

CURRICULUM VITÆ

Michel DE LARA

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Afiliación académica

Investigador científico, CERMICS (Centre d'enseignement et de recherche en mathématiques et calcul scientifique), École des Ponts ParisTech, 6 et 8 avenue Blaise Pascal, 77455 Marne la Vallée Cedex 2, France

✉ delara@cermics.enpc.fr ☎ +33 1 64 15 36 21

Idiomas: Francés (lengua maternal), Inglés (hablado, leído y escrito), Español (hablado y leído)

Diplomes, formación y carrera

Michel De Lara estudió la carrera de Matemáticas Aplicadas, especializado en procesos estocásticos y en teoría del control, luego de graduarse como ingeniero de la *École Polytechnique* (X ParisTech, 1984) y de la *École nationale des ponts et chaussées* (Ponts ParisTech, 1987), donde está trabajando actualmente. Obtuvo un Ph.D. en Matemáticas en la *École nationale supérieure des mines de Paris* (Mines ParisTech, 1991), y una habilitación para dirigir investigaciones en la *université Paris-Sud* (2000).

El empezó su carrera en el Centro de Investigación Ambiental Cereve y a su vez trabajó en el Ministerio del Ambiente Francés. Actualmente trabaja en el Centro de Investigación Matemático, el Cermics, de la *École nationale des ponts et chaussées*.

Actividad científica

Michel De Lara trabaja sobre diferentes aplicaciones de las matemáticas. Publica artículos de investigación en diversos temas como biología, economía y matemáticas. En 2008, Michel De Lara ha sido invitado oficialmente por el Ministerio Francés de la Ecología, la Energía, el Desarrollo Sostenible y el Mar a ser miembro del *Consejo Económico para el Desarrollo Sostenible*. Además es editor asociado de *Journal of Environmental Modelling and Assessment*.

Michel De Lara tiene cuatro libros publicados con el editor científico Springer-Verlag. En 2008, ha publicado con Luc Doyen el libro *Sustainable Management of Natural Resources: Mathematical Models and Methods*. En 2013, ha publicado con Brigitte d'Andréa-Novel el libro *Control Theory for Engineers. A primer*. En 2015, ha publicado con Pierre Carpentier, Jean-Philippe Chancelier and Guy Cohen el libro *Stochastic Multi-Stage Optimization: At the Crossroads between Discrete Time Stochastic Control and Stochastic Programming*. En 2015, ha publicado con Jérôme Boutang el libro *The Biased Mind. How Evolution Shaped our Psychology. Including Anecdotes and Tips for Making Sound Decisions*. En 2019, ha publicado con Jérôme Boutang el libro *Les Biais de l'esprit. Comment l'évolution a forgé notre psychologie* con el editor Odile Jacob.

Michel De Lara ha sido director de programas de investigación nacionales e internacionales y ha coordinado redes de investigación compuestas por biólogos, economistas y matemáticos en métodos cuantitativos

aplicados a la gestión sostenible. El ha sido invitado repetidas veces a America Latina (Colombia, Perú, Chile, México, Argentina, etc.) para dar cursos y conferencias en español.

Michel De Lara queda activo sobre el desarrollo de métodos matemáticos para la gestión sostenible de la biodiversidad — pesca y epidemiología — particularmente sobre cómo tomar en consideración las incertidumbres en la toma de decisiones. Actualmente, particularmente estudia la gestión optimizada por las redes eléctricas en el contexto nuevo de transformación de los sistemas eléctricos en todas partes. En efecto, la penetración fuerte de las tecnologías de comunicación y de medida ("smart grid"), energías renovables, muy variables e intermitentes y espacialmente dispersas (viento, solar), y las numerosas limitaciones medioambientales (contaminación, usos del agua) conducen a una renovación de los métodos de diseño y de pilotaje de las redes. Michel De Lara pone el énfasis en la optimización estocástica para el manejo de micro-redes.

Libros (a partir de 2004)

- ☛ J. Boutang and M. De Lara. *Les Biases 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..* 2015. Springer-Verlag, Berlin, 2015.
- ☛ P. Carpentier, J.-P. Chancelier, G. Cohen, M. De Lara. *Stochastic Multi-Stage Optimization. At the Crossroads between Discrete Time Stochastic Control and Stochastic Programming*. Springer-Verlag, Berlin. 2015.
- ☛ M. De Lara, P. Carpentier, J.-P. Chancelier, V. Leclère. *Optimization Methods for the Smart Grid*, report commissioned by *Conseil Français de l'Energie*. October 2014.
- ☛ 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.

Publicaciones en revistas académicas (a partir de 2004)

2020

- ☛ Jean-Philippe Chancelier, Michel De Lara. *Constant Along Primal Rays Conjugacies and the l_0 Pseudonorm*. In *Optimization*, accepted for publication. *HAL arXiv*
- ☛ 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. *HAL arXiv*
- ☛ Jean-Philippe Chancelier, Michel De Lara. *Hidden Convexity in the l_0 Pseudonorm*. In *Journal of Convex Analysis*, accepted for publication. *HAL arXiv*

2019

- ☛ 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 *HAL arXiv*
- ☛ Martin Quaas, Stefan Baumgaertner, Michel De Lara. *Insurance Value of Natural Capital* In *Ecological Economics*, Volume 165, November 2019

- ✿ Henri Gérard, Michel De Lara, Jean-Philippe Chancelier. *Equivalence Between Time Consistency and Nested Formula* In *Annals of Operations Research*, accepted for publication. HAL arXiv
- ✿ 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 HAL arXiv
- ✿ 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*, accepted for publication. HAL arXiv
- ✿ 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 arXiv

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 HAL arXiv

2017

- ✿ Dee, Laura; De Lara, Michel; Costello, Chris; Gaines, Steve. *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 HAL

2016

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

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 HAL
- ✿ 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 HAL

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 *HAL arXiv*
- ✿ 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 *HAL arXiv*
- ✿ 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 *HAL arXiv*

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 *HAL arXiv*

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

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- ✿ 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.

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- ✿ 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.