



Protected when completed

Date Submitted: 2021-10-31 05:21:07

Confirmation Number: 1384027

Template: NSERC_Researcher

Dr. Fabian Bastin

Correspondence language: French

Contact Information

The primary information is denoted by (*)

Address

Mailing (*)

Département d'Informatique et
de Recherche Opérationnelle
Université de Montréal
CP 6128, Succ. Centre-Ville
Montréal Québec H3C 3J7
Canada

Primary Affiliation

Département d'Informatique et
de Recherche Opérationnelle
Pavillon André-Aisenstadt
2920, Chemin de la Tour
Montréal Québec H3T 1J4
Canada

Telephone

Fax 514-3435834

Work (*) 514-3436952

Email

Work fabian.bastin@cirrelt.ca

Work fabian.bastin@umontreal.ca

Work (*) bastin@iro.umontreal.ca



Protected when completed

Dr. Fabian Bastin

Language Skills

Language	Read	Write	Speak	Understand	Peer Review
English	Yes	Yes	Yes	Yes	Yes
French	Yes	Yes	Yes	Yes	Yes

Degrees

- 2006/12 Post-doctorate, Algorithmics, Centre Européen de Recherche et de Formation Avancée en Calcul Scientifique
Supervisors: Serge Gratton, 2005/1 - 2006/12
- 2004/12 Post-doctorate, Transportation, Imperial College of Science, Technology and Medicine
Supervisors: John Polak, 2004/10 - 2004/12
- 2004/3 Doctorate, Mathematics, Faculté universitaire Notre-Dame de la Paix
Supervisors: Philippe Toint, 2000/9 - 2004/9; François Louveaux, 2000/9 - 2004/9
- 2001/9 Diploma, Mathematics, Faculté universitaire Notre-Dame de la Paix
Supervisors: Philippe Toint, 2000/9 - 2001/9; François Louveaux, 2000/9 - 2001/9
- 1999/6 Master's Equivalent, Mathematics, Faculté universitaire Notre-Dame de la Paix
Supervisors: Philippe Toint, 1998/9 - 1999/6; Éric Cornélis, 1998/9 - 1999/6
- 1997/6 Bachelor's Equivalent, Mathematics, Faculté universitaire Notre-Dame de la Paix

Recognitions

- 2017/6 Prix "Transport de marchandises", Association Québécoise des Transports, attribué au CIRRELT et à CargoM pour le projet "Measuring and improving fluidity of the transportation by trucks" (Frejinger, E., Morin, L.R., Bastin, F. et Trépanier, M.)
Association Québécoise des Transports
Prize / Award
Prize attributed to the CIRRELT and CargoM for the project "Measuring and improving fluidity of the transportation by trucks", led by Emma Frejinger. Other team members were Léonard Ryo Morin, Fabian Bastin, and Martin Trépanier.

User Profile

Research Specialization Keywords: Stochastic optimization, Nonlinear programming, Statistical estimation, Discrete choice, Finance

Employment

2019/6	Professeur Titulaire Informatique et Recherche Opérationnelle, Arts et Sciences, Université de Montréal Full-time, Professor Tenure Status: Tenure
2013/6 - 2019/5	Professeur Agrégé Informatique et Recherche Opérationnelle, Arts et Sciences, Université de Montréal Full-time, Associate Professor Tenure Status: Tenure
2019/1 - 2019/2	Chargé de Cours Mathematics and Industrial Engineering, École Polytechnique de Montréal Part-time, Lecturer Tenure Status: Non Tenure Track
2018/1 - 2018/2	Chargé de Cours Mathematics and Industrial Engineering, École Polytechnique de Montréal Part-time, Lecturer Tenure Status: Non Tenure Track
2015/1 - 2015/2	Professeur invité Applied Mathematics, Computer Science and Control, École Nationale d'Aviation Civile Part-time, Visiting Professorship Tenure Status: Non Tenure Track
2007/1 - 2013/5	Professeur Adjoint Informatique et recherche opérationnelle, Arts et Sciences, Université de Montréal Full-time, Assistant Professor Tenure Status: Tenure Track
2011/4 - 2011/5	Professeur invité Mathematics, Faculté des Sciences, Facultés universitaire Notre-Dame de la Paix Part-time, Visiting Professorship Tenure Status: Non Tenure Track
1999/9 - 2000/9	Researcher Mathematics, Faculté des Sciences, Facultés universitaire Notre-Dame de la Paix Full-time Tenure Status: Non Tenure Track Researcher in the Transportation Research Group

Research Funding History

Awarded [n=4]

2018/4 - 2024/3	NSERC CREATE Program on Machine Learning in Quantitative Finance and Business Analytics, Grant
Co-investigator	<p>Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC) Foncer Total Funding - 1,650,000 Portion of Funding Received - 150,000 Funding Competitive?: Yes</p> <p>Co-investigator : Bengio, Yoshua; Bijvank, Marco; Delage, Erick; Gauthier, Geneviève,; Hyndman, Cody; Lemieux, Christiane; Levin, Yuri; Tapp, Alain; Yu, Jia Yuan;</p>

2017/4 - 2022/3 Principal Investigator	Principal Investigator : Morales, Manuel On the exploitation of uncertainty in exact and approximate optimization, Fellowship Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC) Subventions à la découverte Total Funding - 120,000 Portion of Funding Received - 120,000 Funding Competitive?: Yes
2021/6 - 2021/10 Principal Applicant	Valeur à vie de clients dans une entreprise de commerce électronique, Fellowship Funding Sources: Mathematics of Information Technology and Complex Systems (MITACS) Accelerate Total Funding - 15,000 Portion of Funding Received - 15,000 Funding Competitive?: No
2021/5 - 2021/10 Principal Applicant	Programme de démarrage de projet de recherche collaborative de Consilium Crypto - IVADO, Fellowship Funding Sources: Institute for Data Valorisation (IVADO) Démarrage Total Funding - 25,000 Portion of Funding Received - 25,000 Funding Competitive?: No
Completed [n=17]	
2021/6 - 2021/10 Principal Applicant	Développement de méthodes d'estimation de la demande d'électricité à court-terme, Fellowship Funding Sources: Mathematics of Information Technology and Complex Systems (MITACS) Accelerate Total Funding - 15,000 Portion of Funding Received - 15,000 Funding Competitive?: No
2021/2 - 2021/9 Principal Applicant	Multivariate sequential data generator with long term, non-linear dependency, Fellowship Funding Sources: Mathematics of Information Technology and Complex Systems (MITACS) Accélérate Total Funding - 30,000 Portion of Funding Received - 30,000 Funding Competitive?: No
2021/1 - 2021/4 Principal Applicant	Market making for digital assets, Fellowship Funding Sources: Mathematics of Information Technology and Complex Systems (MITACS) Accelerate Total Funding - 22,000 Portion of Funding Received - 22,000 Funding Competitive?: No
2020/8 - 2020/12	Discount Pricing Recommendations, Fellowship

- Principal Investigator **Funding Sources:**
 Mathematics of Information Technology and Complex Systems (MITACS)
 Accelerate
 Total Funding - 15,000
 Portion of Funding Received - 15,000
 Funding Competitive?: No
- 2020/8 - 2020/12
 Principal Investigator Optimization of sentence classification for insurance applications, Fellowship
Funding Sources:
 Mathematics of Information Technology and Complex Systems (MITACS)
 Accelerate
 Total Funding - 15,000
 Portion of Funding Received - 15,000
 Funding Competitive?: No
- 2020/7 - 2020/11
 Principal Investigator L'intelligence artificielle au service de l'industrie de l'assurance, Fellowship
Funding Sources:
 Mathematics of Information Technology and Complex Systems (MITACS)
 Accelerate
 Total Funding - 15,000
 Portion of Funding Received - 15,000
 Funding Competitive?: No
- 2020/3 - 2020/11
 Principal Applicant Modeling order book dynamics, Fellowship
Funding Sources:
 Mathematics of Information Technology and Complex Systems (MITACS)
 Accelerate
 Total Funding - 30,000
 Portion of Funding Received - 30,000
 Funding Competitive?: No
- 2020/4 - 2020/7
 Principal Applicant Algorithme décisionnel intelligent pour systèmes énergétiques multiagents, Fellowship
Funding Sources:
 Mathematics of Information Technology and Complex Systems (MITACS)
 Accelerate
 Total Funding - 25,000
 Portion of Funding Received - 25,000
 Funding Competitive?: No
 Co-applicant : Bouffard, François
- 2019/12 - 2020/3
 Principal Applicant Algorithme décisionnel intelligent pour systèmes énergétiques, Fellowship
Funding Sources:
 Mathematics of Information Technology and Complex Systems (MITACS)
 Accélération
 Total Funding - 25,000
 Portion of Funding Received - 25,000
 Funding Competitive?: No
 Co-applicant : Bouffard, François
- 2019/5 - 2019/9
 Principal Investigator Machine Learning Strategies in the Physical North American Power Markets, Fellowship
Funding Sources:
 Mathematics of Information Technology and Complex Systems (MITACS)
 Accélération
 Total Funding - 13,334

	Portion of Funding Received - 13,334 Funding Competitive?: No
2017/9 - 2019/8 Co-investigator	Application des méthodes d'apprentissage machine au problème d'inventaire dans les stratégies algorithmiques à haute fréquence: Une approche via un générateur de flux artificiel d'ordres., Fellowship Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC) Collaborative Research and Development Total Funding - 26,284 Portion of Funding Received - 8,762 Funding Competitive?: Yes National Bank of Canada Research Contract Total Funding - 35,000 Portion of Funding Received - 11,667 Funding Competitive?: Yes PROMPT-Québec Total Funding - 31,582 Portion of Funding Received - 10,528 Funding Competitive?: Yes Principal Investigator : Morales, Manuel
2019/1 - 2019/5 Principal Investigator	Algorithme décisionnel intelligent pour systèmes de stockage énergétique, Fellowship Funding Sources: Mathematics of Information Technology and Complex Systems (MITACS) Accélération Total Funding - 15,000 Portion of Funding Received - 15,000 Funding Competitive?: No Co-investigator : Bouffard, François
2018/7 - 2018/12 Principal Investigator	Development of demand forecasting and inventory management models in the alcohol market, Fellowship Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC) Subventions d'engagement partenarial Total Funding - 25,000 Portion of Funding Received - 25,000 Funding Competitive?: Yes
2018/3 - 2018/9 Principal Investigator	Développement de modèles alternatifs de risque de crédits avec des réseaux artificiels de neurones, Fellowship Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC) Subventions d'engagement partenarial Total Funding - 25,000 Portion of Funding Received - 25,000 Funding Competitive?: Yes
2018/6 - 2018/8 Principal Investigator	Extensions de l'algorithme du gradient stochastique pour l'estimation de modèles mixed logit, Fellowship Funding Sources: IVADO

Undergraduate Research Scholarship

Total Funding - 2,500

Portion of Funding Received - 2,500

Funding Competitive?: Yes

Principal Applicant : Laprés-Chartrand, Jean

2012/4 - 2017/3

Principal Investigator

Towards new solution techniques in mathematical programming with scenarios, Fellowship

Funding Sources:

Natural Sciences and Engineering Research Council of Canada (NSERC)

Subventions à la découverte

Total Funding - 105,000

Portion of Funding Received - 105,000

Funding Competitive?: Yes

2015/5 - 2015/8

Co-applicant

Modeling and simulation of a hydroelectricity generation network, Fellowship

Funding Sources:

Natural Sciences and Engineering Research Council of Canada (NSERC)

Undergraduate Student Research Award

Total Funding - 4,500

Portion of Funding Received - 0

Funding Competitive?: Yes

Student/Postdoctoral Supervision

Bachelor's [n=6]

2020/9 - 2021/4

Principal Supervisor

Bédard, Sandrine (Completed) , Université de Montréal

Thesis/Project Title: Impact du COVID-19 sur l'industrie de la restauration et des bars et facteurs de résilience de l'industrie

Present Position: Intern, Amazon

2019/6 - 2019/9

Principal Supervisor

Ma, Chiyu (Completed) , Nankai University

Thesis/Project Title: Random Search in Metaheuristics and Derivative-free Optimization

Present Position: Ph.D. student, The Hong Kong Polytechnic University

2018/9 - 2018/12

Principal Supervisor

Deaudelin, Lauranne (Completed) , Université de Montréal

Thesis/Project Title: Implémentation de la méthode du gradient moyen stochastique

Present Position: Validation advisor, Desjardins

2018/5 - 2018/8

Principal Supervisor

Laprés-Chartrand, Jean (Completed) , Université de Montréal

Thesis/Project Title: Extensions de l'algorithme du gradient stochastique pour l'estimation de modèles mixed logit

Present Position: Master student

2018/5 - 2018/7

Principal Supervisor

Bhaisare, Rajrishi Amar Singh (Completed) , Indian Institute of Technology Kharagpur

Thesis/Project Title: Management of outliers in discrete choice data

Present Position: Master student

2017/9 - 2017/12

Principal Supervisor

Brihlante, Alexandre (Completed) , Université de Montréal

Thesis/Project Title: Algorithme du gradient stochastique pour l'estimation de modes de choix discrets

Present Position: Vice President, BMO Capital Markets

Bachelor's Honours [n=2]

- 2015/6 - 2015/8 Tao, Manyuan (Completed) , Xiamen University
Principal Supervisor Thesis/Project Title: Lanczos Method Algorithm for Solving the Trust-Region Subproblem
Present Position: Ph.D. student, University of Maryland
- 2015/5 - 2015/8 Pigeon, Pierre-Luc (Completed) , Université de Montréal
Principal Supervisor Thesis/Project Title: Modeling and simulation of a hydroelectricity generation network
Present Position: Programmer Analyst, GIRO, Montreal

Master's non-Thesis [n=9]

- 2021/4 - 2021/9 Borie, Pierre (Completed) , École Nationale d'Aviation Civile
Principal Supervisor Thesis/Project Title: Développement de méthodes d'estimation de la demande d'électricité à court-terme
Present Position: M.Sc. Student, École Nationale d'Aviation Civile - Université de Montréal
- 2021/1 - 2021/12 Milot, François (In Progress) , Université de Montréal
Principal Supervisor Student Degree Expected Date: 2021/12
Thesis/Project Title: Tarification en assurance IARD avec de l'apprentissage par renforcement
Present Position: Master student, Université de Montréal
- 2020/5 - 2021/12 Dallaire, Martin (In Progress) , Université de Montréal
Principal Supervisor Student Degree Expected Date: 2021/12
Thesis/Project Title: Analyse du cycle de vie des clients de commerce en ligne.
Present Position: Master student, Université de Montréal
- 2019/6 - 2019/9 Shi-Garrier, Loic (Completed) , École Nationale d'Aviation Civile
Principal Supervisor Thesis/Project Title: Hessian-free second-order methods for statistical learning
Present Position: Ph.D. student, École Nationale d'Aviation Civile
- 2019/5 - 2019/12 Benazzouz, Maria (Completed) , Université de Montréal
Principal Supervisor Thesis/Project Title: Tarification d'options à l'aide du calcul de Malliavin et comparaison avec des approches par réseaux de neurones.
Present Position: Employee, Desjardins
- 2019/5 - 2019/12 Chavez, Raul (Completed) , Université de Montréal
Principal Supervisor Thesis/Project Title: Tarification d'options à l'aide du calcul de Malliavin et comparaison avec des approches par réseaux de neurones.
Present Position: Teaching assistant, École de Technique Supérieure
- 2018/5 - 2018/8 Raschas, Niels (Completed) , Université de Montréal
Principal Supervisor Thesis/Project Title: Conception de modèles de demande et d'inventaire de boissons alcoolisées dans l'industrie de loisir.
Present Position: Market Risk Modeller, ING Nederland
- 2018/1 - 2018/8 Butoyi, Ghislain (Completed) , Université de Montréal
Principal Supervisor Thesis/Project Title: Valorisation d'option américaine et intégration de techniques d'apprentissage machine
Present Position: Data Scientist, Desjardins
- 2017/9 - 2018/5 Olagot Koutana, Cheryl (Completed) , Université de Montréal
Principal Supervisor Thesis/Project Title: Prédiction de la volatilité à court terme à l'aide des SVM
Present Position: Revenue Management Analyst, Transat

Master's Thesis [n=9]

- 2020/9 - 2022/8 Jutras-Dubé, Pascal (In Progress) , Université de Montréal
Principal Supervisor Thesis/Project Title: Génération de populations synthétiques
Present Position: M.Sc. student

2018/11 - 2020/6 Principal Supervisor	Desage, Ysael (Completed) , Université de Montréal Thesis/Project Title: Algorithme décisionnel intelligent pour systèmes de stockage énergétique Present Position: Ph.D. student, McGill University
2018/9 - 2021/8 Principal Supervisor	Laprés-Chartrand, Jean (In Progress) , Université de Montréal Student Degree Expected Date: 2021/8 Thesis/Project Title: Measuring RocksDB performance and adaptive sampling model estimation Present Position: MSc student
2018/4 - 2020/6 Principal Supervisor	Malette, Marie-Ève (Completed) , Université de Montréal Thesis/Project Title: Application des techniques d'apprentissage automatique en finance Present Position: AI Scientist, National Bank of Canada
2018/1 - 2022/12 Principal Supervisor	Hénault, Vincent (In Progress) , Université de Montréal Thesis/Project Title: Développement de modèles de prévision de demande et de gestion d'inventaire Present Position: MSc student (in suspension)
2017/10 - 2020/5 Principal Supervisor	Beaulne, Alexandre (Completed) , Université de Montréal Thesis/Project Title: European Day-Ahead Electricity Price Forecasting Present Position: Chief Technology Officer, MNGR
2015/9 - 2017/9 Principal Supervisor	Sboui, Wael (Completed) , Université de Montréal Thesis/Project Title: Évaluation de politiques d'ordonnancement d'atterrissages d'avions au moyen de simulation Monte Carlo Present Position: Cognitive Process Automation development consultant, CGI
2015/5 - 2018/6 Principal Supervisor	Abodinar, Laila (Completed) , Université de Montréal Thesis/Project Title: Stochastic Simulated Annealing Present Position: Unemployed
2010/9 - 2016/8 Principal Supervisor	Zehtabian, Shohre (Completed) , Université de Montréal Thesis/Project Title: Development of new scenario decomposition techniques for linear and nonlinear stochastic programming Present Position: PhD student, Aarhus University
Doctorate [n=10]	
2021/9 - 2023/8 Principal Supervisor	Gagné, Nicolas (In Progress) , University of Montreal Thesis/Project Title: Learning with market-oriented programming Present Position: Ph.D. student
2019/9 - 2022/8 Principal Supervisor	Carignan, Jean-Francis (In Progress) , Université de Montréal Thesis/Project Title: Reinforcement learning methods for market making Present Position: Étudiant
2019/9 - 2022/8 Principal Supervisor	Rieussec, Jérémy (In Progress) , Université de Montréal Thesis/Project Title: Hessian-free second order methods in statistical learning Present Position: Étudiant
2018/9 - 2022/8 Principal Supervisor	Zegbeh, Francis Ange (In Progress) , Université de Montréal Thesis/Project Title: Application de méthodes d'apprentissage automatique en courtage haute fréquence Present Position: PhD student

2018/1 - 2021/12 Principal Supervisor	Chantal-Huot, Francis (In Progress) , Université de Montréal Thesis/Project Title: Développement de techniques d'apprentissage automatique en courtage haute fréquence Present Position: PhD student
2017/5 - 2018/12 Co-Supervisor	Keutchayan, Julien (Completed) , École Polytechnique de Montréal Thesis/Project Title: New methods for generating scenario trees Present Position: Lead Data Scientist, Qohash
2016/1 - 2020/3 Principal Supervisor	Khassiba, Ahmed (Completed) , Université de Montréal Thesis/Project Title: Two-stage stochastic programming for aircraft arrival scheduling under uncertainty Present Position: Post-doctoral researcher, École Nationale d'Aviation Civile
2014/1 - 2019/12 Co-Supervisor	Thuy, Anh Ta (Completed) , Université de Montréal Thesis/Project Title: Staffing and Scheduling Optimization with Chance Constraints in Call Centers Present Position: Assistant Professor, Phenikaa University
2013/9 - 2020/5 Co-Supervisor	Morin, Léonard Ryo (Completed) , Université de Montréal Thesis/Project Title: Traffic prediction and bilevel network design Present Position: Scientific Software Developer, Bentley Systems
2013/5 - 2016/3 Co-Supervisor	Mai, Anh Tien (Completed) , Université de Montréal Thesis/Project Title: Dynamic Programming Approaches for Estimating and Applying Large-scale Discrete Choice Models Present Position: Assistant Professor, Singapore Management University

Post-doctorate [n=1]

2018/1 - 2019/12 Co-Supervisor	Yergeau, Gabriel (Completed) , Université de Montréal Thesis/Project Title: Techniques d'apprentissage automatique en courtage haute fréquence Present Position: Research assistant, HEC Montréal
-----------------------------------	---

Event Administration

2019/3 - 2021/10	Co-organizer, CRM Workshop on Optimization under Uncertainty, Workshop, 2021/9 - 2021/10
2020/10 - 2021/7	Member of the Program Committee, 18th EUROPT Workshop on Advances in Continuous Optimization, Workshop, 2021/7 - 2021/7
2016/10 - 2018/5	Co-organizer, 15th EUROPT Workshop on Advances in Continuous Optimization, Workshop, 2017/7 - 2017/7
2016/10 - 2017/7	Member of the Program Committee, International Conference on Monte Carlo Methods and Applications, Conference, 2017/7 - 2017/7
2014/7 - 2015/6	Invited Sessions Co-Chair, CORS/INFORMS 2015, Conference, 2015/6 - 2015/6
2014/7 - 2015/6	Co-organizer, Summer School on Dynamic Discrete Choice Models: Econometric Models and Operations Research Methods, Course, 2015/6 - 2015/6

Editorial Activities

2015/1 - 2099/1	Associate Editor, Journal of Industrial and Management Optimization, Journal
-----------------	--

International Collaboration Activities

2015/1 - 2019/6 Invited professor, research collaborator, France
 Following a visit at the National School of Civil Aviation (ENAC: Ecole Nationale d'Aviation Civile) in Toulouse, France, from January to May, 2015, I am involved in a research project on airplane scheduling, partly funded by ENAC, with the co-supervision of a PhD student. A formal co-advisorship agreement has been signed between ENAC and the University of Montreal.

Committee Memberships

2019/12 Committee Member, Comité d'évaluation des bourses, Fonds de recherche du Québec - Nature et technologies (FRQNT)

2019/4 Committee Member, Fin-ML - CREATE Program team, Université de Montréal
 Co-founder of the Fin-ML program and member of the grant committee.

2009/2 Committee Member, Société Canadienne de Recherche Opérationnelle, Section de Montréal, Canadian Operational Research Society

2018/11 - 2020/12 Committee Member, Membre du comité de bourses du CIRRELT, Centre Interuniversitaire de Recherche sur les Réseaux d'Entreprise, la Logistique et le Transport

Other Memberships

2017/6 Master program responsible, Université de Montréal
 Responsible of the Master program in Mathematical and Computational Finance

Presentations

1. Chavez R*, Benazzouz M*, Kharrat M. (2021). A comparison of machine learning and Malliavin calculus for American options sensitivities estimation and pricing. International e-Conference on Pure and Applied Mathematical Sciences, Tunisia
 Main Audience: Researcher
 Invited?: Yes, Keynote?: No
2. Hanini, M. (2021). Assistants virtuels pour le secteur des assurances. Webinaire IVADO, Montreal, Canada
 Invited?: Yes, Keynote?: No
3. Laprés-Chartrand J*, Rieussec J*, Shi-Garrier L*. (2021). An adaptive subsampled Hessian-free optimization method for statistical learning. 31st European Conference on Operational Research, Athens, Greece
 Main Audience: Researcher
 Invited?: Yes, Keynote?: No
4. Hubbell, Austin. (2021). Digital Asset Market Structure and Liquidity Modeling. IVADO Zoom sur l'intelligence numérique collaborative - Zooming in on Collaborative Digital Intelligence, Montréal, Canada
 Main Audience: Knowledge User
 Invited?: Yes, Keynote?: No
5. Desage Y*, Bouffard F. (2019). Intelligent decision-making algorithm for energy storage systems. Optimization Days, Montreal, Canada
 Main Audience: Researcher
 Invited?: No, Keynote?: No

6. Huot-Chantal F*, Yergau G. (2019). High frequency market making. Optimisation Days, Montreal, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No
7. Keutchayan J*, Gendreau M. (2019). Problem-driven scenario trees in multistage stochastic optimization. International Congress on Industrial and Applied Mathematics, Valencia, Spain
Invited?: Yes, Keynote?: No
8. Keutchayan J*, Gendreau M. (2019). Problem-driven scenario generation in multistage stochastic optimization. Optimization Days, Montreal, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No
9. Cirillo C, Hetrakul P. (2018). Dynamic discrete choice model for railway ticket cancellation and exchange decisions. 2018 INFORMS Revenue Management and Pricing Section Conference, Toronto, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No
10. Ta T A, L'Ecuyer P. (2018). On a two-stage stochastic optimization problem with stochastic constraints. 23rd International Symposium on Mathematical Programming, Bordeaux, France
Main Audience: Researcher
Invited?: Yes, Keynote?: No
11. Khassiba A, Gendron B, Cafieri S, Mongeau M. (2018). A two-stage stochastic model for scheduling aircraft arrivals under uncertainty. Optimization Days, Montreal, Canada
Main Audience: Researcher
Invited?: No, Keynote?: No
12. Mai T, Ta T A, L'Ecuyer P. (2018). A learning-based approach for multi-skill staffing optimization in call centers. 23rd International Symposium on Mathematical Programming, Bordeaux, France
Main Audience: Researcher
Invited?: Yes, Keynote?: No
13. Bouttier C. (2017). Exploitation of random noise in simulated annealing. 21st Conference of the International Federation of Operational Research Societies, Quebec, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: No
14. Brisebois A, Leung B, Sabourin JF, Bergeron P. (2017). The future of trading. I5 Day, Montreal, Canada
Main Audience: Knowledge User
Invited?: Yes, Keynote?: No
15. Mai T, Frejinger E. (2016). Comparing Regret Minimization and Utility Maximization for Route Choice Recursive Logit Models. 58th CORS Annual Conference, Banff, AB, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: No
16. Frejinger E, Mai T, Toulouse M. (2015). On the use of the information matrix in Discrete Choice Modeling. NOW 2015, La Rochelle, France
Main Audience: Researcher
Invited?: Yes, Keynote?: No
17. Cirillo C, Mai T, Toulouse M. (2015). Combining Hessian Approximations in Estimation Problems. CORS/INFORMS International Meeting, Montreal. QC, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: No

18. (2015). Application de l'algorithme de couverture progressive pour la planification à moyen terme de la production hydroélectrique. Séminaire SPOT, ENSEEIHT, Toulouse, France
Main Audience: Researcher
Invited?: Yes, Keynote?: No
19. (2015). Introduction to stochastic dynamic programming. Summer School "New Paradigms in Revenue Management: Methods and Applications", National Transportation Center, University of Maryland, College Park, MD, United States
Main Audience: Researcher
Invited?: Yes, Keynote?: No
20. Mai T, Frejinger E. (2015). Mixed recursive logit models for route choice analysis. International Symposium on Mathematical Programming, Pittsburgh, PA, United States
Invited?: Yes, Keynote?: No
21. (2015). Sur la matrice d'information de Fisher dans le calcul du maximum de vraisemblance, avec des applications en modèles de choix discrets. MIAT Unit Seminars, INRA, Toulouse, France
Main Audience: Researcher
Invited?: Yes, Keynote?: No

Publications

Journal Articles

1. Thuy T A*, Chan W, Bastin F, L'Ecuyer P. (2021). 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.
Published
Refereed?: Yes
2. Kharrat, M; Bastin F. (2021). Continuation value computation using Malliavin calculus under general volatility stochastic process for American option pricing. *Turkish Journal of Mathematics*. DOI: 10.3906/mat-210
Accepted
Refereed?: Yes, Open Access?: Yes
3. Khassiba A*, Bastin F, Gendron B, Cafieri S, Mongeau M. (2020). Two-stage stochastic mixed-integer programming with chance constraints for extended aircraft arrival management. *Transportation Science*.
Accepted
Refereed?: Yes
4. Ta T A*, Mai T*, Bastin F, L'Ecuyer P. (2020). On a multistage discrete stochastic optimization problem with stochastic constraints and nested sampling. *Mathematical Programming*. 190(1): 1--37.
Published
Refereed?: Yes
5. Khassiba A*, Bastin F, Gendron B, Cafieri S, Mongeau M. (2019). Extended Aircraft Arrival Management under Uncertainty: a computational study. *Journal of Air Transportation*. 27
Published
Refereed?: Yes
6. Kaushik K, Cirillo C, Bastin F. (2019). On Modelling Human Population Characteristics with Copulas. *Procedia Computer Science*. 151
Published
Refereed?: Yes

7. Cirillo C, Bastin F, Hetrakul P*. (2018). Dynamic Discrete Choice Model for Railway Ticket Cancellation and Exchange Decisions. *Transportation Research Part E*. 110
Published
Refereed?: Yes
8. Mai T*, Bastin F, Frejinger E. (2018). A Decomposition Method for Estimating Recursive Logit Based Route Choice Models. *EURO Journal on Transportation and Logistics*. 7
Published
Refereed?: Yes
9. Bastin F, Liu Y*, Cirillo C, Mai T*. (2018). Transferring Time-Series Discrete Choice to Link-Based Route Choice in Space : Estimating Vehicle-Type Preference Using Recursive Logit Model. *Transportation Research Record*. 2672
Published
Refereed?: Yes
10. Mai T*, Frejinger E, Fosgerau M, Bastin F. (2017). A dynamic programming approach for quickly estimating large-scale MEV models. *Transportation Research Part B*. 98: 179-197.
Published
Refereed?: Yes
11. Mai T*, Bastin F, Frejinger E. (2017). On the similarities between random regret minimization and mother logit: The case of recursive route choice models. *Journal of Choice Modelling*. 23: 21-33.
Published
Refereed?: Yes
12. Cirillo C, Xu R*, Bastin F. (2016). A Dynamic Formulation for Car Ownership Modeling. *Transportation Science*. 50(1): 322-335.
Published
Refereed?: Yes
13. Nasri M*, Bastin F, Marcotte P. (2015). Quantifying the social welfare loss in moral hazard models. *European Journal of Operational Research*. 245(1): 226-235.
Published
Refereed?: Yes
14. Carpentier PL*, Gendreau M, Bastin F. (2015). Managing Hydroelectric Reservoirs over an Extended Horizon using Benders Decomposition with a Memory Loss Assumption. *IEEE Transactions on Power Systems*. 30(2): 563-572.
Published
Refereed?: Yes
15. Tarzanagh D A*, Peyghami M R, Bastin F. (2015). A New Nonmonotone Adaptive Retrospective Trust Region Method for Unconstrained Optimization Problems. *Journal of Optimization Theory and Applications*. 167(2): 676-692.
Published
Refereed?: Yes
16. Mai T*, Frejinger E, Bastin F. (2015). A misspecification test for logit based route choice models. *Economics of Transportation*. 4(4): 215-226.
Published
Refereed?: Yes

Journal Issues

1. Lee J; Lind J; Kostyukova O I; Tchemisova T V; Dehghani M; Lambe A; Orban D; Mohammad-Nezhad A; Terlaky T; Müller J; Dussault J-P; Munoz Zuniga M; Sinoquet D; Leyffer S; Menickelly M; Munson T; Vanaret C; Wild S M; Bazier-Matte T; Delage E; Amaral P A; Barahona P. (2020). Special Issue on "Continuous Optimization and Applications in Machine Learning and Data Analytics". *INFOR: Information Systems and Operational Research*. 58(2): 424.
Published
Refereed?: Yes
Editors: Anjos M, Bastin F, Le Digabel S, Lodi A

Book Chapters

1. Morin L R*, Bastin F, Frejinger E, Trépanier M. (2019). Modelling truck route choice in an urban area using a recursive logit model and gps data. *Awasthi A. Sustainable City Logistics Planning: Methods and Applications*. Volume 3. : 103-122.
In Press, Nova Science
Refereed?: Yes

Reports

1. Desage, Y*; Bouffard, F; Bastin, F.; Venne, J-S. (2020). Autonomous control in smart buildings: A deep reinforcement learning approach. 17. GERAD.
2. Keutchayan J*, Gendreau M, Bastin F. (2018). Problem-driven scenario trees in multistage stochastic optimization: An illustration in option pricing. 42. <https://doi.org/10.13140/rg.2.2.10503.85923/2>.
3. Keutchayan J*, Bastin F, Gendreau M. (2018). The figure of demerit: a quality measure for the discretization of probability distributions in multistage stochastic optimization. 33. CIRRELT.
4. Zehtabian S*, Bastin F. (2016). Penalty Parameter Update Strategies in Progressive Hedging Algorithm. 27. CIRRELT.

Conference Publications

1. Dietrich, C; Bastin, F; Daneshvar, M; Ma, C*; Sallier, D; Shi-Garrier, L*. (2020). Constrained demand – Air Canada. *Proceedings of the ninth Montréal industrial problem solving workshop*. Ninth Montréal Industrial Problem Solving Workshop, Montreal, Canada (30-36)
Conference Date: 2019/8
Paper
Published
Refereed?: No, Invited?: No
2. Kaushik K*, Cinzia C, Bastin F. (2019). On Modelling Human Population Characteristics with Copulas. *Procedia Computer Science*. The 10th International Conference on Ambient Systems, Networks and Technologies (ANT 2019) / The 2nd International Conference on Emerging Data and Industry 4.0 (EDI40 2019) / Affiliated Workshops, Leuven, Belgium (210-217)
Conference Date: 2019/4
Paper
Published
Refereed?: Yes, Invited?: No

3. Bastin F, Chugunova M, Karagul B Z, Morales M, Regnard N, Wang Y, Zoghalchi F. (2017). Arbitrage Strategy Between Next-Day Delivery Prices and Real-Time Delivery Prices of Electricity Megawatts on the Physical California Market. Proceedings of the Eighth Montréal Industrial Problem Solving Workshop. Eighth Montréal Industrial Problem Solving Workshop, Montréal, (93-104)
Conference Date: 2017/7
Paper
Published
Refereed?: No, Invited?: No
4. Morin L R*, Bastin F, Frejinger E, Trepanier M. (2016). A GPS-based recursive logit model for truck route choice in urban area. TRB 96th Annual Meeting Compendium of Papers. Transportation Research Board 96th Annual Meeting, Washington, D.C., United States
Conference Date: 2017/1
Paper
Published
Refereed?: Yes, Invited?: No
5. Chan W*, Ta T A*, L'Ecuyer P, Bastin F. (2016). Two-stage chance-constrained staffing with agent recourse for multi-skill call centers. Proceedings of the 2016 Winter Simulation Conference. Winter Simulation Conference, Washington D.C., United States
Conference Date: 2016/12
Paper
Published
Refereed?: Yes, Invited?: No
6. Ta T A*, Pierre L'ecuyer P, Bastin F. (2016). Staffing optimization with chance constraints for emergency call centers. 11th International Conference on MOdeling, Optimization and SIMlation, Montreal, Conference Date: 2016/8
Paper
Published
Refereed?: Yes, Invited?: No