

# Pierre L'Ecuyer

Curriculum Vitæ, February 9, 2024

## PERSONAL DATA

*Citizenship* : Canadian

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## EDUCATION

- 1981–83 Ph.D. in computer science, with operations research orientation (University of Montreal). Thesis title: “Processus de décision Markoviens à étapes discrètes: application à des problèmes de remplacement d'équipement.” Advisor: Alain Haurie. April 1983.
- 1978–80 M.Sc. in operations research (University of Montreal). December 1980.
- 1969–72 Bachelor degree in mathematics (University of Montreal). May 1972.

## PRIZES AND DISTINCTIONS

- Advances in Modeling and Simulation: Festschrift for Pierre L'Ecuyer, Springer Nature, Research-level book published in my honor by Springer Nature, Switzerland. Edited by Z. Botev, A. Keller, C. Lemieux, and B. Tuffin, August 2022.
- INFORMS Simulation Society Lifetime Professional Achievement Award. International award given once a year to “recognize major contributions to the field of simulation that are sustained over most of a professional career, with the critical consideration being the total impact of those contributions on computer simulation.” 2020.
- Computer Science Canada (CS-Can) Lifetime Achievement Award. “This award recognizes individuals who have made outstanding and sustained contributions to the field of computer science over their careers.” 2019.
- INFORMS Simulation Society Outstanding Research Publication Award. An international award given once a year for the best publication in simulation. 2018.
- ACM SIGSIM Distinguished Contributions Award. Award given once a year by the *Association for Computing Machinery, Special Interest Group on Simulation*, for exceptional contribution in career to the area of simulation. 2016
- Award of Merit from the Canadian Operational Research Society. Given once a year in recognition of significant contributions to the profession of operational research. 2014.
- Inria International Chair, at Inria–Rennes, France, for 2013–2018.
- INFORMS Simulation Society Distinguished Service Award. International Award given once a year for exceptional service to the simulation community, in career. 2011

- Canada Research Chair on “Stochastic Simulation and Optimization,” for the period 2011–2017.
- INFORMS Simulation Society Outstanding Research Publication Award. An international award given once a year for the best publication in simulation. 2009.
- Author of one of the “10 Landmark Papers that impacted the theory, education, and practice of simulation,” selected among the nearly 10,000 papers of the first 40 years of the Winter Simulation Conference, 2007.
- Fellow of the Michel Métivier Foundation, IRISA, France, 2007.
- Elected Fellow of the *Institute for Operations Research and the Management Sciences* (INFORMS) in 2006.
- Canada Research Chair on “Stochastic Simulation and Optimization,” for the period 2004–2010.
- Urgel-Archambault Prize, from the “Association francophone pour le savoir” (ACFAS), given for an “exceptional scientific contribution by a French Canadian to the areas of physics, mathematics, and engineering,” in 2002.
- Killam Research Fellowship, from the Canada Council for the Arts, 2001–2003.
- Jacob Wolfowitz Prize for Theoretical Advances in the Mathematical and Management Sciences, in 2000.
- INFORMS College on Simulation Outstanding Research Publication Award. An international award given once a year for best publication in simulation. 1999.
- E.W.R. Steacie Memorial Fellowship, from NSERC (Natural Sciences and Engineering Research Council), 1995–1997.
- Toshiba Chair at Waseda University, Tokyo, 1992.
- Selected for inclusion in *Who’s Who in Canada* each year since 1996.

## PROFESSIONAL EXPERIENCE

- 1990–... Professor in the “Département d’informatique et de recherche opérationnelle” (DIRO) at the University of Montreal. Full professor since June 1, 1992. Teaching: stochastic models, simulation, operations research.
- 1986–... Member of GERAD (Groupe d’études et de recherche en analyse des décisions), Montreal.
- 2006–... Member of CIRRELT (Centre Interuniversitaire de Recherche sur les Réseaux d’Entreprise, la Logistique et le Transport), Montreal.
- 2021 (Jan.–July 2021): Visiting Scholar, Google Research, Mountain View, California, USA.
- 2013–2014 (Nov.–Dec. 2013 and March–Jul. 2014): Visiting Researcher, International Chair, Inria–Rennes, France.
- 2014 (Jan.–Feb.): Invited Professor, University of New South Wales, Sydney, Australia.
- 2013 (Sept. 1–Oct. 1): Invited Professor, Université de Savoie, Chambéry, France.
- 2006–2007 (July–Oct. 2006 and Feb.–July 2007): Visiting researcher, IRISA–INRIA, Rennes, France.
- 1998 (Jan. 1 – July 20): Visiting professor, Department of Industrial Engineering, North Carolina State University, Raleigh, U.S.A.
- 1997 (Sept. 1 – Dec. 31): Guest professor, Institut für Mathematik, University of Salzburg, Austria.
- 1992 (Sept. 1 – Dec. 31): Visiting professor, under the Toshiba Chair, in the Graduate School of Science and Engineering at Waseda University, Tokyo, Japan.

- 1982–90 Professor in the Computer Science Department at Laval University, Ste-Foy, Quebec. Tenured from June 1, 1987. Teaching: Analysis of algorithms, computer simulation, statistics, mathematical programming and operations research. Assistant chairman and research coordinator from 1984 to 1988.
- 1988–89 Visiting professor at Stanford University, in the Operations Research department (5 months). Visitor at INRIA (Institut national de recherche en informatique et automatique), Rocquencourt (near Paris), France (3 months). Visiting professor at ENSM (École nationale supérieure de mécanique), Nantes, France (2 months).
- 1986 Graduate-level teaching at the “École Mohammedia d’ingénieurs” in Rabat, Morocco.
- 1980–82 Part-time research assistant with GERAD, at the “École des Hautes Études Commerciales” in Montreal.
- 1974–78 Teacher of mathematics at the CEGEP of Sept-Iles (Quebec). Coordinator of the department of sciences (1977–78). Member of the Quebec provincial coordination committee for the teaching of mathematics at the college level (1974–77).

## GENERAL AREAS OF EXPERTISE

Operations research; optimization; statistics; queueing systems; dynamic programming; stochastic modeling and computer simulation; random number generation; rare-event simulation; design and analysis of algorithms.

## CURRENT RESEARCH INTERESTS

Random number generators (design, theoretical analysis, implementation, and testing); Monte Carlo and quasi-Monte Carlo methods; discrete-event simulation; efficiency improvement in simulation; stochastic optimization of discrete-event systems through Monte Carlo methods; applications to management problems (decision making, performance evaluation and optimization) in various areas, including finance, communication systems, emergency systems, and telephone call centers.

## RESEARCH GRANTS

2019–22	Mitacs International Acceleration Grant, “Modélisation probabiliste des délais dans un système ferroviaire”. Collaboration with Société Nationale des Chemins de Fer français (SNCF).	120,000\$
2018–24	NSERC-Canada individual discovery grant, “Fundamental tools for stochastic simulation”.	64,000\$/year
2018–20	IVADO Fundamental Research Program, P. L’Ecuyer (resp.), L. Devroye, and S. Lacoste-Julien, “Monte Carlo and Quasi-Monte Carlo Methods for Optimization and Machine Learning”.	90,000\$/year
2018–19	Mitacs Acceleration Grant, “Modélisation et optimisation du remplacement préventif des composantes de terminaux de paiement”. Collaboration with Moneris.	60,000\$
2018–18	Mitacs International Acceleration Grant, “Amélioration d’un simulateur du système ferroviaire par la valorisation de données historiques réalisées”. In collaboration with Société Nationale des Chemins de Fer français (SNCF).	15,000\$
2011–17	Canada Research Chair, “Stochastic simulation and optimization”.	200,000\$/year

2013–18	NSERC-Canada individual discovery grant, “Modeling and simulation of stochastic systems”.	52,000\$/year
2015–15	Engage Grants Program (NSERC), “Planification des horaires des agents en fonction des prévisions des taux d’arrivées dans les centres d’appels”.	25,000\$
2014–15	Engage-Plus Grants Program (NSERC) and Advanced Micro Devices (AMD), “Random number generation facilities for OpenCL”.	25,000\$
2014–14	Engage Grants Program (NSERC), “Random number generation facilities for GPGPUs in OpenCL”.	25,000\$
2011	Infrastructure Grant from the Canadian Fund for Innovation and the Quebec Government, linked with the Canada Research Chair, “Computing facilities for the Canada Chair”.	152,908\$
2011–11	Engage Grants Program (NSERC), “Prévision de la demande et optimisation robuste de problèmes d’horaires stochastiques dans le commerce au détail”.	25,000\$
2011–14	NSERC Cooperative Research and Development Grant, P. L’Ecuyer (resp.), M. Gendreau, and L.-M. Rousseau, “Stochastic Modeling and Optimization for Call Center Management”.	100,000\$/year
2011–14	Hydro-Québec, P. L’Ecuyer (resp.), M. Gendreau, and L.-M. Rousseau, “Stochastic Modeling and Optimization for Call Center Management”.	75,000\$/year
2008–13	NSERC-Canada individual discovery grant “Simulation of stochastic systems”.	71,000\$/year
2008–11	NATEQ-Québec, team grant, P. L’Ecuyer (resp.), P. Marcotte, F. Bastin, and G. Savard, “Modélisation stochastique et optimisation pour la tarification des passagers en transport aérien et ferroviaire”.	52,920\$/year
2008–10	Équipe associée INRIA, B. Tuffin (resp.) and P. L’Ecuyer, “Monte Carlo and Quasi-Monte Carlo for rare event simulation”.	22,000 € /year
2006	FQRNT-Québec, collaboration with INRIA, Rennes.	3,272\$
2005–08	NSERC Cooperative Research and Development Grant, P. L’Ecuyer (resp.) and M. Gendreau, “Simulation and Optimization for Call Centers Management”.	75,000\$/year
2005–08	Laboratoires Universitaires Bell, P. L’Ecuyer and M. Gendreau. “Simulation et optimisation pour la gestion des centres d’appels”,	75,000\$/year
2005–08	NATEQ-Québec, team grant, A. Girard, P. L’Ecuyer, and B. Sansò (resp.), “Performance, Design et Fiabilité des Réseaux de Communications avec Différentiation de Services”.	70,550\$/year
2005–07	MITACS, P. Marcotte, G. Savard, P. L’Ecuyer, and C. K. Anderson, “Optimal Pricing via Mathematical and Bilevel Programming”,	117,000\$/year
2004	Infrastructure Grant from the Canadian Fund for Innovation, linked with the Canada Research Chair, “Computing facilities: cluster and workstations”.	242,757\$
2004–10	Canada Research Chair “Stochastic simulation and optimization”.	200,000\$/year
2003–08	NSERC-Canada individual discovery grant “Simulation of stochastic systems”.	71,000\$/year

2002–05	NATEQ-Québec team grant. Team: P. L’Ecuyer (resp.) and F. Vázquez-Abad. “Simulation des systèmes stochastiques”.	56,000\$/year
2002	NATEQ-Québec equipment grant. P. L’Ecuyer (resp.) and F. Vázquez-Abad.	12,000\$
2002	NSERC Cooperative Research and Development Grant, P. L’Ecuyer (resp.) and P. Hansen, “Modeling, simulation, and optimization of telephone call centers”.	30,000\$
2003–2005	same project (continuation)	95,000\$/year
2002	NSERC University/Industry, “Software tools for testing families of random number generators”.	30,000\$
2001	Alcatel Canada Inc., “Software for testing random number generators” (research contract).	30,000\$
2001–03	Killam Research Fellowship (part of salary + benefits): “Practical Tools for Random Number Generation and Quasi-Monte Carlo Simulation”.	72,107\$/year
2001–04	Laboratoires Universitaires Bell: “Gestion optimale d’un centre d’appels dans un environnement blend”, P. Hansen and P. L’Ecuyer.	80,000\$/year
1999–03	NSERC-Canada individual operating grant. “Simulation and Random Number Generators”.	57,750\$/year
1999–02	FCAR-Québec team grant. Team: P. L’Ecuyer (resp.) and F. Vázquez-Abad. “Simulation des systèmes stochastiques”.	31,500\$/year
1999	FCAR–Team (equipment).	10,000\$
1999	NSERC equipment grant. Team: P. L’Ecuyer (resp.), J. Ferland, P. Marcotte, B. Gendron, S. Nguyen, J.-Y. Potvin, F. Vázquez-Abad.	35,474\$
1995–99	NSERC-Canada individual operating grant. “Simulation et optimisation des systèmes stochastiques”.	50,000\$/year
1995–97	NSERC-Canada individual operating grant: supplement of individual grant for Steacie award.	59,500\$/year
1995–98	FCAR-Québec team grant. Team: P. L’Ecuyer (resp.), J. Ferland, G. Brassard and F. Vázquez-Abad. “Méthodes probabilistes en informatique”.	44,000\$/year
1995	FCAR–team (equipment).	9,500\$
1994–95	NSERC equipment grant. Team: J. Ferland (resp.), P. L’Ecuyer, P. Marcotte, P. Michelon, F. Vázquez-Abad.	86,280\$
1992–95	NSERC-Canada individual operating grant. “Simulation et optimisation des systèmes stochastiques”.	32,000\$/year
1993–94	FRSQ-Québec team grant. Team: C. Tilquin (resp.), J. Ferland, P. Michelon, B. Jaumard, C. Ribeiro, C. Sicotte, L. Lamothe, and P. L’Ecuyer. “Recherche Opérationnelle en Santé”.	87,930\$
1994–95	idem.	87,720\$
1992–95	FCAR-Québec team grant. Team: P. L’Ecuyer (resp.), J. Ferland, and G. Brassard. “Méthodes probabilistes en informatique”.	72,900\$/year
1992	FCAR–team (equipment).	11,000\$
1991–92	NSERC equipment grant: “Poste de travail UNIX”.	11,721\$

1990–91	Grant from CAFIR, (U. of Montreal): “Modèles stochastiques et simulation”.	6,500\$
1991	Grant from the Ministry of External Affairs and External Commerce of Canada: scientific cooperation with the IBM Tokyo Research Laboratory on random number generation.	4,000\$
1990–91	Grant from the University of Montreal: “Etude d’algorithmes de simulation”.	12,000\$
1989–92	NSERC-Canada individual operating grant. “Simulation et commande des systèmes stochastiques”.	19,500\$/year
1988–91	FCAR team grant. Team: P. L’Ecuyer (resp.) and Thien Vo-Dai. “Modélisation, simulation et optimisation des systèmes dynamiques stochastiques”.	23,200\$/year
1986–89	NSERC-Canada individual operating grant. “Optimisation des systèmes dynamiques stochastiques: application aux problèmes de maintenance et de production”.	13,500\$/year
1986–88	FCAR team grant. Team: P. L’Ecuyer (resp.) and Thien Vo-Dai. “Méthodes de recherche opérationnelle face aux problèmes de performance des systèmes informatiques”.	12,000\$/year
1987	Grant for a pedagogical innovation project (simulation software), Laval University.	4,800\$
1985–86	Research Grant from Laval University.	3,000\$
1983–86	NSERC-Canada individual operating grant. “Optimisation des systèmes dynamiques stochastiques: application aux problèmes de maintenance et de production”.	12,243\$/year
1985–86	FCAR team grant. Team: P. L’Ecuyer (resp.) and Thien Vo-Dai. “Méthodes de recherche opérationnelle face aux problèmes de performance des systèmes informatiques”.	13,404\$
1984–85	idem.	10,427\$
1984–85	NSERC-Canada research development grant.	13,000\$

## LIST OF SCIENTIFIC PUBLICATIONS

Google Scholar, November 6, 2023: 18,453 citations, H-index 71, I10-index 209.

### 1. Encyclopedia and book sections:

- [1] M. Thiongane, W. Chan, and P. L’Ecuyer, “Learning-Based Prediction of Conditional Waiting Time Distributions in Multiskill Call Centers,” in *Operations Research and Enterprise Systems*, G. H. Parlier, F. Liberatore, and M. Demange, eds, Springer International Publishing, 83–106, 2022.
- [2] P. L’Ecuyer, “Randomized Quasi-Monte Carlo”, a section of the *Wiley StatsRef: Statistics Reference Online*, Article 08240, John Wiley, Chichester, UK, 2020.
- [3] Z. I. Botev and P. L’Ecuyer, “Simulation from the Tail of the Univariate and Multivariate Normal Distribution,” Chapter 8 of *Systems Modeling: Methodologies and Tools, EIA/Springer Innovations in Communication and Computing*, A. Puliafito and K. Trivedi Eds, Springer, 2019, 115–132.
- [4] P. L’Ecuyer, “Random Number Generation and Quasi-Monte Carlo”, a section of the *Wiley StatsRef: Statistics Reference Online*, Article 04386, John Wiley, Chichester, UK, 2014, <http://onlinelibrary.wiley.com/book/10.1002/9781118445112.stat04386.pub2>

- [5] Z. I. Botev, D. P. Kroese, R. Y. Rubinstein, and P. L'Ecuyer, "The Cross-Entropy Method for Optimization," Chapter 3 of *Handbook of Statistics, Volume 31: Machine Learning*, V. Govindaraju and C. R. Rao, Eds, North Holland, 2013, 35–59.
- [6] P. L'Ecuyer, "Random Number Generators", in *Encyclopedia of Operations Research and Management Science*, Third Edition, S. I. Gass and M. C. Fu, eds., Springer-Verlag, 2013, Chapter 958, pages 1256–1263.
- [7] P. L'Ecuyer, "Random Number Generation", invited contribution, Chapter 3 of the *Handbook of Computational Statistics*, Second Edition, J. E. Gentle, W. Haerdle, and Y. Mori, eds., Springer-Verlag, 2012, 35–71.
- [8] P. L'Ecuyer, "Uniform Random Number Generators", in *International Encyclopedia of Statistical Science*, M. Lovric ed., Springer-Verlag, 2011, Part 21, 1625–1630.
- [9] P. L'Ecuyer, "Non-Uniform Random Variate Generation", in *International Encyclopedia of Statistical Science*, M. Lovric ed., Springer-Verlag, 2011, Part 14, 991–995.
- [10] J. F. Shortle and P. L'Ecuyer, "Introduction to Rare-Event Simulation", in *Wiley Encyclopedia of Operations Research and Management Science*, John Wiley, 2011.
- [11] H. Cancela, P. L'Ecuyer, M. Lee, G. Rubino, and B. Tuffin, "Analysis and Improvements of Path-Based Methods for Monte Carlo Reliability Evaluation of Static Models," chapter 3 of *Simulation Methods for Reliability and Availability of Complex Systems*, J. Faulin, A. A. Juan, S. Martorell, and E. Ramirez-Marquez eds., Springer-Verlag, 2010, 65–84.
- [12] P. L'Ecuyer and F. Panneton, " $\mathbb{F}_2$ -Linear Random Number Generators", invited chapter for the book: *Advancing the Frontiers of Simulation: A Festschrift in Honor of George Samuel Fishman*, C. Alexopoulos, D. Goldsman, and J. R. Wilson Eds., Springer-Verlag, 2009, 169–193.
- [13] P. L'Ecuyer, M. Mandjes, and B. Tuffin, "Importance Sampling and Rare Event Simulation," in *Rare Event Simulation Using Monte Carlo Methods*, G. Rubino and B. Tuffin Eds, Wiley, 2009, 17–38.
- [14] P. L'Ecuyer, F. LeGland, P. Lezaud, and B. Tuffin, "Splitting Techniques," in *Rare Event Simulation Using Monte Carlo Methods*, G. Rubino and B. Tuffin Eds, Wiley, 2009, 39–62.
- [15] P. L'Ecuyer, "Pseudorandom Number Generators", a section of the *Encyclopedia of Quantitative Finance*, R. Cont, Ed., Wiley, 2010, 1431–1437.
- [16] P. L'Ecuyer, "Random Number Generation", invited contribution, chapter 3 of the *Elsevier Handbooks in Operations Research and Management Science: Simulation*, S. G. Henderson and B. L. Nelson, eds., Elsevier Science, Amsterdam, 2006, 55–81.
- [17] P. L'Ecuyer, "Random Number Generation", invited contribution, chapter 2 of the *Handbook of Computational Statistics*, J. E. Gentle, W. Haerdle, and Y. Mori, eds., Springer-Verlag, 2004, 35–70.
- [18] P. L'Ecuyer, "Random Number Generation and Quasi-Monte Carlo", a section of the *Encyclopedia of Actuarial Science*, J. Teugels and B. Sundt Eds., John Wiley, Chichester, UK, 2004, vol. 3, 1363–1369.
- [19] P. L'Ecuyer and C. Lemieux, "Recent Advances in Randomized Quasi-Monte Carlo Methods", an invited Chapter of *Modeling Uncertainty: An Examination of Stochastic Theory, Methods, and Applications*, M. Dror, P. L'Ecuyer, and F. Szidarovszki, Eds., Kluwer Academic Publishers, 2002, 419–474.
- [20] H. Ben Ameur, M. Breton, and P. L'Ecuyer, "Partial Hedging for Options Based on Extreme Values and Passage Times", *Decision and Control in Management Science: in Honor of Professor Alain Haurie*, G. Zaccour Ed., Kluwer Academic Publishers, 2002, 179–200.

- [21] P. L’Ecuyer, “Random Numbers”, a section of the *International Encyclopedia of the Social and Behavioral Sciences*, N. J. Smelser and Paul B. Baltes Eds., Pergamon, Oxford, 2002, 12735–12738.
- [22] P. L’Ecuyer, “Random Number Generators”, in *Encyclopedia of Operations Research and Management Science*, Second Edition, S. I. Gass and C. M. Harris Eds., Kluwer Academic Publishers, 2001, 695–702.
- [23] P. L’Ecuyer and P. Hellekalek, “Random Number Generators: Selection Criteria and Testing”, in *Random and Quasi-Random Point Sets, Lecture Notes in Statistics* **138**, Springer, New York, 1998, 223–266.
- [24] P. L’Ecuyer, “Random Number Generation”, Chapter 4 of *The Handbook of Simulation*, Jerry Banks Ed., Wiley, New York, 1998, 93–137.
- [25] P. L’Ecuyer, “Uniform Random Number Generation”, *Encyclopedia of Computer Science and Technology*, Vol. 39, A. Kent and J. G. Williams Eds., Marcel Dekker, New York, 1998, 323–339.
- [26] P. L’Ecuyer, “Random Number Generators”, a section of *Encyclopedia of Operations Research and Management Science*, S. I. Gass and C. M. Harris Eds., Kluwer Academic Publishers, 1996, 571–578.

## 2. Articles in scientific journals:

- [27] T. Goda and P. L’Ecuyer, “Construction-free median quasi-Monte Carlo rules for function spaces with unspecified smoothness and general weights,” *SIAM Journal on Scientific Computing*, **44**, 4 (2022), A2765–A2788.
- [28] Y. Peng, M. C. Fu, J.-Q. Hu, P. L’Ecuyer, and B. Tuffin, “Variance Reduction for Generalized Likelihood Ratio Method By Conditional Monte Carlo and Randomized Quasi-Monte Carlo Methods,” *Journal of Management Science and Engineering*, **7**, 4, 550–577, 2022.
- [29] P. L’Ecuyer, F. Puchhammer, and A. Ben Abdellah, “Monte Carlo and Quasi-Monte Carlo Density Estimation via Conditioning,” *INFORMS Journal on Computing*, **34**, 3, 1729–1748, 2022.
- [30] F. Puchhammer, A. Ben Abdellah, and P. L’Ecuyer, “Variance Reduction with Array-RQMC for Tau-Leaping Simulation of Stochastic Biological and Chemical Reaction Networks,” *Bulletin of Mathematical Biology*, **83**, 91, <https://doi.org/10.1007/s11538-021-00920-5>, 2021.
- [31] T. A. Ta, W. Chan, F. Bastin, and P. L’Ecuyer, “A Simulation-based Decomposition Approach for Two-stage Staffing Optimization in Call Centers under Arrival Rate Uncertainty,” *European Journal of Operational research*, **293**, 3, 966–979, 2021.
- [32] A. Ben Abdellah, P. L’Ecuyer, A. B. Owen, and F. Puchhammer, “Density Estimation by Randomized Quasi-Monte Carlo,” *SIAM Journal on Uncertainty Quantification*, **9**, 1, 280–301, 2021.
- [33] T. A. Ta, T. Mai, F. Bastin, and P. L’Ecuyer, “On a multistage discrete stochastic optimization problem with stochastic constraints and nested sampling,” *Mathematical Programming*, **190**, 1–37, <https://doi.org/10.1007/s10107-020-01518-w>, 2021.
- [34] Z. I. Botev and P. L’Ecuyer, “Sampling Conditionally on a Rare Event via Generalized Splitting,” *INFORMS Journal on Computing*, **32**, 4, 986–995, 2020.
- [35] P. Marion, M. Godin, and P. L’Ecuyer, “An algorithm to compute the t-value of a digital net and of its projections”, *Journal of Computational and Applied Mathematics*, **371**, 112669, June 2020.
- [36] P. L’Ecuyer, P. Wambergue, and E. Bourceret, “Spectral Analysis of the MIXMAX Random Number Generators,” *INFORMS Journal on Computing*, **32**, 1, 135–144, 2020.
- [37] C. Lécot, P. L’Ecuyer, R. El Haddad, and A. Tarhini, “Quasi-Monte Carlo simulation of coagulation-fragmentation”, *Mathematics and Computers in Simulation*, **161**, 113–124, 2019.



- [38] P. L’Ecuyer, P. Maillé, N. Stier-Moses, and B. Tuffin, “Non-Neutrality of Search Engines and its Impact on Innovation”, *Internet Technology Letters*, **1**, 2017, see doi:10.1002/itl2.10.
- [39] P. L’Ecuyer, D. Munger, C. Lécot and B. Tuffin, “Sorting Methods and Convergence Rates for Array-RQMC: Some Empirical Comparisons”, *Mathematics and Computers in Simulation*, **143**, 191–201, 2017.
- [40] P. L’Ecuyer, P. Maillé, N. Stier-Moses, and B. Tuffin, “Revenue-Maximizing Rankings for Online Platforms with Quality-Sensitive Consumers”, *Operations Research*, **65**, 2, 408–423, 2017.
- [41] P. L’Ecuyer, D. Munger, B. Oreshkin, and R. Simard, “Random Numbers for Parallel Computers: Requirements and Methods, with Emphasis on GPUs”, invited paper, *Mathematics and Computers in Simulation*, **135**, 3–17, 2017.
- [42] B. N. Oreshkin, N. Régnard, and P. L’Ecuyer, “Rate-Based Daily Arrival Process Models with Application to Call Centers”, *Operations Research*, **64**, 2, 510–527, 2016. [INFORMS SIMULATION SOCIETY OUTSTANDING RESEARCH PUBLICATION AWARD IN 2018](#).
- [43] P. L’Ecuyer and D. Munger, “Algorithm 958: LatticeBuilder: A General Software Tool for Constructing Rank-1 Lattice Rules”, *ACM Transactions on Mathematical Software*, **42**, 2, Article 15, 2016.
- [44] R. Ibrahim, H. Ye, P. L’Ecuyer, and H. Shen, “Modeling and Forecasting Call Center Arrivals: A Literature Survey and a Case Study”, *International Journal of Forecasting*, **32**, 3, 865–874, 2016.
- [45] R. Ibrahim, P. L’Ecuyer, H. Shen, and M. Thiongane, “Inter-Dependent, Heterogeneous, and Time-Varying Service-Time Distributions in Call Centers”, *European Journal of Operational Research*, **250** (2016), 480–492
- [46] Z. I. Botev, P. L’Ecuyer, R. Simard, and B. Tuffin, “Static Network Reliability Estimation under the Marshall-Olkin Copula,” *ACM Transactions on Modeling and Computer Simulation*, **26**, 2 (2016), Article 14.
- [47] P. L’Ecuyer, “Discussion of ”Sequential Quasi-Monte-Carlo Sampling” by M. Gerber and N. Chopin,” *Journal of the Royal Statistical Society*, Series B, **77**, part 3 (2015), 565–566.
- [48] W. Chan, G. Koole, and P. L’Ecuyer, “Dynamic Call Center Routing Policies Using Call Waiting and Agent Idle Times,” *Manufacturing and Service Operations Management*, **16**, 4 (2014), 544–560.
- [49] N. Chapados, M. Joliveau, P. L’Ecuyer, and L.-M. Rousseau, “Retail Store Scheduling for Profit”, *European Journal of Operations Research*, **239**, 3 (2014), 609–624.
- [50] P. L’Ecuyer, and R. Simard, “On the Lattice Structure of a Special Class of Multiple Recursive Random Number Generators”, *INFORMS Journal on Computing*, **26**, 2 (2014), 449–460.
- [51] B. Tuffin, S. Saggadi, and P. L’Ecuyer, “An Adaptive Zero-Variance Importance Sampling Approximation for Static Network Dependability Evaluation”, *Computers and Operations Research*, **45** (2014), 51–59.
- [52] A. Jaoua, P. L’Ecuyer and L. Delorme, “Call-Type Dependence in Multiskill Call Centers”, *Simulation: Transactions of the Society for Modeling and Simulation International*, **89**, 6 (2013), 722–734.
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- [16] P. Marion, P. L'Ecuyer, and M. Godin "Custom Digital Net Constructions: Algorithms and Software", *14th International Conference on Monte Carlo and Quasi-Monte Carlo Methods (MCQMC)*, Oxford, U.K. (Online-only Conference), Aug. 2020.
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- [101] B. Tuffin and P. L'Ecuyer, "Network reliability simulation with extension to Marshall-Olkin copula-based dependent failures," *Eleventh International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing*, Leuven, April 2014.
- [102] P. L'Ecuyer, "On the Distribution of Integration Error with Randomly-Shifted Lattice Rules", invited talk, Latrobe University, Melbourne, Australia, Feb. 2014.
- [103] P. L'Ecuyer, "Static Network Reliability Estimation Under the Marshall-Olkin Copula", School of Mathematics, University of New South Wales, Sydney, Feb. 2014.

- [104] P. L'Ecuyer and D. Munger, "Software Tools for Constructing Lattice Rules", [INVITED TALK](#), Workshop on Uniform Distribution and Quasi-Monte Carlo Methods, Linz, Austria, Oct. 2013.
- [105] P. L'Ecuyer and R. Simard, "On the Lattice Structure of a Special Class of Multiple Recursive Generators", Workshop on Uniform Distribution Theory and Applications, Oberwolfach, Germany, Oct. 2013.
- [106] P. L'Ecuyer, "Randomized Quasi-Monte Carlo Methods", invited 6-hour advanced tutorial, Summer School in Computer Science, Tarragona, Spain, July 2013.
- [107] P. L'Ecuyer and D. Munger, "Tailor-Made Lattice Rules: Principles and Software Tools", [INVITED PLENARY TALK](#), *Ninth IMACS Symposium on Monte Carlo Methods*, Annecy, France, July 2013.
- [108] P. L'Ecuyer, "Approximate Zero-Variance Simulation and Rare Events", [INVITED PLENARY PRESENTATION](#), Annual meeting of the Lebanese Society for the Mathematical Sciences (LSMS-2013), Beirut, Lebanon, May 2013.
- [109] P. L'Ecuyer, "Random Numbers for Simulation", Center for Advanced Mathematical Sciences (CAMS), American University of Beirut, Lebanon, May 2013.
- [110] P. L'Ecuyer, "Challenges in Stochastic Modeling of Complex Service Systems for Simulation and Optimization", [INVITED KEYNOTE PRESENTATION](#), ACM SIGSIM Conference on Principles of Advanced Discrete Simulation (PADS), Montreal, Canada, May 2013.
- [111] P. L'Ecuyer, "Static Network Reliability Estimation via Importance Sampling and Splitting," School of Business, Universidad Adolfo Ibañez, Chile, March 2013.
- [112] P. L'Ecuyer, "Randomized Quasi-Monte Carlo for Stopping Time Optimization", Workshop on Simulation-Based Optimization, Viña del Mar, Chile, March 2013
- [113] P. L'Ecuyer, "Approximate Zero-Variance Simulation", School of Mathematics and Statistics, University of New South Wales, Sydney, Australia, March 2013.
- [114] P. L'Ecuyer, "Artificial Random Numbers for Simulation", School of Mathematics and Statistics, University of New South Wales, Sydney, Australia, Feb. 2013.
- [115] P. L'Ecuyer, W. Chan, and G. Koole, "Call Routing Policies with Dynamic Priorities Based on Wait and Idle Times in Call Centers", Statistics, Modeling and Operations Research Seminars, The University of Queensland, Brisbane, Australia, Feb. 2013.
- [116] P. L'Ecuyer, "Artificial Random Numbers for Simulation", Maths Colloquium, The University of Queensland, Brisbane, Australia, Feb. 2013.
- [117] P. L'Ecuyer, W. Chan, and G. Koole, "Call Routing Policies with Dynamic Priorities Based on Wait and Idle Times in Call Centers", INFORMS Computing Society Conference, Santa Fe, USA, Jan. 2013.
- [118] P. L'Ecuyer, "Le hasard artificiel", Club Mathématique, Université de Montréal, Nov. 2012.
- [119] N. Chapados, M. Joliveau, L.-M. Rousseau, and P. L'Ecuyer, "Stochastic Modeling of Retail Stores for Workforce Management", *CORS 2012 Conference*, Niagara Falls, Canada, June 2012.
- [120] W. Chan, G. Koole, and P. L'Ecuyer, "Weight-based routing for multi-skill call centers using call waiting times and agent idle times", *CORS 2012 Conference*, Niagara Falls, Canada, June 2012.
- [121] M. Joliveau, L.-M. Rousseau, and P. L'Ecuyer, "Maximizing retail store incomes by efficient workforce scheduling", *CORS 2012 Conference*, Niagara Falls, Canada, June 2012.
- [122] A. Jaoua and P. L'Ecuyer, "Sensitivity of the pooling decision to the dependence across call types in Multiskill Call Centers", *CORS 2012 Conference*, Niagara Falls, Canada, June 2012.



- [123] W. Chan, G. Koole, and P. L'Ecuyer, "Call Center Routing Policy Using Call Waiting and Agent Idle Times", *Fourth Meeting of the EURO Working Group on Stochastic Modeling*, Paris, France, June 2012.
- [124] R. Ibrahim and P. L'Ecuyer, "Forecasting Call Center Arrivals: Bivariate and Mixed Models", *The Optimization Days*, Montreal, May 2012.
- [125] A. Jaoua, L. Delorme, and P. L'Ecuyer, "Sensitivity of the Pooling Decision to the Dependence Across Call Types in the Hydro-Québec Large Call Center", *The Optimization Days*, Montreal, May 2012.
- [126] W. Chan, G. Koole, and P. L'Ecuyer, "Weight-Based Routing for Multi-Skill Call Centers using Call Waiting Times and Agent Idle Times", *The Optimization Days*, Montreal, May 2012.
- [127] P. L'Ecuyer, A. Ionut, and R. Simard, "On the Lattice Structure of a Special Class of Multiple Recursive Generators," *Tenth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing*, Sydney, Australia, Feb. 2012.
- [128] D. Munger and P. L'Ecuyer, "A General Software Tool for Constructing Rank-1 Lattice Rules," *Tenth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing*, Sydney, Australia, Feb. 2012.
- [129] P. L'Ecuyer, Z. I. Botev, and B. Tuffin, "Approximate Zero-Variance Simulation in Rare Event Settings", [INVITED PLENARY TALK](#), *Eighth IMACS Symposium on Monte Carlo Methods*, Borovets, Bulgaria, Aug. 2011.
- [130] Z. I. Botev and P. L'Ecuyer, "A Markov Chain Monte Carlo Method for Rare-Event Probability Estimation", *New Frontiers in Applied Probability: Conference in Honor of Søren Asmussen*, Sønderborg, Denmark, Aug. 2011.
- [131] M. Bijvank, A. Haensel, P. L'Ecuyer, and P. Marcotte, "Improved Bid Prices for Multistage Network Revenue Management" *INFORMS Simulation Society Research Workshop*, Poster presentation, Montreal, July 2011.
- [132] W. Chan, G. Koole, and P. L'Ecuyer, "Multiskill Call Center Routing Using Weights, Call Waiting Times and Agent Idle Times", *INFORMS Simulation Society Research Workshop*, Poster presentation, Montreal, July 2011.
- [133] R. Ibrahim and P. L'Ecuyer, "Forecasting Call Center Arrivals", *INFORMS Simulation Society Research Workshop*, Poster presentation, Montreal, July 2011.
- [134] A. Jaoua and P. L'Ecuyer, "Modelling and Assessing the Effect of the Non-Linear Dependence Between Call Types in Multi-Skill Call Centers," *INFORMS Simulation Society Research Workshop*, Poster presentation, Montreal, July 2011.
- [135] M. Bijvank, A. Haensel, P. L'Ecuyer, and P. Marcotte, "Improved Bid Prices for Multistage Network Revenue Management," *INFORMS Revenue Management and Pricing Section Conference*, New York, July 2011.
- [136] Z. I. Botev and P. L'Ecuyer, "The Markov Chain Importance Sampling Method for Rare-Event Probability Estimation", *The Optimization Days*, Montreal, May 2011.
- [137] D. Munger and P. L'Ecuyer, "Randomly-Shifted Lattice Rules Adapted to Specific Integrands", *The Optimization Days*, Montreal, May 2011.
- [138] R. Ibrahim and P. L'Ecuyer, "Forecasting Intraday Arrivals at a Call Center", *The Optimization Days*, Montreal, May 2011.
- [139] A. Jaoua and P. L'Ecuyer, "Study of Call Type Dependence in a Multiskill Call Center", *The Optimization Days*, Montreal, May 2011.

- [140] W. Chan, P. L'Ecuyer, and G. Koole, "Call Center Routing Policy Based on Call Waiting and Agent Idle Times", *The Optimization Days*, Montreal, May 2011.
- [141] M. Bijvank, P. L'Ecuyer, and P. Marcotte, "Improved Bid Prices for Multistage Network Revenue Management", *The Optimization Days*, Montreal, May 2011.
- [142] B. Tuffin, P. L'Ecuyer, G. Rubino, H. Cancela, and S. Saggadi, "Approximation of Zero-Variance Importance Sampling in Reliability Settings," *Seventh Conference on Extreme Value Analysis, Probabilistic and Statistical Models and their Applications*, Lyon, France, June 2011.
- [143] P. L'Ecuyer, "Two new algorithms for static network reliability estimation," School of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, April 2011.
- [144] P. L'Ecuyer, "Rare Event Simulation: Challenges, Ideas, and Effective Tools," CIISE Distinguished Seminar Series, Concordia University, Montreal, Jan. 2011.
- [145] P. L'Ecuyer and D. Munger, "What Discrepancy to Choose for Selecting RQMC Point Sets in Practice and What Difference Does it Make?," **INVITED PLENARY TALK**, *Ninth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing*, Warsaw, Aug. 2010.
- [146] P. L'Ecuyer, M. Dion, and A. L'Archevêque-Gaudet, "Array-RQMC for Markov Chains with Random Stopping Times," *Ninth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing*, Warsaw, Aug. 2010.
- [147] P.-A. Tremblay and P. L'Ecuyer, "Stochastic Mesh Methods for Quadratic Hedging with Transaction Costs," *Ninth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing*, Warsaw, Aug. 2010.
- [148] W. Chan and P. L'Ecuyer, "Call Center Routing Policies Based on Call Waiting and Agent Idle Times," *ALIO-INFORMS 2010 Joint International Meeting*, Buenos-Aires, June 2010.
- [149] P. L'Ecuyer, "Modeling and Optimization in Call Centers: A Glance at Some Relevant Problems," *Montreal Workshop on Call Centers*, Montreal, June 2010.
- [150] W. Chan and P. L'Ecuyer, "Staffing Multiskill Call Centers with Service Level and Fairness Constraints: An Approach Based on Aggregation, PASTA, and Partial Simulation," *Montreal Workshop on Call Centers*, Montreal, June 2010.
- [151] P. L'Ecuyer, "On the Effectiveness of Randomized Quasi-Monte Carlo in Finance", **INVITED PLENARY TALK**, *IFM2 Mathematical Finance Days*, Montreal, May 2010.
- [152] P.-A. Tremblay and P. L'Ecuyer, "Simulation Techniques for Quadratic Hedging with Transaction Costs", *IFM2 Mathematical Finance Days*, Montreal, May 2010.
- [153] M. Dion and P. L'Ecuyer, "American Option Pricing with Quasi-Monte Carlo Simulation", *IFM2 Mathematical Finance Days*, Montreal, May 2010.
- [154] P. L'Ecuyer, "Artificial Randomness for Simulation," **INVITED TUTORIAL TALK**, *The Optimization Days*, Montreal, May 2010.
- [155] D. Munger, P. L'Ecuyer, and F. Bastin, "Efficient Estimation of the Mixed-Logit Likelihood Using RQMC", *The Optimization Days*, Montreal, May 2010.
- [156] M. Dion and P. L'Ecuyer, "Pricing and Optimization of Natural Gas Storage via Simulation", *The Optimization Days*, Montreal, May 2010.
- [157] W. Chan and P. L'Ecuyer, "Multiskill Call Center Staffing Optimization with Delay Constraints via Stochastic Fluid Model", *The Optimization Days*, Montreal, May 2010.
- [158] P. L'Ecuyer, "Software Tools for Random Number Generation", **INVITED KEYNOTE PRESENTATION**, NSTools 2009: International Workshop on Network Simulation Tools, Pisa, Italy, Oct. 2009.

- [159] P. L'Ecuyer, "Le hasard artificiel", [PUBLIC CONFERENCE TO LARGE AUDIENCE](#), Université de Montréal, Oct. 2009.
- [160] P. L'Ecuyer and B. Tuffin, "Limiting Distributions for Randomly-Shifted Lattice Rules", *Seventh IMACS Seminar on Monte Carlo Methods*, Bruxelles, Sept. 2009.
- [161] P. L'Ecuyer and B. Tuffin, "Limiting Distributions for Randomly-Shifted Lattice Rules", *INFORMS Applied Probability Workshop*, Cornell University, Ithaca, New York, July 2009.
- [162] W. Chan, A. N. Avramidis, M. Gendreau, P. L'Ecuyer, and O. Pisacane, "Optimizing Daily Agent Scheduling in a Multiskill Call Center", *INFORMS Applied Probability Workshop*, Cornell University, Ithaca, New York, July 2009.
- [163] M. Dion and P. L'Ecuyer, "American Option Pricing with Randomized Quasi-Monte Carlo", *Optimization Days 2009*, Montreal, May 2009.
- [164] A. L'Archevêque-Gaudet and P. L'Ecuyer, "Quasi-Monte Carlo for Markov Chains: Application to Option Pricing", *Optimization Days 2009*, Montreal, May 2009.
- [165] W. Chan, A. N. Avramidis, M. Gendreau, P. L'Ecuyer, and O. Pisacane, "Optimizing Daily Agent Scheduling in a Multiskill Call Center", *Optimization Days 2009*, Montreal, May 2009.
- [166] P. L'Ecuyer, "Simulation-Based Optimization for Staffing and Scheduling in Call Centers", [INVITED PRESENTATION](#), *Seminar on Sampling-Based Optimization in the Presence of Uncertainty*, Dagstuhl, Germany, April 2009.
- [167] P. L'Ecuyer, "Le hasard artificiel", Colloque du DIRO, Université de Montréal, March 2009.
- [168] P. L'Ecuyer, "Lectures on Stochastic Simulation", [ADVANCED TUTORIAL](#), Scuola Superiore ISUFI, University of Salento, Lecce, Italy, Feb. 2009.
- [169] P. L'Ecuyer, "Random Number Generation", [INVITED KEYNOTE PRESENTATION](#), *Workshop on Distributed and Grid Computing in Computational Finance*, INRIA, Sophia-Antipolis, France, Oct. 2008.
- [170] P. L'Ecuyer, J. Blanchet, B. Tuffin, and P. W. Glynn, "Asymptotic Robustness of Estimators in Rare-Event Simulation", *RESIM'2008*, Rennes, France, Sept. 2008.
- [171] P. L'Ecuyer, "Point Sets and Sequences for Quasi-Monte Carlo and Random Number Generation", [INVITED KEYNOTE PRESENTATION](#), *International Conference on Sequences and Their Applications (SETA)*, Lexington, Kentucky, Oct. 2008.
- [172] P. L'Ecuyer and B. Tuffin, "Approximating zero-variance importance sampling in a reliability setting", *Efficient Monte Carlo: From Variance Reduction to Combinatorial Optimization*, Sønderborg, Denmark, July 2008.
- [173] G. Rubino, H. Cancela, P. L'Ecuyer, M. Lee, and B. Tuffin, "Combining Path-Based Methods, RQMC and Zero-Variance Approximations in Static Model Analysis", *Eighth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing*, Montréal, July 2008.
- [174] P. L'Ecuyer and C. Lécot, "Randomized quasi-Monte Carlo simulation of multidimensional Markov chains", *Eighth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing*, Montréal, July 2008.
- [175] P. L'Ecuyer, "Sur l'efficacité des méthodes quasi-Monte Carlo randomisées pour l'évaluation d'options", *Congrès conjoint de la Société Statistique du Canada et de la Société Française de Statistique*, May 2008.
- [176] O. Pisacane, A. N. Avramidis, M. Gendreau, and P. L'Ecuyer, "Agent Scheduling in a Multiskill Call Center", *CORS/Optimization Days 2008 joint conference*, Québec, May 2008.

- [177] W. Chan and P. L'Ecuyer, "Multiskill Call Center Staffing Optimization with Continuous-Time Markov Chain Simulation", *CORS/Optimization Days 2008 joint conference*, Québec, May 2008.
- [178] N. Channouf, P. L'Ecuyer, and T. Avramidis, "Forecasting Models for Daily and Intraday Arrivals in a Call Center", *CORS/Optimization Days 2008 joint conference*, Québec, May 2008.
- [179] E. Buist and P. L'Ecuyer, "Simulating Call Centers Using a Uniformized Continuous-Time Markov Chain", *CORS/Optimization Days 2008 joint conference*, Québec, May 2008.
- [180] P. L'Ecuyer, "Why and When Is Quasi-Monte Carlo better than Monte Carlo for Pricing Financial Derivatives?", *CORS/Optimization Days 2008 joint conference*, Québec, May 2008.
- [181] P. L'Ecuyer, "Problèmes de "staffing" et de "scheduling" des agents dans les centres d'appel", Workshop on the interface between stochastic models and optimization, GERAD, May 2008.
- [182] W. Chan, A. N. Avramidis, and P. L'Ecuyer, "Staffing Algorithms for Multiskill Call Centers", *INFORMS Conference 2007*, Seattle, USA, Nov. 2007.
- [183] F. Bastin and P. L'Ecuyer, "Variance Reduction Techniques for Adaptive Nonlinear Stochastic Programming", *INFORMS Conference 2007*, Seattle, USA, Nov. 2007.
- [184] P. L'Ecuyer, "Why Is Variance Reduction So Important?", [INVITED KEYNOTE PRESENTATION](#), *European Simulation and Modeling Conference 2007*, Malta, Oct. 2007.
- [185] H. Cancela, P. L'Ecuyer, M. Lee, G. Rubino, and B. Tuffin, "Refinements of a path-based efficient algorithm for network reliability estimation in the rare event case", Bernoulli Society Meeting on Probability and Statistics in Science and Technology, University of Porto, Aug. 2007.
- [186] P. L'Ecuyer, "Méthodes quasi-Monte Carlo pour les chaînes de Markov et leur combinaison avec le couplage à partir du passé", Institut de Recherche Mathématique de Rennes, Université de Rennes 1, France, June 2007.
- [187] R. El Haddad, C. Lécot, and P. L'Ecuyer, "Quasi-Monte Carlo-Based Methods for Markov Chains with Multidimensional State Spaces", *Sixth IMACS Symposium on Monte Carlo Methods*, Reading, U.K., June 2007.
- [188] P. L'Ecuyer, "Randomized Quasi-Monte Carlo for Markov Chains", [INVITED PLENARY TALK](#), *Sixth IMACS Symposium on Monte Carlo Methods*, Reading, U.K., June 2007.
- [189] R. El Haddad, C. Lécot, and P. L'Ecuyer, "Méthodes Quasi-Monte Carlo pour la Simulation de Chînes de Markov", *Congrès National de Mathématiques Appliquées et Industrielles*, Praz sur Arly, France, June 2007.
- [190] P. L'Ecuyer, "Challenges in the Modeling and Simulation of Call Centers", [INVITED KEYNOTE PRESENTATION](#), *IASTED Conference on Modelling and Simulation*, Montreal, Canada, May 2007.
- [191] P. L'Ecuyer and B. Tuffin, "Splitting, Weight Windows, and Quasi-Monte Carlo" *International Workshop on Rare-Event Simulation*, Université de Nice, France, May 2007.
- [192] A. N. Avramidis, M. Gendreau, P. L'Ecuyer, and O. Pisacane, "Simulation-Based Optimization of Agent Scheduling in Multiskill Call Centers", *Optimization Days 2007*, Montreal, May 2007.
- [193] W. Chan, A. N. Avramidis, and P. L'Ecuyer, "Single-Period Staffing for Multiskill Call Centers", *Optimization Days 2007*, Montreal, May 2007.
- [194] N. Channouf, P. L'Ecuyer, and T. Avramidis, "Models of Arrival Processes in a Call Center", *Optimization Days 2007*, Montreal, May 2007.
- [195] E. Buist and P. L'Ecuyer, "The Interaction Between Stratification and Control Variates, with Illustrations in a Call Center Simulation", *Optimization Days 2007*, Montreal, May 2007.

- [196] P. L'Ecuyer, "La génération des nombres pseudo-aléatoires et ses applications", [SPECIAL INVITED CONFERENCE FOR THE MÉTIVIER FOUNDATION](#), IRISA, Rennes, France, April 2007.
- [197] P. L'Ecuyer, "Randomized quasi-Monte Carlo Methods in Practice", Department of Mathematics, Vrije Universiteit Amsterdam, April 2007.
- [198] P. L'Ecuyer, "Splitting Techniques in Simulation", Kumamoto University, Japan, March 2007.
- [199] P. L'Ecuyer, "A Practical View of Randomized Quasi-Monte Carlo", invited presentation in the mini-workshop: *Applications of Randomness*, University of Hiroshima, Japan, March 2007.
- [200] P. L'Ecuyer, "Performance Evaluation and Optimization in Contact Centers: An Overview", *Bell Canada*, Montreal, Dec. 2006.
- [201] P. L'Ecuyer, "Uniform Random Number Generators for Simulation", [INVITED PLENARY TALK](#), *CLAIO'2006*, Montevideo, Uruguay, Nov. 2006.
- [202] P. L'Ecuyer, "Randomized Quasi-Monte Carlo", [INVITED PLENARY TALK](#), *Recent Advances in Monte Carlo Based Inference*, Isaac Newton Institute, Cambridge, UK, Nov. 2006.
- [203] P. L'Ecuyer and C. Sanvido, "How to Combine Perfect Sampling with Randomized Quasi-Monte Carlo" *Seventh International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing*, Ulm, Germany, Aug. 2006.
- [204] P. L'Ecuyer, V. Demers, and B. Tuffin, "Randomized Quasi-Monte Carlo in Multilevel Splitting for Rare-Event Simulation" *Seventh International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing*, Ulm, Germany, Aug. 2006.
- [205] Y. Edel and P. L'Ecuyer, "A Coding Theoretic Approach to Building Nets with Well Equidistributed Projections" *Seventh International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing*, Ulm, Germany, Aug. 2006.
- [206] P. L'Ecuyer, "Efficiency Improvement in the Simulation of Call Centers", *EURO 2006 Conference*, Iceland, July 2006.
- [207] P. L'Ecuyer, "Randomized Quasi-Monte Carlo for Markov Chains", *EURO 2006 Conference*, Iceland, July 2006.
- [208] P. L'Ecuyer, "Staffing and Scheduling in Call Centers", *Workshop on call centers*, Montreal, May 2006.
- [209] C. Dkhil, P. L'Ecuyer, P. Marcotte, and G. Savard, "A Simulation Tool for Revenue Management in Air Transportation", *Canadian Operational Research Society and Optimization Days 2006 Joint Conference*, Montreal, May 2006.
- [210] O. Pisacane, A. N. Avramidis, W. Chan, M. Gendreau, and P. L'Ecuyer, "Scheduling for Multi-Skill Call Centers", *Canadian Operational Research Society and Optimization Days 2006 Joint Conference*, Montreal, May 2006.
- [211] A. N. Avramidis, W. Chan, and P. L'Ecuyer, "Méthodes de recherche pour l'affectation du personnel polyvalent dans un centre d'appels", *Canadian Operational Research Society and Optimization Days 2006 Joint Conference*, Montreal, May 2006.
- [212] E. Buist and P. L'Ecuyer, "Improving Efficiency of Contact Center Simulation-based Optimization", *Canadian Operational Research Society and Optimization Days 2006 Joint Conference*, Montreal, May 2006.
- [213] P. L'Ecuyer, "Staffing and Scheduling in Call Centers", [INVITED KEYNOTE PRESENTATION](#), *Workshop of EURO Working Group on Stochastic Modeling*, Amsterdam, The Netherlands, April 2006.

- [214] P. L'Ecuyer and B. Tuffin, "Quasi-Monte Carlo, Randomized Quasi-Monte Carlo, and Array-RQMC Methods", *Workshop on rare events*, IRISA, Rennes, April 2006.
- [215] P. L'Ecuyer, "Combination of splitting and array-RQMC techniques", *Workshop on rare events*, IRISA, Rennes, April 2006.
- [216] P. L'Ecuyer and A. N. Avramidis, "Efficient Monte Carlo and Quasi-Monte Carlo Option Pricing Under the Variance-Gamma Model", invited presentation, *International Conference on Financial Engineering*, Gainesville, Florida, March 2006.
- [217] P. L'Ecuyer, "Des Simulations Plus Efficaces Grâce à Quasi-Monte Carlo", Colloque du DIRO, Université de Montréal, Sept. 2005.
- [218] P. L'Ecuyer, C. Lécot, and B. Tuffin, "A New Randomized Quasi-Monte Carlo Approach for Markov Chains", *INFORMS Applied Probability Conference*, Ottawa, July 2005.
- [219] T. Avramidis, N. Channouf, and P. L'Ecuyer, "Modeling Arrival Processes to Call Centers with Dependence Structure", *INFORMS Applied Probability Conference*, Ottawa, July 2005.
- [220] V. Demers and P. L'Ecuyer, "Combining Randomized Quasi-Monte Carlo and Other Variance Reduction Methods for Pricing and Sensitivity Analysis of a Barrier Option", *INFORMS Applied Probability Conference*, Ottawa, July 2005.
- [221] B. A. R. Chabi-Yo and P. L'Ecuyer, "Empirical Evaluation of Links Between  $L_2$ -discrepancy and Efficiency Improvement of RQMC Methods in Financial Applications", *INFORMS Applied Probability Conference*, Ottawa, July 2005.
- [222] P. L'Ecuyer, "A Practical View of Randomized Quasi-Monte Carlo", Department of Mathematics, University of Salzburg, Austria, June 2005.
- [223] P. L'Ecuyer, "Uniform Random Number Generation: A State-of-the-Art Survey", **INVITED PLENARY TALK**, *MCM'2005: Fifth IMACS Seminar on Monte Carlo Methods*, Tallahassee, Florida, May 2005.
- [224] F. Panneton and P. L'Ecuyer, "Resolution-stationary random number generators", Tallahassee, Florida, May 2005.
- [225] P. L'Ecuyer, "A Randomized Quasi-Monte Carlo Approach for Markov Chains", *The Optimization Days*, Montréal, May 2005.
- [226] V. Demers and P. L'Ecuyer, "Combining Randomized Quasi-Monte Carlo and Other Variance Reduction Methods for Pricing and Sensitivity Analysis of a Barrier Option", *The Optimization Days*, Montréal, May 2005.
- [227] B. A. R. Chabi-Yo and P. L'Ecuyer, "Empirical Evaluation of Links Between  $L_2$ -discrepancy and Efficiency Improvement of RQMC Methods in Financial Applications", *The Optimization Days*, Montréal, May 2005.
- [228] E. Buist and P. L'Ecuyer, "ContactCenters: Librairie Java pour la simulation de centres de contacts", *The Optimization Days*, Montréal, May 2005.
- [229] N. Channouf, T. Avramidis, P. L'Ecuyer, and A. Ingolfsson, "Modeling and Forecasting Arrivals to an Emergency Call Center", *The Optimization Days*, Montréal, May 2005.
- [230] W. Chan, T. Avramidis, and P. L'Ecuyer, "Affectation du personnel dans un centre d'appel multi-skills par une recherche randomisée aidée d'un modèle de chaînes de Markov en temps continu", *The Optimization Days*, Montréal, May 2005.
- [231] P. L'Ecuyer, "Réduction de variance par des méthodes quasi-Monte Carlo randomisées", École des Mines de Ste-Étienne, France, April 2005.

- [232] P. L’Ecuyer, “Méthodes quasi-Monte Carlo Hasardées”, Université de Savoie, Chambéry, France, April 2005.
- [233] P. L’Ecuyer, “Stochastic simulation: random number generation, variance reduction, and applications”, [FOUR-HOUR INVITED TUTORIAL TALK](#), Third Chile Summer School on Optimization, Santiago, Chile, Jan. 2005.
- [234] P. L’Ecuyer, “Uniform Random Number Generators”, Cornell University, Ithaca, NY, Oct. 2004.
- [235] P. L’Ecuyer, “Randomized Quasi-Monte Carlo Simulation to Estimate the Distribution of the State of a Transient Markov Chain at Each Step”, Workshop on Number Theoretic Algorithms and Related Topics, Strobl, Austria, Sept. 2004.
- [236] P. L’Ecuyer, “Uniform Random Number Generation: Overview and Recent Developments”, [INVITED SEMI-PLENARY TALK](#), AIRO’2004, Lecce, Italia, Sept. 2004.
- [237] P. L’Ecuyer, “Staffing and Scheduling in Multiskill and Blend Call Centers”, invited talk, 2004 Stochastic Networks Conference: Workshop on Call Centers, CRM, Montréal, Sept. 2004.
- [238] H. Ben-Ameur, M. Breton, L. Karoui and P. L’Ecuyer, “A Dynamic Programming Approach for Pricing Options Embedded in Bonds”, 10th International Conference on Computing in Economics and Finance, Amsterdam, July 2004.
- [239] P. L’Ecuyer and F. Panneton, “Point Sets Constructed via a Linear Recurrence over  $\mathbf{F}_{2^w}$ ”, *Sixth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing*, Juan-Les-Pins, France, June 2004.
- [240] P. L’Ecuyer, C. Lécot, and B. Tuffin, “Quasi-Monte Carlo simulation of Markov chains with randomized copies of a two-dimensional highly-uniform point set”, *Sixth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing*, Juan-Les-Pins, France, June 2004.
- [241] P. L’Ecuyer, “Méthodes Quasi-Monte Carlo Randomisées”, LAAS, Toulouse, France, June 2004.
- [242] P. L’Ecuyer and F. Panneton, “Nouveaux générateurs de valeurs aléatoires basés sur des récurrences modulo 2”, [INVITED PLENARY TALK](#), XXXVIèmes Journées de Statistique, Montpellier, France, May 2004.
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- [326] P. L'Ecuyer and George Yin, "Budget-Dependent Convergence Rates for Stochastic Approximation", *INFORMS Conference*, New Orleans, Nov. 1995.
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- [329] P. L'Ecuyer, "Estimation du gradient", Conférence de l'association pour la statistique et ses utilisations, H.E.C., Jouy-en-Josas, France, May 1995.
- [330] P. L'Ecuyer, "Uniform Random Number Generation", Laboratory of Applied Physics, Delft Technical University, The Netherlands, Oct. 1994.
- [331] P. L'Ecuyer, "Génération de valeurs aléatoires par ordinateur", École Polytechnique Fédérale de Lausanne, June 1994.
- [332] P. L'Ecuyer, "Understanding combined random number generators", CERN, Genève, Suisse, June 1994.
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- [360] P. L'Ecuyer, "Estimation du gradient par simulation", Séminaire de la Faculté des Sciences de l'Administration, Université Laval, Feb. 1990.
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- [365] P. L'Ecuyer, "A Unified View of the Infinitesimal Perturbation Analysis and Score Function (Likelihood Ratio) Gradient Estimation Techniques", AT&T Bell laboratories, Holmdel, N. J., Oct. 1989.
- [366] P. L'Ecuyer, "Mixing Perturbation Analysis and Likelihood Ratios", ORSA/TIMS New York, Oct. 1989.
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- [377] P. L'Ecuyer, "Computing Approximate Solutions to Markov Renewal Programs with Continuous State Spaces", *Stanford University, Stanford, Cal.*, Nov. 1988.
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- [380] P. L'Ecuyer, M. Mayrand and M. Dror, "Dynamic Scheduling of a Robot Servicing Machines on a One-Dimensional Line", *EURO IX—TIMS XXVIII Joint International Conference*, Paris, July 1988.
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- [385] P. L'Ecuyer, "Logiciel pour la génération de valeurs pseudo-aléatoires", Université Laval, Jan. 1987.
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- [389] P. L'Ecuyer, A. Haurie and A. Hollander, "Calcul de stratégies optimales d'investissement", *Optimization Days '85*, Montréal, May 1985.
- [390] P. L'Ecuyer, A. Haurie and A. Hollander, "Optimal Research and Development Expenditures Under an Incremental Tax Incentive Scheme", *TIMS/ORSA Conference*, Dallas, Nov. 1984.
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- [392] P. L'Ecuyer, "Bounds and Approximations in Discrete-Stage Markovian Decision Processes", *Optimization Days'83*, Montréal, May 1983.
- [393] P. L'Ecuyer and A. Haurie, "Isotonicity in Discrete-Stage Markovian Decision Processes", *XI-th International Symposium on Mathematical Programming*, Bonn (Germany), Aug. 1982.

## SUPERVISION OF GRADUATE STUDENTS

### A. Degrees completed:

1. Tony Brière (M.Sc.) Pseudorandom Number Generators for Graphics Processing Units. May 2022
2. Yocheved Darmon (M.Sc.) "Réseaux digitaux RQMC avec matrice génératrice pré-optimisée." Oct. 2021
3. Amal Ben Abdellah (Ph.D.) "Randomized quasi-Monte Carlo methods for density estimation and simulation of Markov chains." Jan. 2021.
4. Marc-Antoine Savard (M.Sc.) "Générateurs pseudo-aléatoires modulo un grand entier et dont l'uniformité multivariée est assurée." Jan. 2020.
5. Thuy Anh Ta (Ph.D.) "Stochastic optimization of staffing for multiskill call centers", (co-supervision with F. Bastin). Dec. 2019.
6. Rasoul Panahihassanbarough (M.Sc.) "Data analysis and modelling of delays in a railway system." (Mitacs project with SNCF, France). Feb. 2019.
7. Klas Gustavsson (Licenciate Degree  $\equiv$  M.Sc.) "Modeling and simulation of the SOS Alarm emergency call centers of Sweden." (co-supervision with Leif Olsson, Mid-Sweden University, Sweden). Sept. 2018.
8. Pierre-Alexandre Tremblay (Ph.D.) "Stochastic Mesh Approximations for Dynamic Hedging with Costs." Oct. 2017.
9. Mamadou Thiongane (Ph.D.) "Prédiction du délai d'attente en temps réel et modélisation des durées de service dans les centres d'appels multi-compétences." Nov. 2016.
10. Myriam Méchouat (M.Sc.) "Modèles stochastiques de taux d'intérêt à court terme et construction de structures à terme de taux dans un cadre de gestion de risques." Dec. 2015.
11. Nabil Kemerchou (M.Sc.) "Logiciel de génération de nombres aléatoires dans OpenCL." Dec. 2015.
12. Thuy Anh Ta (M.Sc.) "Staffing Optimization with Chance Constraints in Call Centers", (co-supervision with F. Bastin). Jan. 2014.
13. Wyeon Chan (Ph.D.) "Optimisation des horaires des agents et du routage des appels dans les centres d'appels." Dec. 2013.
14. El Houcine Fettahi (M.Sc.) "Processus de construction de portefeuille indiciel" Oct. 2012.
15. Arbi Bouchoucha (M.Sc.) "Analyse de dépendance des programmes à objet en utilisant les modèles probabilistes des entrées" (co-supervision with H. Sarahoui), July 2011.
16. Maxime Dion (M.Sc., with internship) "Méthodes quasi-Monte Carlo moindres carrés pour l'évaluation d'options de type américain," Dec. 2009.
17. Serge Barbeau (M.Sc., with internship) "Recherches de suites de Sobol' ayant une meilleure uniformité 2D et 3D," Dec. 2009.
18. Éric Buist (Ph.D.) "Simulation des centres de contact," May 2009.
19. Jean-Sébastien Parent-Chartier (M.Sc., with internship) "Réduction de la dimension effective dans la simulation de processus de Lévy," Dec. 2008.
20. Nabil Channouf (Ph.D.) "Modélisation et optimisation d'un centre d'appels téléphoniques: étude du processus d'arrivée," Aug. 2008.
21. Ornella Pisacane (Ph.D., Università della Calabria, Italia) "Stochastic Optimization of Agent's Scheduling and in Call Centers," Jan. 2008.

22. Charles Sanvido (M.Sc.) “Étude de la combinaison de la technique quasi-Monte Carlo randomisé vectoriel avec l’échantillonnage exact,” March 2007.
23. Wyeon Chan (M.Sc.) “Optimisation stochastique pour l’affectation du personnel polyvalent dans un centre d’appels téléphoniques,” Feb. 2007.
24. Boni-Abdel Chabi-Yo (M.Sc., with internship) “Méthodes de simulation pour l’évaluation de produits dérivés basés sur les taux d’intérêt” (collaboration avec la Caisse Centrale Desjardins). Jan. 2007.
25. Nicolas Marcotte (M.Sc., with internship) “Modèles de taux d’intérêt et simulation” (collaboration avec la Caisse Centrale Desjardins), Sept. 2006.
26. Éric Buist (M.Sc.) “Conception et implantation d’une bibliothèque pour la simulation de centres de contacts,” Sept. 2005.
27. Jean-Sébastien Boyer (M.Sc., with internship) “Estimation de la valeur à risque par Monte Carlo pour des produits dérivés sur le marché du gaz naturel” (collaboration avec Gaz Métropolitain), Aug. 2005.
28. François Panneton (Ph.D.) “Construction d’ensembles de points basée sur des récurrences linéaires dans un corps fini de caractéristique 2 pour la simulation Monte Carlo et l’intégration quasi-Monte Carlo”, Oct. 2004.
29. Alexandre Deslauriers (M.Sc.) “Modélisation et simulation d’un centre d’appels téléphonique dans un environnement mixte”, March 2003.
30. Lakhdar Meliani (M.Sc.) “Un cadre d’application pour la simulation stochastique en Java” (co-supervision with S. Nguyen), April 2002.
31. Hatem Ben Ameer (Ph.D.) “Simulation and Numerical Procedures for Option Pricing” (co-supervision with M. Breton, H.E.C.), Oct. 2001.
32. Jacinthe Granger-Piché (M.Sc.) “Générateurs pseudo-aléatoires combinant des récurrences linéaires et non linéaires”, Aug. 2001.
33. Renée Touzin (M.Sc.) “Des générateurs récursifs multiples combinés rapides avec des coefficients de la forme  $\pm 2^{p_1} \pm 2^{p_2}$ ”, May 2001.
34. François Panneton (M.Sc.) “Générateurs de nombres aléatoires utilisant des récurrences linéaires modulo 2”, Nov. 2000.
35. Christiane Lemieux (Ph.D.), “L’Utilisation des règles de réseau en simulation comme technique de réduction de variance”, May 2000.
36. Yanick Champoux (M.Sc.) “Estimation du taux de perte de réseaux ATM via la simulation et le changement de mesure” (collaboration with Newbridge Networks Corp.), Aug. 1998.
37. Issoufou Mounkaila (M.Sc., Univ. Laval), “Traducteur Automatique de Modula-2 en C” (co-supervision with J. Bergeron, Université Laval), June 1998.
38. Denis Choquet (M.Sc.) “Intervalles de confiance par “bootstrap” pour la simulation régénérative” (co-supervision with C. Léger), Aug. 1997.
39. Benoît Martin (M.Sc.), “Estimation fonctionnelle et optimisation par simulation pour des modèles d’entretien préventif” (co-supervision with F. Vázquez-Abad), Nov. 1996.
40. Richard Simard (M.Sc.) “Solutions algébriques-numériques des systèmes différentiels à l’aide des séries de Tchébycheff” (co-supervision with R. Zahar), Jan. 1995
41. Martin Boucher (M.Sc.) “Les générateurs cryptographiques et leurs applications pratiques en simulation” (co-supervision with G. Brassard), Aug. 1994.
42. Samih Abdul Nabi (M.Sc.), “Variantes de la méthode du recuit simulé pour la coloration des graphes” (co-supervision with J. Ferland), Aug. 1993.
43. Bernard Plante (M.Sc., Univ. Laval), “Utilisation de la répartition journalière du trafic pour dimensionner les réseaux voix/données”, Nov. 1993.



44. Ifat Ghamlouche (M.Sc.), “Variantes de la méthode Tabou pour la coloration de graphes” (co-supervision with J. Ferland), 1993.
45. Gaetan Perron (M.Sc.) “Estimation de gradient et optimisation par simulation”, Jan. 1992.
46. Martin Richard (M.Sc.) “Etude des langages temps-réel synchrones; application dans le langage Esterel” (co-supervision with O. Roux), March 1991.
47. Serge Côté (M.Sc.), “Un progiciel de simulation basé sur ADA”, Oct. 1990.
48. François Blouin (M.Sc.), “Générateurs à congruence linéaire généralisés”, Nov. 1989.
49. Nataly Giroux (M.Sc.), “Optimisation stochastique de type Monte-Carlo”, Jan. 1989.
50. Jacques Malenfant (M.Sc.), “Modélisation du rétablissement lors des pannes dans les bases de données par des processus de renouvellement commandés”, Dec. 1986.
51. Abderrhaim Loukili (M.Sc.), “Optimisation par la simulation”, 1986.

## B. Students under supervision:

1. Gregory de Salaberry (Ph.D.) Travaux sur les méthodes quasi-Monte Carlo randomisées.
2. (M.Sc.) Youssef Cherkani-Hassani Contributions à LatNet Builder.
3. Mohamed El Derkaoui (M.Sc.) Étude et implantation de nouvelles mesures d’uniformité pour les réseaux digitaux.
4. Hugo Coté (Ph.D.) Modélisation stochastique et simulation des délais des trains dans un réseau ferroviaire. Project with SNCF in Paris, France.

## C. Postdoctoral fellows:

1. Julien Keutchayan, “Construction tools for quasi-random point sets”, Feb. 2019–Aug. 2019.
2. Florian Puchhammer, “Quasi-Monte Carlo for Markov Chains and its Applications”, Sept. 2017–Aug. 2019.
3. Mamadou Thiongane, “Prédiction des délais d’attente dans les systèmes de service”, June 2017–Dec. 2017.
4. Wyeon Chan, “Algorithmes et logiciels pour la simulation et l’optimisation dans les centres d’appels”, Jan. 2014–Aug. 2017.
5. Marie Pelleau, “Confection d’horaires et mis à jour en environnement stochastique”, (co-supervision with Louis-Martin Rousseau), Sept. 2013–Sept. 2015.
6. Nazim Régnard, “Modélisation stochastique des processus d’arrivée dans les centres d’appels”, Feb. 2012–Aug. 2014.
7. Abdelalim Farag, “Parallel Random number generation facilities in OpenCL”, Jan. 2014–July 2014.
8. Boris Oreshkin, “Modélisation stochastique de processus partiellement observés dans les centres d’appels”, Sept. 2012–Jan. 2014.
9. Marc Joliveau, “Confection d’horaires en environnement incertain”, (co-supervision with Louis-Martin Rousseau), Nov. 2011–Feb. 2013.
10. Amel Jaoua, “Développement d’outils de simulation des centres d’appels d’Hydro-Québec”, Bourse industrielle MITACS–Hydro-Québec. Sept. 2009–Dec. 2012.
11. David Munger, “Studying the convergence and distribution of randomized quasi-Monte Carlo estimators via Hilbert spaces”, March 2009–Sept. 2012.
12. Nicholas Chapados, Prévision de la demande et optimisation stochastique des horaires dans le commerce au détail, May 2011–April 2012.
13. Zdravko I. Botev, Méthodes de splitting pour les chaines de Markov et estimation de probabilités minuscules par simulation, Oct. 2010–Sept. 2011.
14. Rouba Ibrahim, “Modélisation, simulation et approximation pour les phénomènes d’attente dans les centres d’appels téléphoniques,” Sept. 2010–Aug. 2011.

15. Marco Bijvank, “Simulation et optimisation pour la gestion du revenu en transport aérien,” (co-supervision with Patrice Marcotte), March 2010–Sept. 2011.
16. Maxime Dion “Méthodes Monte Carlo et quasi-Monte Carlo en programmation dynamique.” Jan. 2010–Dec. 2010.
17. Vasile Sinescu, “Construction and analysis of lattice rules for high-dimensional integration”, May 2008– Dec. 2009.
18. Mohammed Hamdouni, “Scheduling agents in a call center”, May 2006–April 2007.
19. Tolga Çezik, “Optimization of staffing and scheduling in call centers”, Oct. 2003–Dec. 2004.
20. Jutta Pichitlamken, “Optimization via simulation, with application to improving the management policies of telephone call centers”, Oct. 2002–Sept. 2003.
21. Hee Sun Regina Hong, “Implementation of randomized highly-uniform point sets for high-dimensional numerical integration”, June 2002–Aug. 2002.
22. Nabil Belacel, “Modélisation, simulation et optimisation d’un centre d’appels en mode mixte” (co-supervision with Pierre Hansen), Jan. 2001–Dec. 2001.
23. Qian-Yu Tang, “Convergence of stochastic approximation algorithms”, Sept. 1995–June 1997.

#### D. Supervision of undergraduate and master internships (since 1995):

1. Robin Legault, Conception et implantation de batteries de tests statistiques dans TestU01, stagiaire de premier cycle, boursier du CRSNG, été 2020 (4 mois).
2. Simon-Olivier Laperrière, Outils pour mesurer l’équidistribution de générateurs de valeurs aléatoires basés sur des récurrences modulo 2, stagiaire de premier cycle, boursier du CRSNG, été 2020 (4 mois).
3. Guillaume Nervo, Implantation de méthodes de splitting et Monte Carlo conditionnel pour la simulation d’événements rares dans les réseaux, stagiaire de maîtrise de l’École Polytechnique de Paris, France, été 2019 (5 mois).
4. Sofiane Hadji, Méthodes de splitting généralisées pour des problèmes de fiabilité dans les réseaux, stagiaire de maîtrise de l’École Polytechnique de Paris, France, été 2019 (5 mois).
5. Pierre Marion, Construction de réseaux digitaux selon différents critères d’uniformité, stagiaire de maîtrise de l’École Polytechnique de Paris, France, été 2018 (5 mois). Winner of the most successful achievement in an 2018 internship for all students of the École Polytechnique de Paris, for his internship in Montreal.
6. Maxime Godin, Logiciel de construction de réseaux digitaux et polynomiaux, stagiaire de maîtrise de l’École Polytechnique de Paris, France, été 2018 (5 mois).
7. Théo Guillaumot, Extensions au logiciel TestU01, stagiaire de maîtrise de l’École Polytechnique de Paris, France, été 2018 (4 mois).
8. Florent Maligne, Développement et amélioration de tests statistiques pour les générateurs pseudo-aléatoires, stagiaire de maîtrise de l’École Polytechnique de Paris, France, été 2018 (5 mois).
9. Erwan Bourceret, Extensions à LatMRG et construction de nouveaux générateurs pseudo-aléatoires, stagiaire de maîtrise de l’École Polytechnique de Paris, France, été 2017 (4 mois).
10. Jemel Ayman, Développement d’outils pour la construction de règles de réseaux polynomiales, stagiaire de maîtrise de l’École Polytechnique de Paris, France, été 2017 (5 mois).
11. Paul Wambergue, Développement d’outils logiciels pour l’analyse de générateurs matriciels, stagiaire de maîtrise de l’École Centrale de Paris, France, été 2017 (6 mois).
12. Youssef Achari Berrada, Outil de construction de réseaux digitaux, stagiaire de maîtrise de l’École Polytechnique de Paris, France, été 2016 (5 mois).
13. Chaker Oueslati, Développement d’outils pour la construction automatique de réseaux polynômiaux et digitaux pour l’intégration numérique, bourse d’été de premier cycle du CRSNG, été 2016 (4 mois).

14. Yun He, Conception d'horaires de travail dans les centres d'appels téléphoniques, stagiaire de l'ENAC, Toulouse, France, été 2014 (6 mois).
15. Grégoire Corbière, Modélisation des processus d'arrivée dans les centres d'appels d'Hydro-Québec, stagiaire de l'Université Paul Sabatier, Toulouse, France, été 2014 (4 mois).
16. Rachid Hassani, Modélisation des bursts pour les appels d'urgence, stagiaire de ENSTA ParisTech, France, été 2014 (3.5 mois).
17. Laure Leblanc, Analyse de données et modélisation des centres d'appels d'Hydro-Québec, stagiaire de l'Université de Toulouse, France, été 2013 (4.5 mois).
18. Delphine Réau, Analyse de données et modélisation des centres d'appels d'Hydro-Québec, stagiaire de l'Université de Toulouse, France, été 2013 (4.5 mois).
19. Siham Kadi, Analyse de données et modélisation pour les centres d'appels du 911 de Montréal et d'Hydro-Québec, stagiaire de Master 2 en Statistique (Master Recherche) à l'université Pierre et Marie Curie, France, été 2013 (6 mois).
20. Moncef Chlouchi, Modélisation des arrivées des appels au centre 911 de Montréal, stagiaire de l'Ecole Polytechnique de Paris, France, été 2012 (3 mois 1/2).
21. Élise Ohier, Modélisation de la durée des appels type par type dans les centres d'appels d'Hydro-Québec, stagiaire de l'Université de Toulouse, France, été 2012 (4 mois).
22. Virginie Doré, Analyse statistique des données pour les centres d'appels d'Hydro-Québec, stagiaire de l'Université de Toulouse, France, été 2012 (4 mois).
23. Stéphanie Roupie, Analyse statistique des données et modélisation des arrivés pour les centres d'appels d'Hydro-Québec, stagiaire de l'Université de Toulouse, France, été 2012 (4 mois).
24. Émilien Jussiaume-Millet, Analyse statistique des données et simulation pour le centre d'appels 911 de Montréal, stagiaire de l'Université de Toulouse, France, été 2012 (4 mois).
25. Basile Verheecke, Estimation et simulation de processus d'arrivées dans les centres d'appels, stagiaire de l'ENSEEIH, Toulouse, France, été 2011 (3 mois).
26. Alexandre Jacquillat, Modélisation de la non-disponibilité des agents dans les centres d'appels, stagiaire de l'Ecole Polytechnique de Paris, France, été 2010 (3 mois 1/2).
27. Stéphane Furderer, Méthodes quasi-Monte Carlo en finance, stagiaire de l'INSA (Toulouse), été 2009 (3 mois).
28. Zdravko Botev, Splitting methods for Markov chains, étudiant de PhD, stagiaire de l'University of Queensland (Brisbane, Australie), été 2009 (2 mois, co-direction avec Dirk P. Kroese).
29. Samira Saggadi, Simulation d'événements rares en fiabilité, stagiaire de l'INRIA (Rennes), été 2009 (co-direction avec B. Tuffin).
30. Clément Teule, Contribution à des outils statistiques dans SSJ: librairie logicielle pour la simulation en Java, stagiaire de l'ISIMA, été 2008 (5 mois).
31. Thomas Reytier, Logiciel pour étudier l'équidistribution d'ensembles de points ayant une structure de réseau digital, stagiaire de l'INSA (Toulouse), été 2007 (3 mois).
32. Louis-Mathieu Lavergne, Conception et développement d'une interface pour un simulateur de centres d'appels téléphoniques, stage d'été chez Bell Canada, été 2007 (4 mois).
33. Sylvain Bonnet, Contribution à SSJ: librairie logicielle pour la simulation en Java, stagiaire de l'ISIMA, été 2007 (5 mois).
34. Frédéric Rozon, Logiciel pour mesurer l'uniformité des structures de réseaux, boursier de premier cycle du CRSNG, été 2006 (4 mois).
35. Mathieu Bague, Contribution à SSJ: librairie logicielle pour la simulation en Java, stagiaire de l'ISIMA, été 2006 (5 mois).
36. Christophe Charret, Logiciel pour étudier la structure des réseaux digitaux en base 2, stagiaire de l'ISIMA, été 2006 (5 mois).
37. Mario Pouchet, Logiciel Java pour la simulation, boursier de premier cycle du CRSNG, été 2005.

38. Alain Fidahoussen, Conception de logiciel pour l'analyse des générateurs basés sur des récurrences modulo 2, stagiaire de l'ISIMA, été 2005 (5 mois).
39. Boni Abdel Chabi-Yo, Méthodes de réduction de variance pour des applications en finance, travail d'été à temps plein, été 2004; travail à temps partiel, septembre 2004 à mai 2006.
40. Chiheb Dkhil, Méthodes quasi-Monte Carlo pour les chaînes de Markov ordonnées, boursier de premier cycle du CRSNG, été 2004.
41. Étienne Marcotte, Outils logiciels pour la simulation stochastique en Java, boursier de premier cycle du CRSNG, été 2004. travail à temps partiel, septembre à décembre 2004.
42. Wyeon Chan, Implantation de modèles de chaînes de Markov pour estimer la performance dans les centres d'appels, boursier de premier cycle du CRSNG, été 2004, travail à temps partiel, septembre à décembre 2004.
43. Pierre-Alexandre Tremblay, Méthodes Monte Carlo pour l'évaluation d'options, travail à temps partiel, janvier 2004 à avril 2004.
44. Éric Buist, Logiciel de simulation de centres d'appels téléphoniques, boursier de premier cycle du CRSNG, été 2003.
45. Abdelaziz Milib, Logiciel Java pour application de méthodes quasi-Monte Carlo randomisées, boursier de premier cycle du CRSNG, été 2003.
46. Chiheb Dkhil, Logiciel pour analyser la structure de réseau des récurrences linéaires, boursier de premier cycle du CRSNG, été 2003.
47. Wen Yu, Logiciel pour analyser la structure de réseau des récurrences linéaires, boursière de premier cycle du CRSNG, été 2003.
48. Éric Buist, Outils logiciels pour la simulation en Java, boursier de premier cycle du CRSNG, été 2002.
49. Denis Boissé, Logiciel Java pour génération de valeurs aléatoires et méthodes quasi-Monte Carlo, boursier de premier cycle du CRSNG, été 2002.
50. Pierre-Alexandre Tremblay, Classes SSJ pour l'évaluation d'options, travail à temps partiel, mai 2002 à août 2003.
51. Lakhdar Meliani, Un cadre d'application pour la simulation en Java, travail à temps partiel, janvier 2001 à mai 2003.
52. Katerine Martin, Implantation d'utilitaires Java pour la simulation, travail à temps partiel, hiver 2001.
53. Alexandre Deslauriers, Outils de simulation en C pour la finance, boursier de premier cycle du CRSNG, été 2001.
54. Grégoire Winterstein, Outils logiciels pour la réduction de variance en simulation, stage de recherche à temps plein, été 2000.
55. Francis Picard, Outils logiciels de simulation en C et en Java, boursier de premier cycle du CRSNG, été 1999.
56. Jean-Sébastien Sénécal, Outils logiciels de simulation en C et en Java, boursier de premier cycle du CRSNG, été 1999.
57. Armand Nganou, Logiciel pour mesurer l'équidistribution de séquences produites par des registres à décalage, travail d'été à temps plein, été 1996.
58. Anna Bragina, Implantation de générateurs pseudoaléatoires, travail d'été à temps plein, été 1996.
59. Ajmal Chaumon, Expérimentations de tests spectraux, assistant à temps partiel, 1996.
60. Jean-François Cordeau, Tests statistiques de générateurs pseudoaléatoires, assistant de recherche temps plein/partiel, mai 1994 à décembre 1995.
61. Yannick Thifault, travail d'été à temps plein, été 1995.
62. Yanick Champoux, travail d'été à temps plein, été 1995.
63. Armand Nganou, travail d'été à temps plein, été 1995.

- 64. Richard Dumoulin, Générateurs de Tausworthe combinés et MRG combinés, été et automne 1994.
- 65. Luc de Bellefeuille, Générateurs de Tausworthe combinés, 1993–1994.
- 66. Many more before 1995.

## OTHER PROFESSIONAL ACTIVITIES

### Editorial and reviewing tasks

- Associate Editor for the *ACM Transactions on Mathematical Software*, since August 2004.
- Associate Editor for *International Transactions in Operational Research*, since May 2007.
- Associate Editor for *Statistics and Computing* (Springer-Verlag), June 2003–January 2020.
- Editor-in-Chief of the *ACM Transactions on Modeling and Computer Simulation* (TOMACS), May 2010–June 2013.
- Area Editor for the *ACM Transactions on Modeling and Computer Simulation*, January 1994–April 2010.
- Associate Editor for *Cryptography and Communications—Discrete Structures, Boolean Functions and Sequences* (Springer-Verlag), December 2006–December 2014.
- Associate Editor for *Management Science*, January 2009–January 2011.
- Associate Editor for *The Open Applied Mathematics Journal*, January 2007–June 2010.
- Departmental Editor for the *Simulation* Department of *Management Science*, January 1993–May 1998.
- Guest Editor for a Special Issue of *Mathematics and Computers in Simulation* on “Monte Carlo Methods and Applications,” volume 161, July 2019.
- Guest Editor for a Special Issue of the *ACM Transactions on Modeling and Computer Simulation* on Random Number Generation and Highly-Uniform Point Sets, 2003.
- Guest Editor for a Special Issue of the *ACM Transactions on Modeling and Computer Simulation* on Random Number Generation, 1998.
- Reviewer for international scientific journals, conferences proceedings, and book manuscripts. Reviewer for the following journals since 1985:
  1. *ACM Transactions on Modeling and Computer Simulation*;
  2. *ACM Transactions on Mathematical Software*;
  3. *ACM Transactions on Privacy and Security*;
  4. *Advances in Applied Probability*;
  5. *Advances in Computational Mathematics*;
  6. *African Journal of Business Management*;
  7. *Annales Mathematicae et Informaticae*;
  8. *Annali di Matematica Pura ed Applicata*;
  9. *Annals of Applied Probability*;
  10. *Annals of the Institute of Statistical Mathematics*;
  11. *Annals of Operations Research*;
  12. *Applicable Algebra (AAECC)*;
  13. *Applications and Applied Mathematics*;
  14. *Applied Mathematical Modeling*;
  15. *Applied Mathematics and Computation*;
  16. *Applied Physics Letters*;
  17. *Applied Sciences*;
  18. *Australian and New-Zealand Industrial and Applied Mathematics (ANZIAM) Journal*;

19. Automatica;
20. Bernoulli Journal;
21. BIT Numerical Mathematics;
22. British Journal of Applied Science and Technology;
23. Bulletin of Mathematical Biology
24. Chaos, Solitons and Fractals;
25. Chemical Engineering Science;
26. Communications in Statistics—Simulation and Computation;
27. Communications in Statistics—Theory and Methods;
28. Communications of the ACM;
29. Computational Geosciences;
30. Computational Statistics and Data Analysis;
31. Computer Communications;
32. Computer Science in Economics and Management;
33. Computer Physics Communications;
34. Computers and Mathematics with Applications;
35. Computers and Operations Research;
36. Computers in Physics;
37. Concurrency and Computation: Practice and Experience;
38. Cryptography and Communications;
39. Cryptologia;
40. Discrete Event Dynamic Systems: Theory and Applications;
41. Dynamics of Atmospheres and Oceans;
42. Electronic Letters; Entropy;
43. European Journal of Control;
44. European Journal of Operations Research;
45. Europhysics Letters;
46. Facta Universitatis: Mathematics and Informatics;
47. Finite Fields and Their Applications;
48. Foundations of Computational Mathematics;
49. Geodesy and Geodynamics;
50. Health Care Management Science;
51. IBM Journal of Research and Development;
52. IEE Proceedings on Computers and Digital Techniques;
53. IEEE Access;
54. IEEE Communications Magazine;
55. IEEE Transactions on Automatic Control;
56. IEEE Transactions on Automation Science and Engineering;
57. IEEE Transactions on Circuits and Systems;
58. IEEE Transactions on Communications;
59. IEEE Transactions on Computers;
60. IEEE Transactions on Information Forensics and Security;
61. IEEE Transactions on Information Theory;
62. IEEE Transactions on Reliability;
63. IEEE Transactions on Systems, Man, and Cybernetics;
64. IEEE Transactions on Very Large Scale Integration Systems
65. IEICE Trans. on Fundamentals of Electronics, Commun. and Comput. Sciences;
66. IEICE Transactions on Information and Systems;
67. IET Circuits, Devices and Systems;
68. IET Generation, Transmission, and Distribution;
69. IIE Transactions;
70. INFOR;
71. Informatics;
72. Information Processing Letters;
73. INFORMS Journal on Computing;

74. Interfaces;
75. International Journal of Computers and Their Applications;
76. International Journal of Computer Mathematics;
77. International Journal of Foundations of Computer Science;
78. International Journal of Mathematics and Mathematical Sciences;
79. International Journal of Parallel, Emergent, and Distributed Systems;
80. International Journal of Production Economics;
81. International Journal of Systems Science;
82. International Transactions in Operational Research;
83. Investigación Operativa;
84. IPSI Transactions on Internet Research;
85. Journal of Applied Mathematics
86. Journal of Applied Probability;
87. Journal of Applied Statistics;
88. Journal of Business Research;
89. Journal of Complexity;
90. Journal of Computational and Applied Mathematics;
91. Journal of Computational and Graphical Statistics;
92. Journal of Computational Finance;
93. Journal of Computational Physics;
94. Journal of Economic Dynamics and Control;
95. Journal of Cryptology;
96. Journal of Experimental Algorithms;
97. Journal of Forecasting;
98. Journal of Intelligent Transportation Systems;
99. Journal of Mathematics and Mathematical Sciences;
100. Journal of Open Research Software;
101. Journal of Optimization Theory and Applications;
102. Journal of Parallel and Distributed Computing;
103. Journal of Physics A: Mathematical and General;
104. Journal of Simulation;
105. Journal of Statistical Computation and Simulation;
106. Journal of Statistical Planning and Inference;
107. Journal of Statistical Software;
108. Journal of Systems and Software;
109. Journal of the American Statistical Association;
110. Journal of the Franklin Institute;
111. Journal of the Institute of Electronic, Information, and Commun. Engineers.
112. Journal of the Royal Statistical Society, Series B;
113. Journal of Theoretical Probability
114. Journal of Zhejiang University Science;
115. Management Science;
116. Manufacturing and Service Operations Management;
117. Markov Processes and related Fields;
118. Mathematical Programming;
119. Mathematical and Computer Modeling;
120. Mathematics;
121. Mathematics and Computers in Simulation;
122. Mathematics of Computation;
123. Mathematics of Operations Research;
124. Measurement Science and Technology;
125. Mechanical Sciences;
126. Medical Physics;
127. Methodology and Computing in Applied Probability;
128. Monatshefte für Mathematik;

129. Naval Research Logistics;
130. Neural Computing and Applications
131. Operations Research;
132. Operations Research and Decisions;
133. Operations Research Letters;
134. Optimal Control Applications and Methods;
135. Optimization Methods and Software;
136. ORSA Journal on Computing;
137. Parallel Computing;
138. Physical Review E;
139. Physical Review Letters;
140. Probability in the Engineering and Informational Science;
141. Proceedings of the National Academy of Science of the USA;
142. Proceedings of the Royal Society A;
143. Production and Operations Management;
144. Pure and Applied Mathematics Quarterly;
145. Quantitative Finance;
146. Reliability Engineering and System Safety;
147. Science;
148. Scientia Iranica;
149. Scientific Programming;
150. SIAM Journal on Financial Mathematics;
151. SIAM Journal on Optimization;
152. SIAM Journal on Scientific Computing;
153. SIAM Review;
154. Simulation;
155. Simulation Modelling Practice and Theory;
156. Software Practice and Experience;
157. SoftwareX;
158. Statistica Neerlandica;
159. Statistical Papers;
160. Statistics and Computing;
161. Statistics and Probability Letters;
162. Stochastic Models;
163. Stochastic Systems;
164. Technique et Science Informatique;
165. The American Statistician;
166. The Computer Journal;
167. The Open Applied Mathematics Journal;
168. Theory of Computing Systems;
169. Transactions of the Society for Modeling and Simulation International;
170. Transportation Science;
171. VLSI Design;
  
172. Cambridge University Press (books);
173. Elsevier Science: Handbook of Operations Research and Management Science;
174. Feithschrift for Ian Sloan, Springer Verlag;
175. Lecture Notes in Statistics (Springer Series);
176. Kluwer Academic (books and chapters);
177. McGraw-Hill (books);
178. Panoramas et Synthèses (Société mathématique de France);
179. Princeton University Press (books);
180. Springer-Verlag (books);
181. Wiley (books);
182. Wiley Encyclopedia of Operations Research and Management;



- Reviewer for Several conference proceedings.
- Grant proposal evaluations for: Agence Nationale de la Recherche (France); Austrian Science Fund (FWF, Austria); Canada Council for the Arts (Killam Fellowships); Canada Research Chairs (Canada); Fond Québécois de Recherche en Nature et Technologie (Quebec); Hellenic Republic, National Center for Scientific Research (Greece); Institut National de Recherche en Informatique et Automatique (France); IVADO (Canada); K.U. Leuven (Belgium); MITACS (Canada); National Science Foundation (USA); Natural Sciences and Engineering Research Council (Canada); Netherlands Organisation for Scientific Research (Netherlands); Région de Bretagne (France);
- Evaluation for promotion and prizes for the following Universities:

Austrian Academy of Science, Austria;  
 Bilkent University, Ankara, Turkey;  
 Columbia University (Industrial Engineering), New York, USA;  
 Columbia University (Business School), New York, USA;  
 Cornell University, USA;  
 Florida State University, USA;  
 Georgia Institute of Technology (Industrial and Systems Engineering), USA;  
 Indian School of Business, Gachibowli, India;  
 Inria, France;  
 IREQ, Hydro-Québec, Canada;  
 Kuwait University;  
 Lahore University of Management Sciences, Pakistan;  
 McGill University, Montreal, Canada;  
 Memphis State University, Memphis, USA;  
 North-Carolina State University (Industrial Engineering), USA;  
 Northwestern University (Industrial Engineering), Illinois, USA;  
 Purdue University, USA;  
 Rensselaer Polytechnic Institute, USA;  
 Rice University, Houston, USA;  
 Stanford University, USA;  
 University College London, U.K.;  
 University of Calgary, Canada;  
 University of Cambridge, U.K.;  
 University of Cincinnati, USA;  
 University of Miami, USA;  
 University of New South Wales, Australia;  
 University of North-Carolina, Chapel-Hill, USA;  
 University of Oxford, UK;  
 University of Queensland, Australia;  
 University of Salzburg, Autriche;  
 University of San Francisco, USA;  
 University of Southampton, U.K.  
 University of Western Ontario, Canada;  
 University of Wisconsin, Madison, USA;

## Conferences and workshops

- Co-Organizer and program committee member of the *13th International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing* (MCQMC'18), Rennes, France, July 2018.

- Co-Organizer of SAMSI Quasi-Monte Carlo Workshops, SAMSI, Raleigh-Durham, North-Carolina, USA, 28 Aug. – 1 Sept. 2017 and May 7–9, 2018.
- Organizer and Chair of the *Eleventh International Conference on Monte Carlo Methods and its Applications*, Montreal, July 2017.
- Organizer and Chair of the *INFORMS Simulation Society Workshop* (held every two years), Montreal, July 2011.
- Organizer and Chair of an international research workshop on call centers, Montreal, May 2010.
- Organizer and Chair of the *Eighth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing* (MCQMC'08), Montreal, July 6–11, 2008.
- Organizer and Chair of an international workshop on call centers, Montreal, May 2006.
- Organizer and Chair of a two-week international workshop on random number generators and highly-uniform point sets, at the Mathematical Research Center, Montreal, June 2002.
- Co-organizer (with G. Gauthier) of an international workshop on mathematical finance, sponsored by GERAD and CIRANO, University of Montreal, May 1999.
- Organizer and Chair of a three-week international workshop on pseudorandom number generation, at the Mathematical Research Center in Montreal, 3–21 June 1996.
- Program Committee Member of international conferences. Since 2000:
  - MCQMC 2024: Sixteenth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Waterloo, Canada, Aug. 2024.
  - MCM 2023: 14th International Conference on Monte Carlo Methods and its Applications, Paris, France June 2023.
  - MCQMC 2022: Fifteenth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Linz, Austria, July 2022.
  - ICORES 2022: International Conference on Operations Research and Enterprise Systems, Vienna, Austria, Feb. 2022.
  - MCM 2021: 13th International Conference on Monte Carlo Methods and its Applications, Mannheim, Germany July 2021.
  - MCQMC 2020: Fourteenth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Oxford, U.K., Aug. 2020.
  - ICORES 2020: International Conference on Operations Research and Enterprise Systems, Valletta, Malta, Feb. 2020.
  - SIMULTECH 2019: International Conference on Simulation and Modeling Methodologies, Technologies and Applications, Prague, Czech Republic, July 2019.
  - MCM 2019: Twelfth International Conference on Monte Carlo Methods and its Applications, Sydney, Australia, July 2019.
  - Valuetools 2019: International Conference on Performance Evaluation Methodologies and Tools Palma de Mallorca, Spain, March 2019.
  - ICORES 2019: International Conference on Operations Research and Enterprise Systems, Prague, Czech Republic, Feb. 2019.
  - MCQMC 2018: Thirteenth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Rennes, France, July 2018.
  - SIMULTECH 2018: International Conference on Simulation and Modeling Methodologies, Technologies and Applications, Porto, Portugal, July 2018.
  - ICORES 2018: International Conference on Operations Research and Enterprise Systems, Funchal, Portugal, Feb. 2018.

MCM 2017: Eleventh International Conference on Monte Carlo Methods and its Applications, Montreal, Canada, July 2017.

SIMULTECH 2017: International Conference on Simulation and Modeling Methodologies, Technologies and Applications, Madrid, Spain, July 2018.

ICORES 2017: International Conference on Operations Research and Enterprise Systems, Porto, Portugal, Feb. 2017.

MCQMC 2016: Twelve International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Stanford, California, Aug. 2016.

SIMULTECH 2016: International Conference on Simulation and Modeling Methodologies, Technologies and Applications, Lisbon, Portugal, July 2016.

ICORES 2016: International Conference on Operations Research and Enterprise Systems, Rome, Italy, Feb. 2016.

SIMUL 2015: Seventh International Conference on Advances in System Simulation, Barcelona, Nov. 2015.

SIMULTECH 2015: International Conference on Simulation and Modeling Methodologies, Technologies and Applications, Colmar, France, July 2015.

MCM 2015: Tenth IMACS Seminar on Monte Carlo Methods, Linz, Austria, July 2015.

BIRS Workshop on Applied Probability Frontiers: Computational and Modeling Challenges, Banff, Canada, June 2015.

SIMULTECH 2014: International Conference on Simulation and Modeling Methodologies, Technologies and Applications, Vienna, Austria, Aug. 2014.

MCQMC 2014: Eleventh International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Leuven, Belgium, April 2014.

ICORES 2014: International Conference on Operations Research and Enterprise Systems, Angers, France, March 2014.

SNA-MC 2013: Supercomputing in Nuclear Applications and Monte Carlo, Paris, Oct. 27-31, 2013.

MCM 2013: Ninth IMACS Seminar on Monte Carlo Methods, Annecy, France, Aug. 2013.

WorldCIST'13: The 2013 World Conference on Information Systems and Technologies, Olhão, Algarve, Portugal, March 2013.

WSC 2012: Winter Simulation Conference, Berlin, Dec. 2012.

CORS 2012: Canadian Operations Research Society Conference, Niagara Falls, June 2012.

MCQMC 2012: Tenth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Sydney, Australia, Feb. 2012.

MCM 2011: Eighth IMACS Seminar on Monte Carlo Methods, Bulgaria, Aug. 2011.

INFORMS Simulation Society Research Workshop (chair and organizer), Montreal, July 2011.

MCQMC 2010: Ninth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Warsaw, Poland, Aug. 2010.

MOSIM 2010: 8-ième Conférence Francophone de Modélisation et Simulation, Tunisie, May 2010.

SIMUTools 2010: Spain March 2010.

SIMUL 2009: Porto, Portugal, Sept. 2009.

MCM 2009: Seventh IMACS Seminar on Monte Carlo Methods, Bruxelles, Belgique, Sept. 2009.

The 15th INFORMS Applied Probability Society Conference, Ithaca, New York, July

2009.

ISC 2009: International Industrial Simulation Conference, Loughborough, United Kingdom, June 2009.

SIMUTools 2009: Rome, Italia, March 2009.

ESM 2008: European Simulation and Modeling Conference, Le Havre, France Oct. 2008.

RESIM 2008: 7th International Workshop on Rare Event Simulation, Rennes, France, Sept. 2008.

Workshop on Generation, Testing and Applications of Random Number Sequences, Bucharest, Sept. 2008.

MCQMC 2008: Eighth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing (Chair and organizer), Montréal, Canada, July 2008.

ISC 2008: International Industrial Simulation Conference, Lyon, France, June 2008.

MOSIM 2008: 7-ième Conférence Francophone de Modélisation et Simulation, Paris, April 2008.

SIMUTools 2008, Marseilles, March 2008.

ESM 2007: European Simulation and Modeling Conference, Malta, Oct. 2007.

Valuetools 2007: International Conference on Performance Evaluation Methodologies and Tools, Nantes, France, Oct. 2007.

ISC 2007: International Industrial Simulation Conference, Delft, June 2007.

MCM 2007: Sixth IMACS Seminar on Monte Carlo Methods, Reading, United Kingdom, June 2007.

ESM 2006: European Simulation and Modeling Conference, Toulouse, France, Oct. 2006.

MCQMC 2006: Seventh International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Ulm, Germany, Aug. 2006.

ISC 2006: Industrial Simulation Conference, Palermo, Italy, June 2006.

Workshop on Call Centers, Montréal, May 2006.

ESM 2005: European Simulation and Modeling Conference, Porto, Portugal, Oct. 2005.

APS 2005: INFORMS Applied Probability Society Conference, Ottawa, Canada, July 2005.

MCM 2005: IMACS Symposium on Monte Carlo Methods, Tallahassee, Florida, May 2005.

MCQMC 2004: Sixth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Juan-Les-Pins, France, June 2004.

International Conference on Computational Science and its Applications, Montréal, 18–21 May 2003.

Fifth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Singapore, Nov. 2002.

Workshop on Random Number Generators and Highly Uniform Point Sets, Montréal, 17–28 June 2002.

European Simulation Multiconference, Darmstadt, Germany, June 2002.

International Conference on Grand Challenges for Modeling and Simulation, San Antonio, Texas, Jan. 2002.

MCM 2001: IMACS Seminar on Monte Carlo Methods, Salzburg, Austria, Sept. 2001.

Troisièmes Journées Francophones de Recherche Opérationnelle, Québec, May 2000.

Fourth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, Hong Kong, Dec. 2000.

International Workshop on Decision and Control in Management Sciences, Montreal, Oct. 2000.

Many more conferences before 2000.

## Other

- Member of several Ph.D. thesis and M.Sc. thesis committees.
- Steering Committee Member for the International Conference on Monte Carlo Methods and its Applications (biennial conference), 2009–2021. Chair for 2017–2021.
- Steering Committee Member for the International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing, 2006–2024.
- Member of the selection committee for the “INFORMS Simulation Society Lifetime Professional Achievement Award”, 2021–2023.
- Member of the selection committee for the “INFORMS Simulation Society Outstanding Publication Award”, 2019–2021.
- Member of the selection committee for the “ACM Special Interest Group on Simulation: Distinguished Contributions Award”, 2017–2019.
- Member of the selection committee for the “INFORMS Simulation Society Distinguished Service Award”, 2012–2015.
- Member of the selection committee for the “INFORMS Simulation Society Outstanding Publication Award”, 2011–2014.
- Program committee member for the Master in Mathematical and Computational Finance, 2007–2011.
- Member of the selection committee for the “INFORMS Computing Society Best Publication Award”, 2006.
- Member of the selection committee for the “INFORMS College on Simulation Outstanding Publication Award”, Jan. 2000–Dec. 2002 (Chair in 2002).
- Member of the Board of the “Centre de Recherches Mathématiques” in Montreal (1993–1997).
- Member of the *planning committee* of the Faculty of Arts and Sciences at the University of Montreal (1992–1995 and 2003–2007).
- Member of the Institute for Operations Research and the Management Sciences (INFORMS).
- Research and consulting contracts occasionally. Work done for (partial list): Le Barreau du Québec; Provost Transport Routier; Ogilvy Renault Avocats; Régie de l’Assurance Maladie du Québec; Bell Northern Research; Newbridge Networks; Énergie Atomique du Canada; ALCAN Aluminium; Brooks Automation (*Automod* simulation software); Rockwell Software (*Arena* simulation software); New South Wales Lotteries (Australia); Spielo Gaming; Alcatel Canada; Canadian Bank Note; SAS Corporation; Toshiba; Simul8; Loto-Québec; Inosim; The Mathworks (MATLAB software); Hydro-Québec; Montréal Police Service; Advanced Micro Devices (AMD); Ultimate Risk Solutions; SNCF (France).

## OTHER ACTIVITIES

- Sport activities: road cycling and cross-country skiing. Canadian champion in road cycling (by age groups) in 2000, 2001, 2011, and 2012. Second in 2002 and 2004. Quebec champion in road race in 1996, 2000, 2001, 2003, 2012; in time trial in 2002, 2003, 2004, 2005, 2012; and in criterium in 2011 and 2016. Winner of America’s cup in 2000 and 2012. Named *cyclist of the year 2012* in masters categories by the Quebec Cycling Federation. Bronze medal in Canadian cross-country skiing championship (50 km classic) in 1994.

- Coach in Track and Field 1970–1992. Member of the Canadian team at Olympic games, World Championships, Commonwealth Games, etc.. Quebec’s track and field federation’s “coach of the year” in 1985 and 1992. Coach of the Barcelona Olympic games silver medalist (20 km walk) and world record holder (30 km walk) Guillaume Leblanc, from 1973 to 1992.