philippe Chancelier, Michel De Lara, Mathieu Blondel. *Learning with Fitzpatrick Losses.* In Neurips 2024.

Jean-Philippe Chancelier, Michel De Lara, Pierre Carpentier, Cyrille Vessaire, Alejandro Rodríguez-Martínez. *Complexity Bounds for Deterministic Partially Observed Markov Decision Processes.* In Annals of Operations Research, accepted for publication, 2024.

Tristan Rigaut, Pierre Carpentier, Jean-Philippe Chancelier, Michel De Lara. *Decomposition Methods for Monotone Two-Time-Scale Stochastic Optimization Problems.* In Computational Management Science, Volume 21, Number 28, 2024.

Pierre Carpentier, Jean-Philippe Chancelier, Michel De Lara, *Time Consistency for Multistage Stochastic Optimization Problems under Constraints in Expectation.* In SIAM Journal on Optimization, accepted for publication, 2024.

François Pacaud, Pierre Carpentier, Jean-Philippe Chancelier, Michel De Lara. *Optimization of a domestic microgrid equipped with solar panel and battery: Model Predictive Control and Stochastic Dual Dynamic Programming approaches.* In Energy Systems, Volume 15, Pages 115–139, 2024.

2023

Vincent Martinet, Pedro Gajardo, Michel De Lara, *Bargaining On Monotonic Social Choice Environments.* In Theory and Decision, accepted for publication, 2023.

Michel De Lara, *Duality Between Lagrangians and Rockafellians.* In Journal of Convex Analysis, accepted for publication, 2023.

Pierre Carpentier, Jean-Philippe Chancelier, Michel De Lara, Thomas Martin, Tristan Rigaut. *Time Block Decomposition of Multistage Stochastic Optimization Problems.* In Journal of Convex Analysis, accepted for publication, 2023.

Adrien Le Franc, Pierre Carpentier, Jean-Philippe Chancelier, Michel De Lara. *EMSx: A Numerical Benchmark for Energy Management Systems.* In Energy Systems, Volume 14, Pages 817–843, 2023.

2022

Adrien Le Franc, Jean-Philippe Chancelier, Michel De Lara. *The Capra-subdifferential of the ℓ_0 pseudonorm.* In Optimization, Volume 73, Number 4, Pages 1229–1251, 2023.

Cyrille Vessaire, Jean-Philippe Chancelier, Michel de Lara, Pierre Carpentier, Alejandro Rodríguez-Martínez, Anna Robert, *Multistage Optimization of a Petroleum Production System with Material Balance Model.* In Computers and Chemical Engineering, Volume 167, Pages 108005, November 2022.

Jean-Philippe Chancelier, Michel De Lara, *Orthant-Strictly Monotonic Norms, Generalized Top-k and k-Support Norms and the ℓ_0 Pseudonorm.* In Journal of Convex Analysis, accepted for publication, 2022.

Benjamin Heymann, Michel De Lara, Jean-Philippe Chancelier. *Kuhn's Equivalence Theorem for Games in Product Form.* In Games and Economic Behavior, Volume 135, Pages 220-240, September 2022.

Michel De Lara, Jean-Baptiste Hiriart-Urruty. *A Fresh Geometrical Look at the General S-Procedure.* In Optimization Letters, Volume 16, No. 4, pp 1129–1135, May, 2022.

François Pacaud, Pierre Carpentier, Jean-Philippe Chancelier, Michel De Lara. *Distributed Multistage Optimization of Large-Scale Microgrids under Stochasticity.* In IEEE Transactions on Power Systems, Volume 37, No. 1, pp 204–211, 2022.

Jean-Philippe Chancelier, Michel De Lara. *Constant Along Primal Rays Conjugacies and the ℓ_0 Pseudonorm.* In Optimization, Volume 71, No. 2, pp 355–386, 2022.

Jean-Philippe Chancelier, Michel De Lara. *Capra-Convexity, Convex Factorization and Variational Formulations for the ℓ_0 Pseudonorm.* In Set-Valued and Variational Analysis, Volume 30, pp 597–619, 2022.

Jean-Philippe Chancelier, Michel De Lara, Benoît Tran. *Minimization Interchange Theorem on Posets.* In Journal of Mathematical Analysis and Applications, Volume 509, No. 1, 2022.

2021

Jean-Philippe Chancelier, Michel De Lara. *Hidden Convexity in the ℓ_0 Pseudonorm.* In Journal of Convex Analysis, Volume 28, No. 1, pp 203–236, 2021.

2020

M. De Lara, P. Gajardo, D. Vicencio. *Comparison Theorem for Viability Kernels via Conic Preorders.* In Systems and Control Letters, Volume 145, November 2020.

Pierre Carpentier, Jean-Philippe Chancelier, Michel De Lara, François Pacaud. *Mixed Spatial and Temporal Decompositions for Large-Scale Multistage Stochastic Optimization Problems.* In Journal of Optimization Theory and Applications, Volume 186, Number 3, September 2020.

Henri Gérard, Michel De Lara, Jean-Philippe Chancelier. *Equivalence Between Time Consistency and Nested Formula.* In Annals of Operations Research, Volume 292, pp 627–647, 2020.

Michel De Lara, Olivier Gossner. *Payoffs-Beliefs Duality and the Value of Information.* In SIAM Journal on Optimization, Volume 30, Issue 1, pp 464–489, 2020.

2019

Martin Quaas, Stefan Baumgaertner, Michel De Lara. *Insurance Value of Natural Capital.* In Ecological Economics, Volume 165, pp 106388, November 2019.

Lilian Sofia Sepulveda Salcedo, Michel De Lara. *Robust Viability Analysis of a Controlled Epidemiological Model.* In Theoretical Population Biology, Volume 126, pp 51–58, April 2019.

Jean-Philippe Chancelier, Michel De Lara. *Fenchel-Moreau Conjugation Inequalities with Three Couplings and Application to the Stochastic Bellman Equation.* In Journal of Convex Analysis, Volume 26, pp 945–966, 2019.

Tristan Rigaut, Pierre Carpentier, Jean-Philippe Chancelier, Michel De Lara, Julien Waeytens. *Stochastic Optimization of Braking Energy Storage and Ventilation in a Subway Station.* In IEEE Transactions on Power Systems, Volume 34, Issue 2, pp 1256–1263, March 2019.

2018

Michel De Lara. *A Mathematical Framework for Resilience: Dynamics, Uncertainties, Strategies and Recovery Regimes.* In Environmental Modeling & Assessment, Volume 23, Issue 6, pp 703–712, December 2018.

2017

Laura E. Dee, Michel De Lara, Christopher Costello, Steven D. Gaines. *To what extent can ecosystem services motivate protecting biodiversity?*. In Ecology Letters, Volume 20, Issue 8, pp 935–946, 2017.

[2018 Award by Ecological Society of America for *Innovation in Sustainability Science*]

Jean-Christophe Alais, Pierre Carpentier, Michel De Lara. *Multi-usage hydropower single dam management: chance-constrained optimization and stochastic viability*. In Energy Systems, Volume 8, Issue 1, pp 7–30, February 2017.

2016

Michel De Lara, Lilian Sofia Sepulveda Salcedo. *Viable Control of an Epidemiological Model*. In Mathematical Biosciences, Volume 280, pp 24–37, 2016.

Vincent Martinet, Julio Peña-Torres, Michel De Lara, Hector Ramirez Cabrera. *Risk and Sustainability: Assessing Fishery Management Strategies*. In Environmental and Resource Economics, Volume 64, Issue 4, pp 683–707, August 2016.

Michel De Lara, Vincent Leclère. *Building Up Time-Consistency for Risk Measures and Dynamic Optimization*. In European Journal of Operations Research, Volume 249, Issue 1, pp 177–187, 2016.

2015

Esther Regnier, Michel De Lara. *Robust Viable Analysis of a Harvested Ecosystem Model*. In Environmental Modeling & Assessment, Volume 20, Issue 6, pp 687–698, 2015.

Michel De Lara, Vincent Martinet, Luc Doyen. *Satisficing Versus Optimality: Criteria for Sustainability*. In Bulletin of Mathematical Biology, Volume 77, Issue 2, pp 281–297, February 2015.

2013

Michel De Lara, André de Palma, Moez Kilani and Serge Piperno. *Congestion pricing and long term urban form: Application to Paris region*. In Regional Science and Urban Economics, Volume 43, Number 2, pp 282–295, 2013.

2012

P. Carpentier, J.-P. Chancelier, G. Cohen, M. De Lara and P. Girardeau. *Dynamic Consistency for Stochastic Optimal Control Problems.* In Annals of Operations Research Volume 200, Issue 1, pp 247–263, 2012.

Michel De Lara, Eladio Ocana Anaya, Ricardo Oliveros–Ramos, Jorge Tam. *Ecosystem Viable Yields.* In Environmental Modeling & Assessment, Volume 17, Issue 6, pp 565–575, 2012.

Babacar Seck, Laetitia Andrieu, Michel De Lara. *Parametric multi-attribute utility functions for optimal profit under risk constraints.* In Theory and Decision, Volume 72, Number 2, pp 257–271, February 2012.

2011

André de Palma, Moez Kilani, Michel De Lara, and Serge Piperno. *Cordon pricing in the monocentric city model: theory and application to Paris region.* In Louvain Economic Review, Volume 77 (2-3), pp 105–124, 2011.

M. De Lara, P. Gajardo, H. Ramirez. *Viable states for monotone harvest models.* In Systems and Control Letters, Volume 60, pp 192–197, 2011.

2010

L. Doyen, M. De Lara. *Stochastic viability and dynamic programming.* In Systems and Control Letters, Volume 59, Number 10, pp 629–634, 2010.

2009

Laetitia Andrieu, Michel De Lara, Babacar Seck. *Taking Risk into Account in Electricity Portfolio Management.* In Steffen Rebennack, Panos M. Pardalos, Mario V.F. Pereira, Niko A. Iliadis, editors, Handbook of Power Systems 1, Series: Energy Systems. Springer Verlag, 2009.

M. De Lara and L. Gilotte. *Precautionary effect and variations of the value of information.* In Jerzy Filar and Alain Haurie, editors, Uncertainty and Environmental Decision Making, International Series in Operations Research and Management Science, Springer Verlag, Volume 138, pp 239–253, 2009.

M. De Lara and V. Martinet. *Multi-criteria dynamic decision under uncertainty: A stochastic viability analysis and an application to sustainable fishery management.* In Mathematical Biosciences, Volume 217, Issue 2, pp 118–124, February 2009.

P. Carpentier, J.-P. Chancelier, M. De Lara. *Approximations of stochastic optimization problems subject to measurability constraints.* In SIAM Journal on Optimization, Volume 19, Issue 4, pp 1719–1734, 2009.

J.-P. Chancelier, M. De Lara, and A. de Palma. *Risk aversion in expected intertemporal discounted utilities bandit problems.* In Theory and Decision, Volume 67, Issue 4, pp 433–440, 2009.

2007

Luc Doyen, Michel De Lara, Jocelyne Ferraris, and Dominique Pelletier. *Sustainability of exploited marine ecosystems through protected areas: a viability model and a coral reef case study.* In Ecological Modelling, Volume 208(2-4), pp 353–366, November 2007.

M. De Lara, L. Gilotte. *A tight sufficient condition for Radner-Stiglitz nonconcavity in the value of information.* In Journal of Economic Theory, Volume 137(1), pp 696–708, 2007.

Michel De Lara, Luc Doyen, Thérèse Guilbaud, and Marie-Joëlle Rochet. *Is a management framework based on spawning-stock biomass indicators sustainable? A viability approach.* In ICES Journal of Marine Science, Volume 64(4), pp 761–767, 2007.

M. De Lara, L. Doyen, T. Guilbaud, M.-J. Rochet. *Monotonicity properties for the viable control of discrete time systems.* In Systems and Control Letters, Volume 56, Number 4, pp 296–302, 2007.

2006

J.-P. Chancelier, M. De Lara, A. de Palma. *Risk aversion, road choice and the one-armed bandit problem.* In Transportation Science, 2006 Volume 41, Number 1, Pages 1-14, February 2007.

M. De Lara. *Mum, why do you keep on growing? Impacts of environmental variability on optimal growth and reproduction allocation strategies.* In Journal of Mathematical Biology, Volume 52, Number 5, Pages 633-666, May 2006.

M. De Lara. *On drift, diffusion and geometry.* In Journal of Geometry and Physics, Volume 56, Issue 8, Pages 1215-1234, August 2006.

K. Barty, P. Carpentier, J.-P. Chancelier, G. Cohen, M. De Lara and T. Guilbaud. *Dual effect free stochastic controls.* In Annals of Operations Research, Volume 142, Number 1, Pages 41 - 62, February 2006.

2005

G. Constantin de Magny, C. Paroissin, B. Cazelles, M. De Lara, J.-F. Delmas, J.-F. Guégan. *Modeling environmental impacts of plankton reservoirs on cholera population dynamics.* In ESAIM: Proceedings, Volume 14, September 2005.

2004

J.-O. Irisson, A. LeVan, M. De Lara, S. Planes. *Strategies and Trajectories of Coral Reef Fish Larvae Optimizing Self-recruitment.* In Journal of Theoretical Biology, Volume 227, Issue 2, Pages 205-218, 21 March 2004.

PhD students supervision (current)

Dynamic Programming and Decomposition Methods for Prospective Studies in Energy Systems, Camila Martínez Parra, (École nationale des ponts et chaussées, January 2023).

Algorithms in Generalized Convexity. Application to Sparse Optimization, Seta Rakotomandimby, (École nationale des ponts et chaussées, November 2023).

Post-doctoral students supervision (past)

Benjamin Heymann (2019).

Forward-looking credit rating of sovereign risks integrating energy resilience as a key factor, Adrien Nguyen (École nationale des ponts et chaussées, 2015).

Thérèse Guilbaud (École nationale des ponts et chaussées, 2007).

PhD students supervision (past)

Subdifferentiability in Convex and Stochastic Optimization Applied to Renewable Power Systems, Adrien Le Franc, (École nationale des ponts et chaussées, 2021).

Stochastic Optimization for the Procurement of Crude Oil in Refineries, Thomas Martin, (École nationale des ponts et chaussées, 2021).

Game Theory with Information. Games in Intrinsic Witsenhausen Form, Daniel Kadnikov (University Paris-Est, 2020).

Stochastic Optimization Problems: Decomposition and Coordination under Risk, Henri Gérard (University Paris-Est, 2018).

Decentralized Optimization Methods for Energy Efficiency Management under Stochasticity, *François Pacaud* (University Paris-Est, 2018).

Mathematical Viability Methods for Supervision and Control of Endemic Diseases of South-West Colombia, Lilian Sofia Sepulveda Salcedo (universidad Nacional de Colombia and University Paris-Est, 2015).

Contributions to Decomposition Methods in Stochastic Optimization, *Vincent Leclère* (University Paris-Est, 2014).

Interactions Between Aquaculture and Fisheries, and the Viability Approach to Risk Management in Harvested Ecosystems, Esther Régnier (University Paris 1, 2014).

Risk and Optimization for Energies Management, Jean-Christophe Alais (University Paris-Est, 2013).

From Risk Constraints in Stochastic Optimization to Utility Functions, Babacar Seck (École nationale des ponts et chaussées, 2008).

Uncertainty, Inertia and Optimal Decision. Optimal Control Models Applied to Greenhouse Gas Abatment Policies Selection, Laurent Gilotte (École nationale des ponts et chaussées, 2004).

Plenary and invited conferences

- Plenary speaker, *The Architecture of Green Energy Systems: The Underlying Problem and Its Challenges*, Institute for Mathematical and Statistical Innovation (IMSI), University of Chicago, USA, 17–21 June 2024

- Invited speaker, *Large-Scale Microgrids Optimal Management*, Care Network Symposium 2024, Pattaya, Thailand, 20-22 March 2024

- Plenary speaker, *Algorithms in Generalized Convexity*, XIV Brazilian Workshop on Continuous Optimization, Rio de Janeiro, Brazil, 4–9 March 2024

- Plenary speaker, *A Mathematical Perspective on Resilience and Sustainability in Climate and Biodiversity*, XVI International Conference on Stochastic Programming, UC Davis, USA, 24–28 July 2023

- Plenary speaker, *A Mathematical Perspective on Resilience and Sustainability in Climate and Biodiversity*, Mathematical Population Dynamics, Ecology and Evolution - MPDEE 2023, Mathématiques pour la Dynamique des population, l'Ecologie et l'Evolution, CIRM, Marseille, France, 24–28 April 2023

- ❦ Plenary speaker, *Design of Lower Bound Convex Programs for Exact Sparse Optimization*, Computational Management Science conference CMS 2019, University of Technology, Chemnitz, Germany, 27–29 March 2019

- ❦ Invited speaker, *Control Theory and Viability Methods for the Sustainable Management of Natural Resources*, Workshop on Applications in Natural Resource Mathematics (WANRM), University of Queensland, Brisbane, Australia, 3–5 October 2017

- ❦ Invited speaker, *Game Theory with Information: Introducing the Witsenhausen Intrinsic Model*, journées franco-chiliennes d'optimisation (JFCO 2017), Toulouse, France 5–7 juillet 2017

- ❦ Invited speaker, *Stochastic and decentralized optimization for smart grid energy management*, 9th Asian Conference on Fixed point theory and Optimization (ACFPTO 2016), Bangkok, Thailand, 18–20 May 2016

- ❦ Invited speaker, *Spatial Decomposition/Coordination Methods for Stochastic Optimal Control Problems*, Center for Mathematical Modeling (CMM) workshop Optimization meets General equilibrium theory, dynamic contract and finance, Santiago de Chile, Chile, 11–12 and 15–16 December 2014

- ❦ Invited speaker, *Decomposition/coordination methods for stochastic optimal control problems: Practical aspects and theoretical questions*, Banff International Research Station (BIRS) workshop on Optimal Cooperation, Communication, and Learning in Decentralized Systems, Banff, Canada, 12–17 October 2014

- ❦ Invited speaker, *Control Theory and Viability Methods for Sustainable Management of Natural Resources*, workshop on Biodiversity and Environment: Viability and Dynamic Games Perspectives, Montreal, Canada, 4–8 November 2013

- ❦ Semi-plenary speaker, *Smart power systems, renewable energies and markets: The optimization challenge*, Fourth International Conference on Continuous Optimization (IC-COPT 2013), Lisbon, Portugal, 27 July – 1 August 2013

- ❦ Invited speaker, *Information constraints and discretization puzzles in stochastic optimal control*, International Conference on Stochastic Programming (ICSP 2013), SP XIII, Bergamo, Italy, 8–12 July 2013

- ❦ Invited speaker, *Control Theory and Viability Methods for Sustainable Management of Natural Resources*, Colloque National sur l'Assimilation de Données, Nice, France, 17–19 décembre 2012

- ❦ Invited speaker, *Control Theory and Viability Methods for Sustainable Management of Natural Resources*, école CEA-INRIA-EDF "Risque systémique et mesures de risque", Rocquencourt, France, 15–17 octobre 2012

- Invited speaker, *Smart grids and renewable energies: the optimization challenge*, The Royal Golden Jubilee Ph.D. Congress XIII, Pattaya, Thailand, 6–8 April 2012

- Invited speaker, *Control Theory and Viability Methods for Sustainable Management of Natural Resources*, Latin American Workshop on Optimization and Control (LAWOC), Universidad Técnica Federico Santa María - Valparaiso - Chile, 10–13 January 2012

- Invited speaker, *Discrete-Time Viability Methods for Sustainable Management of Natural Resources*, International Conference on Applied Mathematics and Informatics, San Andres, Colombia, 2 November – 3 December 2010

- Invited speaker, *Programación dinámica para el problema de extracción de minas en tajo abierto*, 8^0 Conminería, 8th National Mining Congress, Trujillo, Perú, 19–22 October 2010

- Plenary speaker, *Théorie du contrôle et viabilité pour la gestion des ressources naturelles*, Institut Henri Poincaré, conférence annuelle du GDR MOA (Mathématiques de l'Optimisation et Applications), Paris, France, 18–20 octobre 2010

- Invited speaker, *Risque et durabilité : la viabilité est-elle si loin de l'optimalité ?*, colloque *Gérer le Changement Climatique* au *Collège de France*, organisé par le Pr Nicholas Stern et le Pr Roger Guesnerie, Paris, France, 7 juin 2010

- Plenary speaker, *Discrete-Time Viability Methods for Sustainable Management of Natural Resources*, VI Congreso Latinoamericano de Biología Matemática, Acapulco, Mexico, 16–20 novembre 2009

- Co-organizer of the symposium *Management tools for marine biodiversity* à la conférence internationale *Diversitas OSC2*, Cape Town, South Africa, 13–16 October 2009

- Plenary speaker, *Discrete-Time Viability Methods for Sustainable Management of Natural Resources*, XXIII Jornada de Matemática de la Zona Sur, Universidad de Magallanes, Chile, 29–30 de Abril de 2009