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Training

- **PhD in Electrical Engineering**, Université Laval, 2005.
Thesis: *Algorithmes évolutionnaires appliqués à la reconnaissance des formes et à la conception optique*.
Committee: Marc Parizeau (supervisor), Denis Laurendeau, Robert Sabourin, and Marc Schoenauer.
- **B.Eng. in Computer Engineering**, Université Laval, 2000.

Professional Experience

- **Director**, Institute Intelligence and Data, Université Laval (Québec, QC, Canada), since 2019.
- **Full Professor**, Electrical Engineering and Computer Engineering Department, Université Laval (Québec, QC, Canada), since 2018.
- **Deputy Director**, Big Data Research Centre, Université Laval (Québec, QC, Canada), 2018–2019.
- **Associate Professor**, Electrical Engineering and Computer Engineering Department, Université Laval (Québec, QC, Canada), 2013–2018.
- **Assistant Professor**, Electrical Engineering and Computer Engineering Department, Université Laval (Québec, QC, Canada), 2008–2013.
- **Research Analyst**, Research and Development Department, MacDonald, Dettwiler and Associates Ltd. (Vancouver, BC, Canada), 2007–2008.
- **Consultant**, Informatique WGZ Inc. (Québec, QC, Canada), 2006–2007.
- **Postdoctoral Fellow**, Information Systems Institute, University of Lausanne (Switzerland), 2006.
- **Postdoctoral Fellow**, TAO Team, INRIA Saclay–Île-de-France (Orsay, France), 2005–2006.
- **Lecturer**, Computer Science and Software Engineering Department, Université Laval (Québec, QC, Canada), 2005.
- **Unix/Linux Systems Administrator**, Computer Vision and Systems Laboratory, Université Laval (Québec, QC, Canada), 2001–2004.
- **Teaching Assistant**, Electrical Engineering and Computer Engineering Department, Université Laval (Québec, QC, Canada), 2000–2003.
- **Consultant**, Red Queen Capital Management Inc. (Dallas, TX, USA), 2003.
- **Research Assistant**, Computer Vision and Systems Laboratory, Université Laval (Québec, QC, Canada), 1998–2000.

Professionnal Affiliations

- Full professor at the Electrical Engineering and Computer Engineering Department of Université Laval
- Director of the Institute Intelligence and Data (IID) of Université Laval
- Canada-CIFAR AI Chair
- Associate member to Mila
- Member of the Computer Vision and Systems Laboratory (CVSL)
- Member of the Centre de recherche en Robotique, Vision et Intelligence Machine (CeRVIM) of Université Laval
- Board member of the Big Data Research Centre (BDRC) of Université Laval
- Member of the REPARTI (cyber-physical systems) strategic cluster of the FRQNT
- Member of the UNIQUE (neuroscience and AI) strategic cluster of the FRQNT
- Member of the VITAM (sustainable health) research centre of the FRQS
- Researcher-member of the Observatoire international sur les impacts sociétaux de l'IA et du numérique (OBVIA)

Teaching

- GIF-4001/GIF-7005 – Introduction to Machine Learning, F2009, F2010, F2011, W2013, W2014, F2016, F2017, F2018, F2019, F2020, F2021.
- GIF-3004 – Real-Time Embedded Systems, W2017, W2018, W2019, W2020.
- GIF-3000 – Computer Architecture, F2010, F2011, F2012, F2013, F2016.
- GEL-3005 – Design IV (synthesis), F2008, W2010, A2011, A2014.
- GEL-1001 – Design I (methodology), W2009, W2010, W2011.
- IFT-19968 – Algorithms for the Engineer II, W2009.
- IFT-18254 – Distributed Computer Systems, W2005.

Supervision

PhD Students (on-going)

- **Sara Karami**, Ph.D. in Electrical Engineering, since 2021
- **Sabyasachi Sahoo**, Ph.D. in Electrical Engineering, since 2021
- **Catherine Bouchard**, PhD in Electrical Engineering (cosupervisor: Flavie Lavoie-Cardinal), since 2019 (fast-track to PhD in 2021)
- **Adam Tupper**, Ph.D. in Electrical Engineering, since 2021
- **Benjamin Léger**, Ph.D. in Electrical Engineering, since 2020
- **Nour Elhouda Dhiab**, Ph.D. in Civil Engineering (supervisor: Jean Côté), since 2019
- **Arman Afrasiyabi**, Ph.D. in Electrical Engineering (cosupervisor: Jean-François Lalonde), since 2017
- **Changjian Shui**, Ph.D. in Electrical Engineering (cosupervisor: Boyu Wang, Western Ontario), since 2017
- **Sophie Baillargeon**, Ph.D. in Mathematics (specialization in Statistic) (supervisor: Thierry Duchesne), since 2014

Master's Students with Thesis (on-going)

- **Frédéric Beaupré**, M.Sc. in Biophotonic (cosupervisor: Flavie Lavoie-Cardinal), since 2021
- **Louis Dubois**, M.Sc. in Electrical Engineering (supervisor: Jean-François Lalonde), since 2021
- **Valentin Gendre**, M.Sc. in Electrical Engineering, since 2021
- **Antoine Ollier**, M.Sc. in Electrical Engineering (supervisor: Flavie Lavoie-Cardinal), since 2020
- **Thomas Philippon**, M.Sc. in Electrical Engineering, since 2020
- **Cyril Blanc**, M.Sc. in Electrical Engineering (supervisor: Jean-François Lalonde), since 2020
- **Ali Assafiri**, M.Sc. in Geomatic Sciences (supervisor: Sylvie Daniel), since 2019
- **Ba Diep Nguyen**, M.Sc. in Electrical Engineering (cosupervisor: Daniel Reinharz), since 2018
- **Alexandre Hains**, M.Sc. in Electrical Engineering, since 2018

PhD Students (completed)

- **Mahdieh Abbasi**, *Toward Robust Deep Neural Networks*, Ph.D. in Electrical Engineering (cosupervisor: Denis Laurendeau), 2020
- **Marc-André Gardner**, *Learning to Estimate Indoor Illumination*, Ph.D. in Electrical Engineering (supervisor: Jean-François Lalonde), 2020
- **Karol Lina Lopez**, *A Machine Learning Approach for the Smart Charging of Electric Vehicles*, Ph.D. in Electrical Engineering, 2019
- **Julien-Charles Lévesque**, *Bayesian Hyperparameter Optimization: Overfitting, Ensembles and Conditional Spaces*, Ph.D. in Electrical Engineering (cosupervisor: Robert Sabourin, ÉTS Montréal), 2018
- **Audrey Durand**, *Déclinaisons de bandits et leurs applications*, Ph.D. in Electrical Engineering (cosupervisor: Joelle Pineau, McGill), 2017
- **Ahmed Najjar**, *Forage de données de banques administratives en santé*, Ph.D. in Electrical Engineering (cosupervisor: Daniel Reinharz), 2017
- **Vahab Akbarzadeh**, *Spatio-Temporal Coverage Optimization of Sensor Networks*, Ph.D. in Electrical Engineering (cosupervisor: Marc Parizeau), 2016
- **Zahra Toony**, *Extracting Structured Models From Raw Scans of Manufactured Objects: A Step Towards Embedded Intelligent Handheld 3D Scanning*, Ph.D. in Electrical Engineering (supervisor: Denis Laurendeau), 2015
- **François-Michel De Rainville**, *Placement interactif de capteurs mobiles dans des environnements tridimensionnels non convexes*, Ph.D. in Electrical Engineering (cosupervisor: Denis Laurendeau), 2015
- **Meysam Argany**, *Development of a GIS-based method for sensor network deployment and coverage optimization*, Ph.D. in Geomatic Sciences (supervisor: Mir Abolfazl Mostafavi), 2015
- **Darwin Brochero**, *Hydroinformatics and diversity in hydrological ensemble prediction systems*, Ph.D. in Water Engineering (supervisor: François Anctil), 2013

Master's Students with Thesis (completed)

- **Mohamed Abderrahmen Abid**, *Diverse Image Generation with Very Low Resolution Conditioning*, M.Sc. in Electrical Engineering, since 2021
- **Gabriel Leclerc**, *Apprendre de données positives et non étiquetées: application à la segmentation et la détection d'événements calciques*, M.Sc. in Electrical Engineering (cosupervisor: Flavie Lavoie-Cardinal), 2021
- **Hugo Siqueira Gomes**, *Meta Learning for Population-Based Algorithms in Black-box Optimization*,

M.Sc. in Electrical Engineering, 2021

- **Louis-Émile Robitaille**, *Réseaux de neurones pour l'apprentissage de la préférence en microscopie super-résolution*, M.Sc. in Electrical Engineering (cosupervisors : Audrey Durand and Flavie Lavoie-Cardinal), 2021
- **Sébastien De Blois**, *Deep learning with multiple modalities: making the most out of available data*, M.Sc. in Electrical Engineering, 2020
- **El Mehdi Megder**, *Approches basées sur l'apprentissage automatique pour l'anticipation de la qualité d'usinage de pièces métalliques*, M.Sc. in Computer Science (supervisor: Jonathan Gaudreault), 2020
- **Marc-André Gardner**, *Contrôle de la croissance de la taille des individus en programmation génétique*, M.Sc. in Electrical Engineering (cosupervisor: Marc Parizeau), 2014
- **Kevin Tanguy**, *Modélisation et optimisation de la recharge bidirectionnelle de véhicules électriques : application à la régulation électrique d'un complexe immobilier*, M.Sc. in Electrical Engineering (cosupervisor: Maxime Dubois), 2013
- **Audrey Durand**, *Simulation et apprentissage Monte-Carlo de stratégies d'intervention en santé publique*, M.Sc. in Electrical Engineering (cosupervisor: Daniel Reinharz), 2011
- **François-Michel De Rainville**, *Design d'expérimentation interactif : Aide à la compréhension de systèmes complexes*, M.Sc. in Electrical Engineering (supervisor: Denis Laurendeau), 2010

Research Assistants

- **Harold Toukam Zanjio**, Computer Engineering B.Eng. Student, May to August 2021.
- **Ruoyu Liu**, Computer Science – Artificial Intelligence M.Sc. Student, May to December 2020.
- **Catherine Villeneuve**, Mathematics - Computer Science B.Sc. Student, May to August 2019.
- **Keven Voyer**, Computer Science – Artificial Intelligence M.Sc. Student, May to August 2019.
- **Philippe-André Luneau**, Mathematics - Computer Science B.Sc. Student, September to December 2018.
- **Jonathan Marek**, Computer Engineering B.Eng. Student, May to December 2017.
- **Louis-Émile Robitaille**, Computer Engineering B.Eng. Student, May to August 2016.
- **Jean-Alexandre Beaumont**, Software Engineering B.Eng. Student, May to August 2016.
- **Diane Fournier**, Computer Engineering B.Eng. Student, January 2013 to December 2014.
- **Antoine Bois**, Electrical Engineering B.Eng. Student, May 2012 to April 2013.
- **Marc-André Gardner**, Computer Engineering B.Eng. Student, May 2009 to April 2012.
- **Carl Poirier**, Computer Engineering B.Eng. Student, May 2010 to April 2011.
- **Émile Papillon-Corbeil**, Physic Engineering B.Eng. Student, May 2011 to July 2011.
- **Camille Besse**, Computer Science PhD Student, June 2010 to August 2010.
- **Majid Mallis**, Mathematics and Computer Science B.Sc. Student, January 2009 to December 2009.
- **Alexandre Boily**, Computer Engineering B.Eng. Student, May 2009 to August 2010.
- **Audrey Durand**, Computer Engineering B.Eng. Student, August 2008 to April 2009.

Postdoctoral Fellows

- **Fatemeh Gholi Zadeh Kharrat** (cosupervisor: Caroline Sirois), since January 2020.
- **Ihsen Hedhli**, January 2018 to October 2020.
- **Azadeh Sadat Mozafari**, November 2017 to October 2019.

- **Farkhondeh Kiaee**, January to December 2016.
- **Matthew Walker**, June 2009 to June 2011.
- **Albert Hung-Ren Ko**, February to October 2010.

Research Professionals

- **Diane Fournier**, Laboratoire de simulation du dépistage génétique, technical supervision, January to August 2015.
- **Thierry Moszkowicz**, Computer Vision and Systems Laboratory, supervision at 50%, June 2014 to January 2015.
- **Xavier Douville**, Laboratoire de simulation du dépistage génétique, technical supervision, October 2011 to September 2012.
- **Sylvain Comtois**, Computer Vision and Systems Laboratory, supervision at 50%, June 2010 to June 2014.
- **Julien-Charles Lévesque**, Computer Vision and Systems Laboratory, January to May 2011.
- **Mathieu Gagnon**, Laboratoire de simulation du dépistage génétique, technical supervision, September 2009 to August 2011.

Visiting Interns

- **Guillaume Camus**, Electronic and Computer Engineering undergraduate student, ENSEA, Cergy-Pontoise, France, November 2019 to February 2020.
- **Steeven Janny**, Master 1 student in Electronic, Electric and Automatic, ENS Paris-Saclay, France, May to August 2018.
- **Luis Enrique Güitrón**, Computer Engineering undergraduate student, Tecnológico de Monterrey, Santa Fe Campus, Mexico, May to August 2018.
- **Sai Krishna Kalyan**, Data Mining and Knowledge Management MSc student, Université Lumière (Lyon 2), France and Universitat Politècnica de Catalunya, Barcelona, Spain, March to August 2017.
- **Yosha Tomar**, Electronics and Electrical Engineering undergraduate student, Indian Institute of Technology Guwahati, India, May to July 2017.
- **Thibault Parpaite**, Computer Science undergraduate student at University of Bordeaux, France, May to August 2016.
- **Farkhondeh Kiaee**, Electrical Engineering PhD student at Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran, May 2014 to November 2015.
- **Ludovic Arnold**, Computer Science PhD student at Université Paris-Sud (Paris XI), Orsay, France, Mars to September 2011.
- **Bibhash Kumar Jha**, Mathematics and Computer Science B.Sc. student at Indian Institute of Technology of Kharagpur, India, May to July 2010.
- **Juan Luis Jimenez Laredo**, Computer Engineering PhD student at the University of Granada, Spain, October to November 2008.

Visiting Researcher

- **Hamid Boubertakh**, University of Jijel, Algeria, October to November 2010; September to October 2011; May 2012.

Research Grants and Contracts

Operating Grants obtained as Main Applicant

- *Canada-CIFAR AI Chair*
CIFAR
500 000 \$ / 5 years (2019–2024)
- *Deep Learning with Little Labelled Data*
Discovery Grant (individual), NSERC
205 000 \$ / 5 years (2019–2024)
- *DRIFTERS: Deep Radar Interpretation For Tracking and Enhancement of Raw Signal*
Collaborative Research and Development Grant, NSERC
Partner: Thales Canada
259 566\$ / 3 years (2019–2022)
- *Novel Approaches for Practical Machine Learning*
PROMPT-Québec
Partenaire: E Machine Learning and Thales Canada
411 500 \$ / 3 years (2017–2020).
- *Novel Approaches for Practical Machine Learning*
Accelerate (cluster of 45 units), Mitacs
Partner: E Machine Learning
600 000 \$ / 3 years (2016–2020)
- *Intelligence artificielle appliquée pour l'analyse, l'optimisation et l'innovation*
Accelerate (cluster of 14 units), Mitacs
Partners: Axes Networks, Can-Explore, Co-Operators, Coveo, Desjardins Assurances Générales, Bentley Canada
186 667 \$ / 1 year (2019)
- *Assessment of deep learning for analyzing radar signals in maritime environment*
Accelerate (3 units), Mitacs
Partner: Thales Canada
45 000 \$ / 1 year (2019)
- *Adaptive Learning Methods for Deeply Embedded Devices*
Discovery Grant (individual), NSERC
195 000 \$ / 5 years (2014–2019)
- *Personalized Recommendations for a Social Network of Photographers*
Engage Grant (individual), NSERC
Partner: 500px
24 926 \$ / 6 months (2016)
- *Sélection de méthodes pour la recommandation personnalisée de documents*
Engage Grant (individual), NSERC
Partner: Coveo
24 984 \$ / 6 months (2016)
- *Improving Models for User-Specific State Assessment: A Realtime Querying and Learning Technique*
Accelerate (1 unit), Mitacs
Partner: Thales Canada
15 000 \$ / 6 months (2015–2016)

- *Analyse de données massives provenant de médias sociaux*
Accelerate (1 unit), Mitacs
Partner: Thales Canada
15 000 \$ / 6 months (2015)
- *Modèle d'évaluation de l'état des transformateurs pour la pérennité et la maintenance*
Accelerate (2 units), Mitacs
Partner: Hydro-Québec
30 000 \$ / 6 months (2015)
- *Intelligence machine pour la prédiction de l'état de transformateurs de haute tension*
Engage Grant (individual), NSERC
Partner: Hydro-Québec
24 992 \$ / 6 months (2014–2015)
- *Smartphone Application for Electric and Conventional Vehicles Data Collection*
Engage Grant (individual), NSERC
Partner: Thales Canada
24 987 \$ / 6 months (2014–2015)
- *Enabling Autonomic Computing with Computational Intelligence*
Discovery Grant (individual), NSERC
110 000 \$ / 5 years (2009–2014)
- *Installation et essai d'une borne de recharge supportant la technologie "vehicle-to-grid" (V2G)*
Programme de recherche en partenariat contribuant à la réduction et la séquestration des gaz à effet de serre (team project), FQRNT
250 000 \$ / 3 years (2010–2013)
- *Integrating Developmental Genetic Programming and Terrain Analysis Techniques in GIS-based Sensor Placement Systems*
Strategic Industrial Initiative (team project), GEOIDE NCE
270 000 \$ / 2 years (2010–2012) + 25 000 \$ from MDA Systems Ltd
- *Apprentissage à grande échelle parallèle pour supercalculateurs*
New University Researchers Start Up Program (individual), FQRNT
40 000 \$ / 2 years (2009–2011) + 19 709 \$ for equipment (2009–2010)

Operating Grants obtained as Co-applicant

- *Méthodes d'apprentissage automatique pour le développement de la microscopie intelligente des dynamiques cellulaires*
Projet de recherche en équipe, FRQNT
Main applicant: Flavie Lavoie-Cardinal
240 000 \$ / 4 years (2020–2023)
- *Extreme zooming on intestinal permeability and the western-style diet: Unravelling the role of dietary antigens on the prevalence of cardiometabolic and mental health diseases in the North*
Deuxième appel à projets majeurs, Sentinelle Nord
Main applicant: Flavie Lavoie-Cardinal and Denis Boudreau
739 350 \$ / 5 years (2020–2024)
- *Can Astronomy and Machine Learning help detect neurodegeneration?*
Catalyst Fund, CIFAR
Main applicants: Renée Hložek and Audrey Durand

50 000 \$ / 2 years (2021–2023)

- *Déterminer la qualité de la polypharmacie chez les aînés: une approche basée sur l'intelligence artificielle*

Collaborative Health Research Projects, CIHR and NSERC

Main applicant: Caroline Sirois

1 207 610 \$ / 3 years (2020–2023)

- *Re-penser la découvrabilité, ou comment garantir l'accès à des contenus culturels canadiens dans l'environnement numérique*

Insight Grants, SSHRC

Main applicant: Véronique Guèvremont

294 172\$ / 3 years (2020–2023)

- *Mettre l'IA au service de la diversité des expressions culturelles: une exploration des conditions à remplir pour que les algorithmes de recommandation favorisent la découvrabilité des oeuvres littéraires québécoises dans l'environnement numérique*

Appel à projets innovants (2019-2022) - Volet 1, OBVIA

Main applicant: Véronique Guèvremont

159 469\$ / 3 years (2019–2022)

- *Predicting population risk of suicide using health administrative data*

New Frontiers in Research Fund - Exploration

Main applicant: JianLi Wang

250 000 \$ / 2 years (2020–2022)

- *Suivi de la qualité de la pratique de l'électroconvulsivothérapie au Québec basé sur le recueil de données médico-administratives, cliniques et socio-démographiques en contexte réel*

Données de recherche en contexte réel - Partenariat Innovation-Québec-JANSSEN, FRQS

Main applicant: Alain Lesage

245 044 \$ / 2 years (2019–2021)

- *DEpendable and EXplainable Learning in Aerospace*

Collaborative Research and Development Grant, NSERC

Partners: Thales, Bell Helicopter, CAE, Bombardier, CRIAQ

Main applicants: François Laviolette and Guilano Antoniol

5 905 512 \$ / 5 years (2019–2024)

- *REPARTI – Systèmes cyberphysiques et intelligence machine matérialisée*

Strategic Clusters, FRQNT

Main applicant: Clément Gosselin

2 888 000 \$ / 6 years (2019–2025)

- *Machine learning for the insurance industry: predictive models, fraud detection, and fairness*

Collaborative Research and Development Grant, NSERC

Partner: SSQ Assurance

Main applicant: Mario Marchand

652 175\$ / 5 years (2019–2024)

- *Big data analytics in insurance*

Collaborative Research and Development Grant, NSERC

Partner: Intact Financial Corporation

Main applicant: François Laviolette

2 413 040 \$ / 5 years (2018–2023)

- *Nouvelles approches pour le pilotage d'un atelier d'usinage de pièces métalliques de précision basées sur les données*
Collaborative Research and Development Grant, NSERC
Partner: APN
Main applicant: Jonathan Gaudreault
230 700 \$ / 5 years (2017–2022)
- *PEGASUS-2 - PErsonalized Genomics for prenatal Abnormalities Screening USing maternal blood: Towards First Tier Screening and Beyond*
Large-scale Applied Research Project Competition, Genome Canada
Main applicants: François Rousseau and Sylvie Langlois
10 801 250 \$ / 4 years (2018–2022)
- *Union Neurosciences et Intelligence Artificielle Québec (UNIQUE)*
Strategic Clusters, FRQNT
Main applicant: Karim Jerbi
600 000 \$ / 2 years (2019–2021)
- *E-Community Health and Toxicity*
Accelerate (cluster of 118 units), Mitacs
Partners: Two Hat Security
Main applicant: Richard Khoury
1 693 333 \$ / 3 years (2017–2021)
- *BRITE: Bus RapId Transit system*
Collaborative Research and Development Grant, NSERC
Partners: Thales Canada, LeddarTech
Main applicant: Denis Laurendeau
426 910 \$ / 3 years (2017–2020)
- *Sécurité urbaine: entraînement, soutien opérationnel, protection des infrastructures et analyses prédictives*
Accelerate (cluster of 42 units), Mitacs
Partners: Thales Canada, UMANX
Main applicant: Sébastien Tremblay
560 000 \$ / 3 years (2017–2019)
- *Regroupement stratégique pour l'Étude des Environnements PARTagés Intelligents répartis*
Strategic Clusters, FRQNT
Main applicant: Denis Laurendeau
2 150 000 \$ / 6 years (2013–2019)
- *Solutions intelligentes pour l'efficacité et la fluidité urbaine*
Accelerate (cluster of 51 units), Mitacs
Partners: Thales Canada, Parc technologique du Québec Métropolitain, and Cascades
Main applicant: Sébastien Tremblay
680 000 \$ / 3 years (2015–2018)
- *Convergence d'intelligence géospatiale pour l'innovation*
Appui aux réseaux d'innovation, FRQNT
Main applicant: Mir Abolfazl Mostafavi
300 000 \$ / 3 years (2013–2016)
- *Simulating cost-effectiveness of screening strategies for preeclampsia risk in pregnant women*
Operating Grant, CIHR

Main applicants: Daniel Reinharz and Yves Giguère
91 266 \$ / 2 years (2013–2014)

- *Simulation du coût/efficacité et du coût/utilité du dépistage des gènes de prédisposition au cancer du sein*

Recherches sur les services de santé, FRQS
Main applicant: François Rousseau
105 268 \$ / 2 years (2012–2014)

- *LSD – Laboratoire de Simulation du Dépistage génétique*

Operating Grant, CIHR
Main applicant: Daniel Reinharz
517 233 \$ / 5 years (2008–2013)

- *Regroupement stratégique pour l'Étude des Environnements PARTagés Intelligents répartis*

Strategic Cluster, FQRNT
Main applicant: Denis Laurendeau
2 100 000 \$ / 6 years (2006–2013)

- *Infrastructure for Wide Market Adoption of PHEV*

AUTO21 NCE
Main applicants: Maxime Dubois (2009–2011) and Éric Bibeau (2011–2012)
246 000 \$ / 3 years (2009–2012)

- *Simulating the Cost/Effectiveness of Screening Strategies for Cystic Fibrosis*

Operating Grant, CIHR
Main applicants: Daniel Reinharz and Patrick Daigneault
63 815 \$ / 1 year (2011)

- *La simulation comme outil d'évaluation de la pertinence et du retour sur l'investissement des activités en santé publique au Québec*

Action concertée, FQRSC
Main applicant: Daniel Reinharz
177 708 \$ / 3 years (2008–2011)

Research Contracts

- *Intégration de techniques de Programmation Génétique et d'Analyse de Terrain dans un Système de Placement de Capteurs*

Defence R&D Canada – Valcartier (RDDC Valcartier)
24 900 \$ / 1 year (2012)

- *Development of Multiobjective Optimization Techniques for Sensor Network Layout*

Defence R&D Canada – Valcartier (RDDC Valcartier)
138 121 \$ / 2 years (2009–2011)

Scholarships

- FQRNT (Québec): Postdoctoral Research Scholarship (30 000 \$/year), 2005–2006.
- ERCIM (Europe): Postdoctoral Fellowship Programme (50 000 \$/year approx.), 2005–2006.
- NSERC (Canada): Postgraduate Scholarships-Doctoral (21 000 \$/year), 2003–2005.
- FQRNT (Québec): Doctoral Research Scholarship (20 000 \$/year, declined), 2002–2005.
- NSERC (Canada): Postgraduate Scholarships-Master's (17 300 \$/year), 2001–2003.

- FCAR (Québec): Master’s Research Scholarship (15 000 \$/year, declined 2nd year), 2000–2002.
- Fondation Bechtel du Canada (500 \$), 1999.
- NSERC (Canada): Undergraduate Student Research Award (4000 \$), 1999.

Awards

- Canadian AI 2020 Best Paper for *Toward adversarial robustness by diversity in an ensemble of specialized deep neural networks*
- GECCO 2009 Best Paper, *Real-World Application* track, for *Optimizing Low-Discrepancy Sequences with an Evolutionary Algorithm*.
- GECCO 2002 Best Paper, *Evolvable Hardware* track, for *Lens System Design and Re-Engineering with Evolutionary Algorithms*.

Professional Associations

- Ordre des ingénieurs du Québec (OIQ), Engineer-in-Training (E.I.T.) between 2000 and 2011, Engineer (Eng.) since 2011.
- Institute of Electrical and Electronics Engineers (IEEE), member since 2008.
- Association for Computing Machinery (ACM), professional member since 2010.

Software

- *DEAP: Distributed Evolutionary Algorithms in Python*. Open source software available at <https://github.com/deap/deap>.
- *SCHNAPS: Generic Population-based Simulator for Public Health*. Open source software available at <https://github.com/audurand/schnaps>.
- *Open BEAGLE: A Generic C++ Evolutionary Computation Framework*. Open source software available at <https://github.com/chgagne/beagle>.
- *BEAGLE Puppy: A Minimalist GP Library in C++*. Open source software available at <http://beagle.gel.ulaval.ca/puppy>.

Scientific Events Organization

- Co-organizer, *Rendez-vous IA Québec*, Québec, QC, 2018–2022.
- Co-organizer, *First Workshop on Interactive Labeling and Data Augmentation for Vision*, ICCV 2021.
- Publicity chair, *Genetic and Evolutionary Computation Conference* (GECCO) 2014, Vancouver, BC, 2014.
- Responsible, Section 200 (Physical Sciences, Mathematics, and Engineering), Scientific Committee of the 80th Congress of the Acfas (French-speaking Association for the Advancement of Knowledge), Montreal, QC, 2012.
- Co-organizer, *Evolutionary Art Competition*, GECCO 2009–2012
- Organizer, *Undergraduate Student Workshop*, GECCO 2011, Dublin, Ireland, 2011.
- Competitions chair, GECCO 2010, Portland, OR, 2010.
- Local chair, GECCO 2009, Montreal, QC, 2009.
- Sponsors chair, *High Performance Computing Symposium* (HPCS), Québec, QC, 2008.

Committee

International Committee

- Executive Board, ACM Special Interest Group on Evolutionary Computation (SIGEVO), since 2017.

National Committee

- National Resources Allocation Committee, Compute Canada, 2009–2013, 2017.

Reviewer for Granting Agencies

- Reviewer, Programme de projets de recherche en équipe, Fonds de recherche du Québec – Nature et technologies (FRQNT), Canada, 3 applications reviewed, 2021.
- External reviewer, Discovery Grants, Natural Sciences and Engineering Research Council (NSERC), Canada, 11 applications reviewed, 2010, 2015, 2017–2021.
- Reviewer, Fundamental Research Projects Grants, IVADO, Canada, 20 applications reviewed, 2020.
- Reviewer, Accelerate, Mitacs, Canada, 5 applications reviewed, 2011, 2013, 2016–2017, 2019, 2020.
- Reviewer, PARTENAR-IA, PRIMA-Québec, Canada, 1 application reviewed, 2020.
- Reviewer, PARTENAR-IA, PROMPT-Québec, Canada, 3 applications reviewed, 2019.
- External reviewer, Strategic Partnership Grants, Natural Sciences and Engineering Research Council (NSERC), Canada, 1 application reviewed, 2016.
- External reviewer, Agence nationale de la recherche (ANR), France, 1 application reviewed, 2015.
- External reviewer, College and Community Innovation Program, Natural Sciences and Engineering Research Council (NSERC), Canada, 1 application reviewed, 2013.

Program Committees of Scientific Journals

- Editorial Committee, *Genetic Programming and Evolvable Machines*, since 2013.
- Guest Editor, *International Journal of Arts and Technology (IJART)*, special section, 2011.
- Reviewer, *SN Computer Science*, 2021.
- Reviewer, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2020.
- Reviewer, *IEEE Transactions on Evolutionary Computation*, 2009–2013, 2016–2017.
- Reviewer, *Genetic Programming and Evolvable Machines*, 2007, 2009, 2012–2014, 2016.
- Reviewer, *IET Electrical Systems in Transportation*, 2016.
- Reviewer, *Water*, 2015.
- Reviewer, *Applied Soft Computing*, 2010–2014.
- Reviewer, *European Journal on Operation Research*, 2014.
- Reviewer, *IEEE Transactions on Smart Grid*, 2013.
- Reviewer, *IEEE Transactions on Cybernetics*, 2013.
- Reviewer, *Information Fusion*, 2008, 2011, 2013.
- Reviewer, *IEEE Transactions on Systems, Man, and Cybernetics, Part B*, 2007, 2011.
- Reviewer, *Neural Computing and Applications*, 2011.
- Reviewer, *Computational Intelligence*, 2010.
- Reviewer, *IEEE Transactions on Fuzzy Systems*, 2008.

- Reviewer, *Canadian Journal of Electrical and Computer Engineering*, 2008.
- Reviewer, *Journal of Parallel and Distributed Computing*, 2005.
- Reviewer, *Journal of Heuristics*, 2004.

Program Committees of Scientific Conferences

- Track co-chair, *Evolutionary Machine Learning track, Genetic and Evolutionary Computation COnference* (GECCO), 2021.
- Track co-chair, *Digital Entertainment Technology and Art track, Genetic and Evolutionary Computation COnference* (GECCO), 2011.
- Reviewer, *Association for the Advancement of Artificial Intelligence* (AAAI), 2015–2016, 2020, 2022.
- Reviewer, *Neural Information Processing Systems* (NeurIPS), 2016–2021.
- Reviewer, *International Conference on Computer Vision* (ICCV), 2021.
- Reviewer, *International Joint Conference on Artificial Intelligence* (IJCAI), 2018–2019, 2021.
- Reviewer, *Computer Vision and Pattern Recognition* (CVPR), 2021.
- Reviewer, *International Conference on Learning Representations* (ICLR), 2018–2021.
- Reviewer, *European Conference on Genetic Programming* (EuroGP), 2006–2011, 2013–2014, 2016–2017, 2019–2021.
- Reviewer, *International Conference on Machine Learning* (ICML), 2018–2021.
- Reviewer, *Uncertainty in Artificial Intelligence* (UAI), 2019, 2020.
- Reviewer, *Genetic and Evolutionary Computation COnference* (GECCO), 2003–2010, 2013–2014, 2016–2020.
- Reviewer, *Reinforcement Learning and Decision Making* (RLDM), 2017, 2019.
- Reviewer, *International Joint Conference on Artificial Intelligence* (IJCAI), 2007, 2018.
- Reviewer, *Canadian Conference on Electrical and Computer Engineering* (CCECE), 2018.
- Reviewer, *European Conference on Artificial Intelligence* (ECAI), 2016.
- Reviewer, *Digital Intelligence* (DI), 2016.
- Reviewer, *IEEE Vehicle Power and Propulsion Conference* (VPPC), 2016.
- Reviewer, *IEEE International Conference on Distributed Smart Cameras* (ICDSC), 2013.
- Reviewer, *IEEE Congress on Evolutionary Computation* (IEEE-CEC), 2006, 2008–2011.
- Reviewer, *Artificial Evolution* (EA), 2009, 2011, 2013.
- Reviewer, *Canadian Conference on Computer and Robotic Vision* (CRV), 2009.
- Reviewer, *International Conference on Document Analysis and Recognition* (ICDAR), 2007.

Local Committees

- Graduate programs committee, Computer Science and Software Engineering Department, 2018–2021.
- Graduate programs committee, Electrical Engineering and Computer Engineering Department, 2017–2021.
- Respondant for Computer Engineering, table des répondants pour l'accréditation des programmes de génie, Université Laval, 2017–2018.
- Undergraduate programs committee, Electrical Engineering and Computer Engineering Department, 2010–2018.

- Working group on transportation electrification, Institut Technologies de l'information et société, 2014.
- Secretary of the assembly, Engineering and Computer Engineering Department, 2008–2011.
- President of the working group on microprocessor teaching, undergraduate programs committee, Electrical Engineering and Computer Engineering Department, 2008–2009.

Publications

Accepted or Published papers in Peer-reviewed Scientific Journals

- [J36] S.-C. Kalla, C. Gagné, M. Zeng, and L. A. Rusch. “Recurrent neural networks achieving MLSE performance for optical channel equalization.” *Optics Express* 29.9 (2021), pp. 13033–13047. URL: <https://doi.org/10.1364/OE.423103>.
- [J35] C. Sirois, R. Khoury, A. Durand, P.-L. Deziel, O. Bukhtiyarova, Y. Chiu, D. Talbot, A. Bureau, P. Després, C. Gagné, et al. “Exploring polypharmacy with artificial intelligence: data analysis protocol”. *BMC Medical Informatics and Decision Making* 21.1 (2021), pp. 1–8. URL: <https://doi.org/10.1186/s12911-021-01583-x>.
- [J34] F. Lavoie-Cardinal, A. Bilodeau, M. Lemieux, M.-A. Gardner, T. Wiesner, G. Laramée, C. Gagné, and P. De Koninck. “Neuronal activity remodels the F-actin based submembrane lattice in dendrites but not axons of hippocampal neurons”. *Scientific reports* 10.1 (2020), pp. 1–17. URL: <https://doi.org/10.1038/s41598-020-68180-2>.
- [J33] J. Lehman, J. Clune, D. Misevic, C. Adami, L. Altenberg, J. Beaulieu, P. J. Bentley, S. Bernard, G. Beslon, D. M. Bryson, et al. “The surprising creativity of digital evolution: A collection of anecdotes from the evolutionary computation and artificial life research communities”. *Artificial Life* 26.2 (2020). URL: <https://arxiv.org/abs/1803.03453>.
- [J32] F. Zhou, C. Shui, M. Abbasi, L.-É. Robitaille, B. Wang, and C. Gagné. “Task Similarity Estimation Through Adversarial Multitask Neural Network”. *IEEE Transactions on Neural Networks and Learning Systems* 32.2 (2020). URL: <http://doi.org/10.1109/TNNLS.2020.3028022>.
- [J31] K. L. López, C. Gagné, and M.-A. Gardner. “Demand-Side Management using Deep Learning for Smart Charging of Electric Vehicles”. *IEEE Transactions on Smart Grid* 10.3 (May 2019). URL: <https://doi.org/10.1109/TSG.2018.2808247>.
- [J30] A. Durand, T. Wiesner, M.-A. Gardner, L.-É. Robitaille, A. Bilodeau, C. Gagné, P. De Koninck, and F. Lavoie-Cardinal. “A machine learning approach for automated optimization of super-resolution optical microscopy”. *Nature Communications* 9.5247 (2018). URL: <https://www.nature.com/articles/s41467-018-07668-y>.
- [J29] A. Najjar, D. Reinharz, C. Girouard, and C. Gagné. “A Two-Step Approach for Mining Patient Treatment Pathways in Administrative Healthcare Databases”. *Artificial Intelligence in Medicine* 87 (May 2018). URL: <https://doi.org/10.1016/j.artmed.2018.03.004>.
- [J28] L. Nshimyumukiza, J.-A. Beaumont, J. Duplantie, S. Langlois, J. Little, F. Audibert, C. McCabe, J. Gekas, Y. Giguère, C. Gagné, D. Reinharz, and F. Rousseau. “Cell-Free DNA-Based Non-invasive Prenatal Screening for Common Aneuploidies in a Canadian Province: A Cost-Effectiveness Analysis”. *Journal of Obstetrics and Gynaecology Canada* 40.1 (Jan. 2018), pp. 48–60. URL: <https://doi.org/10.1016/j.jogc.2017.05.015>.
- [J27] M.-A. Gardner, K. Sunkavalli, E. Yumer, X. Shen, E. Gambaretto, C. Gagné, and J.-F. Lalonde. “Learning to Predict Indoor Illumination from a Single Image”. *ACM Transactions on Graphics (SIGGRAPH Asia)* 9.4 (Nov. 2017). URL: <https://arxiv.org/abs/1704.00090>.
- [J26] F. Kiaee, C. Gagné, and H. Sheikhzadeh. “A Double-Layer ELM with Added Feature Selection Ability using a Sparse Bayesian Approach”. *Neurocomputing* 216 (Dec. 2016), pp. 371–380. URL: <http://dx.doi.org/10.1016/j.neucom.2016.08.011>.

- [J25] L. Nshimyumukiza, X. Douville, D. Fournier, J. Duplantie, R. Daher, I. Charlebois, J. Longtin, J. Papenburg, M. Guay, M. Boissinot, M. G. Bergeron, D. Boudreau, C. Gagné, F. Rousseau, and D. Reinharz. “Cost effectiveness analysis of antiviral treatment in the management of seasonal influenza A: point-of-care rapid test versus clinical judgment”. *Influenza and Other Respiratory Viruses* 10.2 (Mar. 2016), pp. 113–121. URL: <http://dx.doi.org/10.1111/irv.12359>.
- [J24] K. Tanguy, M. Dubois, K. L. Lopez, and C. Gagné. “Optimization Model and Economic Assessment of Collaborative Charging using Vehicle-To-Building”. *Sustainable Cities and Society* 26 (Oct. 2016), pp. 496–506. URL: <http://dx.doi.org/10.1016/j.scs.2016.03.012>.
- [J23] M. Argany, M. A. Mostafavi, and C. Gagné. “Context-Aware Local Optimization of Sensor Network Deployment”. *Journal of Sensor and Actuator Networks* 4.3 (2015), pp. 160–188. URL: <http://dx.doi.org/10.3390/jsan4030160>.
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- [J20] Z. Toony, D. Laurendeau, and C. Gagné. “Describing 3D Geometric Primitives Using the Gaussian Sphere and the Gaussian Accumulator”. *3D Research* 6.4 (Dec. 2015). URL: <http://dx.doi.org/10.1007/s13319-015-0074-3>.
- [J19] V. Akbarzadeh, J.-C. Lévesque, C. Gagné, and M. Parizeau. “Efficient Sensor Placement Optimization Using Gradient Descent and Probabilistic Coverage”. *Sensors* 14 (2014), pp. 15525–15552. URL: <https://doi.org/10.3390/s140815525>.
- [J18] L. Nshimyumukiza, A. Bois, P. Daigneault, L. Lands, A.-M. Laberge, D. Fournier, J. Duplantie, Y. Giguère, J. Gekas, C. Gagné, F. Rousseau, and D. Reinharz. “Cost-Effectiveness of Newborn Screening for Cystic Fibrosis: A Simulation Study”. *Journal of Cystic Fibrosis* 13.3 (2014), pp. 267–274. URL: <https://doi.org/10.1016/j.jcf.2013.10.012>.
- [J17] V. Akbarzadeh, C. Gagné, M. Parizeau, M. Argany, and M. A. Mostafavi. “Probabilistic Sensing Model for Line-of-sight Coverage-based Sensor Placement Optimization”. *IEEE Transactions on Instrumentation and Measurement* 62.2 (Feb. 2013), pp. 293–303.
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- [J15] L. Nshimyumukiza, A. Durand, M. Gagnon, X. Douville, S. Morin, C. Lindsay, J. Duplantie, C. Gagné, S. Jean, Y. Giguère, S. Dodin, F. Rousseau, and D. Reinharz. “An economic evaluation: Simulation of the cost/effectiveness and cost/utility of universal prevention strategies against osteoporosis-related fractures”. *Journal of Bone and Mineral Research* 28.2 (2013), pp. 383–394.
- [J14] L. Nshimyumukiza, J. Duplantie, M. Gagnon, X. Douville, D. Fournier, C. Lindsay, M. Parent, A. Milot, Y. Giguère, C. Gagné, F. Rousseau, and D. Reinharz. “Dabigatran versus warfarin under standard or pharmacogenetic-guided management for the prevention of stroke and systemic thromboembolism in patients with atrial fibrillation: a cost/utility analysis using an analytic decision model”. *Thrombosis Journal* 11.14 (2013).
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- [J10] A. Durand, C. Gagné, L. Nshimyumukiza, M. Gagnon, F. Rousseau, Y. Giguère, and D. Reinharz. “Population-based Simulation for Public Health: Generic Software Infrastructure and its Application to Osteoporosis”. *IEEE transactions on Systems, Man, and Cybernetics, Part A* 42.6 (2012), pp. 1396–1409.
- [J9] M. Argany, M. A. Mostafavi, F. Karimipour, and C. Gagné. “A GIS Based Wireless Sensor Network Coverage Estimation and Optimization: A Voronoi Approach”. *Transactions on Computational Science* 14 (2011), pp. 151–172.
- [J8] D. Brochero, F. Anctil, and C. Gagné. “Simplifying a Hydrological Ensemble Prediction System with a Backward Greedy Selection of Members, Part I: Optimization Criteria”. *Hydrology and Earth System Sciences* 15.11 (2011), pp. 3307–3325.
- [J7] D. Brochero, F. Anctil, and C. Gagné. “Simplifying a Hydrological Ensemble Prediction System with a Backward Greedy Selection of Members, Part II: Generalization in Time and Space”. *Hydrology and Earth System Sciences* 15.11 (2011), pp. 3327–3341.
- [J6] C. Gagné, J. Beaulieu, M. Parizeau, and S. Thibault. “Human-Competitive Lens System Design with Evolution Strategies”. *Applied Soft Computing* 8.4 (2008), pp. 1439–1452.
- [J5] F. Ratle, C. Gagné, A.-L. Terrettaz-Zufferey, M. Kanevski, P. Esseiva, and O. Ribaux. “Advanced Clustering Methods for Mining Chemical Databases in Forensic Science”. *Chemometrics and Intelligent Laboratory Systems* 90.2 (2008), pp. 123–131.
- [J4] C. Gagné and M. Parizeau. “Co-evolution of Nearest Neighbor Classifiers”. *International Journal of Pattern Recognition and Artificial Intelligence* 21.5 (2007), pp. 921–946.
- [J3] M. Dubreuil, C. Gagné, and M. Parizeau. “Analysis of a Master-Slave Architecture for Distributed Evolutionary Computations”. *IEEE transactions on Systems, Man, and Cybernetics, Part B* 36.1 (2006), pp. 229–235.
- [J2] C. Gagné and M. Parizeau. “Genericity in Evolutionary Computation Software Tools: Principles and Case Study”. *International Journal on Artificial Intelligence Tools* 15.2 (2006), pp. 173–194.
- [J1] C. Gagné and M. Parizeau. “Genetic Engineering of Hierarchical Fuzzy Regional Representations for Handwritten Character Recognition”. *International Journal of Document Analysis and Recognition* 8.4 (2006), pp. 223–231.

Published Papers in Peer-reviewed Conference Proceedings

- [C64] A. Afrasiyabi, J.-F. Lalonde, and C. Gagné. “Mixture-based Feature Space Learning for Few-shot Image Classification”. *IEEE International Conference on Computer Vision (ICCV)*. Oct. 2021.
- [C63] M. Abbasi, A. Rajabi, C. Gagné, and R. B. Bobba. “Toward adversarial robustness by diversity in an ensemble of specialized deep neural networks”. *Proc. of the Canadian Conference on Artificial Intelligence*. Apr. 2020. URL: <https://arxiv.org/abs/2005.08321>.
- [C62] M. Abbasi, C. Shui, A. Rajabi, C. Gagné, and R. Bobba. “Toward Metrics for Differentiating Out-of-Distribution Sets”. *European Conference on Artificial Intelligence*. 2020. URL: <https://arxiv.org/abs/1910.08650>.
- [C61] A. Afrasiyabi, J.-F. Lalonde, and C. Gagné. “Associative Alignment for Few-shot Image Classification”. *European Conference on Computer Vision (ECCV)*. 2020. URL: <https://arxiv.org/abs/1912.05094>.
- [C60] B. Chatelais, D. Lafond, A. Hains, and C. Gagné. “Improving Policy-Capturing with Active Learning for Real-Time Decision Support”. *Proc. of the conference on Intelligent Human Systems Integration (IHSI)*. Feb. 2020. URL: https://doi.org/10.1007/978-3-030-39512-4_28.

- [C59] S. De Blois, M. Garon, C. Gagné, and J.-F. Lalonde. “Input Dropout for Spatially Aligned Modalities”. *International Conference on Image Processing (ICIP)*. 2020. URL: <https://arxiv.org/abs/2002.02852>.
- [C58] C. Shui, F. Zhou, C. Gagné, and B. Wang. “Deep Active Learning: Unified and Principled Method for Query and Training”. *International Conference on Artificial Intelligence and Statistics (AISTats)*. 2020. URL: <https://arxiv.org/abs/1911.09162>.
- [C57] S. De Blois, I. Hedhli, and C. Gagné. “Learning of Image Dehazing Models for Segmentation Tasks”. *Proc. of the European Signal Processing Conference (EUSIPCO)*. Sept. 2019. URL: <https://arxiv.org/abs/1903.01530>.
- [C56] M.-A. Gardner, Y. Hold-Geoffroy, K. Sunkavalli, C. Gagné, and J.-F. Lalonde. “Deep Parametric Indoor Lighting Estimation”. *IEEE International Conference on Computer Vision (ICCV)*. Oct. 2019. URL: http://openaccess.thecvf.com/content_ICCV_2019/html/Gardner_Deep_Parametric_Indoor_Lighting_Estimation_ICCV_2019_paper.html.
- [C55] A. S. Mozafari, H. S. Gomes, W. Leão, and C. Gagné. “Unsupervised Temperature Scaling: An Unsupervised Post-Processing Calibration Method of Deep Networks”. *ICML 2019 Workshop on Uncertainty and Robustness in Deep Learning*. June 2019. URL: <https://arxiv.org/abs/1905.00174>.
- [C54] C. Shui, M. Abbasi, L.-É. Robitaille, B. Wang, and C. Gagné. “A Principled Approach for Learning Task Similarity in Multitask Learning”. *International Joint Conference on Artificial Intelligence (IJCAI)*. Aug. 2019. URL: <https://arxiv.org/abs/1903.09109>.
- [C53] M. Abbasi, A. Rajabi, C. Gagné, and R. B. Bobba. “Towards Dependable Deep Convolutional Neural Networks (CNNs) with Out-distribution Learning”. *DSN Workshop on Dependable and Secure Machine Learning (DSML 2018)*. 2018. URL: <https://arxiv.org/abs/1804.08794>.
- [C52] K. L. López and C. Gagné. “Optimal Scheduling for Smart Charging of Electric Vehicles using Dynamic Programming”. *Proc. of the Canadian Conference on Artificial Intelligence*. 2018. URL: https://doi.org/10.1007/978-3-319-89656-4_27.
- [C51] L.-É. Robitaille, A. Durand, M.-A. Gardner, C. Gagné, P. De Koninck, and F. Lavoie-Cardinal. “Learning to Become an Expert: Deep Networks Applied To Super-Resolution Microscopy”. *Innovative Applications of Artificial Intelligence (IAAI-18)*. Feb. 2018. URL: <https://arxiv.org/abs/1803.10806>.
- [C50] M. Abbasi and C. Gagné. “Robustness to Adversarial Examples through an Ensemble of Specialists”. *International Conference on Learning Representations (ICLR), Workshop Track*. Apr. 2017. URL: <https://arxiv.org/abs/1702.06856>.
- [C49] A. Durand, J.-A. Beaumont, C. Gagné, M. Lemay, and S. Paquet. “Query Completion Using Bandits for Engines Aggregation”. *Reinforcement Learning and Decision Making (RLDM)*. Ann Arbor, MI, USA, June 2017. URL: <https://arxiv.org/abs/1709.04095>.
- [C48] J.-C. Lévesque, A. Durand, C. Gagné, and R. Sabourin. “Bayesian Optimization for Conditional Hyperparameter Spaces”. *International Joint Conference on Neural Networks (IJCNN)*. May 2017. URL: <https://doi.org/10.1109/IJCNN.2017.7965867>.
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- [C43] V. Akbarzadeh, C. Gagné, and M. Parizeau. “Kernel Density Estimation for Target Trajectory Prediction”. *Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. Sept. 2015. URL: <https://doi.org/10.1109/IROS.2015.7353858>.
- [C42] C. Gagné, K. Tanguy, K. L. Lopez, and M. Dubois. “Vehicle-to-Building is Economically Viable in Regulated Electricity Markets”. *Proc. of the IEEE Vehicular Power and Propulsion Conference (VPPC)*. Oct. 2015. URL: <https://doi.org/10.1109/VPPC.2015.7353038>.
- [C41] A. Najjar, C. Gagné, and D. Reinharz. “Two-Step Heterogeneous Finite Mixture Model Clustering for Mining Healthcare Databases”. *Proc. of the IEEE International Conference on Data Mining (ICDM)*. Nov. 2015. URL: <https://doi.org/10.1109/ICDM.2015.70>.
- [C40] F.-M. D. Rainville, J.-P. Mercier, C. Gagné, P. Giguère, and D. Laurendeau. “Multisensor Placement in 3D Environments via Visibility Estimation and Derivative-Free Optimization”. *Proc. of the International Conference on Robotics and Automation (ICRA)*. May 2015. URL: <https://doi.org/10.1109/ICRA.2015.7139658>.
- [C39] Z. Toony, D. Laurendeau, and C. Gagné. “PGP2X: Principal Geometric Primitives Parameters Extraction”. *Proc. of the 10th International Conference on Computer Graphics Theory and Applications (GRAPP)*. 2015. URL: <https://www.scitepress.org/Papers/2015/53564/53564.pdf>.
- [C38] A. Durand, C. Bordet, and C. Gagné. “Improving the Pareto UCB1 Algorithm on the Multi-Objective Multi-Armed Bandit”. *NIPS Workshop on Bayesian Optimization*. Dec. 2014. URL: <https://bayesopt.github.io/papers/2014/paper4.pdf>.
- [C37] A. Durand and C. Gagné. “Thompson Sampling for Combinatorial Bandits and its Application to Online Feature Selection”. *Proc. of the 28th AAAI Conference, Workshop on Sequential Decision-Making with Big Data*. July 2014, pp. 6–9. URL: <https://www.aaai.org/ocs/index.php/WS/AAAIW14/paper/viewPaper/8707>.
- [C36] A. Najjar, C. Gagné, and D. Reinharz. “A Novel Mixed Values k -Prototypes Algorithm with Application to Health Care Databases Mining”. *Proc. of the IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2014)*. Dec. 2014. URL: <https://doi.org/10.1109/CICARE.2014.7007849>.
- [C35] F.-M. D. Rainville, C. Gagné, and D. Laurendeau. “Automatic Sensor Placement For Complex Three-dimensional Inspection and Exploration”. *Proc. of the International Symposium on Artificial Intelligence, Robotics, and Automation in Space (i-SAIRAS)*. 2014. URL: http://robotics.estec.esa.int/i-SAIRAS/isairas2014/Data/Session%206a/ISAIRAS_FinalPaper_0112.pdf.
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- [C33] V. Akbarzadeh, C. Gagné, and M. Parizeau. “Target Trajectory Prediction in PTZ Camera Networks”. *Proc. of the IEEE Workshop on Camera Networks and Wide Area Scene Analysis (WCNWASA 2013)*. Colocated with the Computer Vision and Pattern Recognition Conference (CVPR 2013). 2013.
- [C32] D. Brochero, C. Gagné, and F. Anctil. “Evolutionary Multiobjective Optimization for Selecting Members of an Ensemble Streamflow Forecasting Model”. *Proc. of the Genetic and Evolutionary Computation Conference (GECCO)*. July 2013.
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- [C29] M.-A. Gardner, C. Gagné, and M. Parizeau. “Estimation of Distribution Algorithm based on Hidden Markov Models for Combinatorial Optimization”. *Companion proc. of the Genetic and Evolutionary Computation Conference (GECCO)*. July 2013.

- [C28] Y. Hold-Geoffroy, M.-A. Gardner, C. Gagné, M. Latulippe, and P. Giguère. “ros4mat: A Matlab Programming Interface for Remote Operations of ROS-based Robotic Devices in an Educational Context”. *Proc. of the Computer and Robot Vision (CRV 2013)*. 2013.
- [C27] J.-C. Lévesque, C. Gagné, and R. Sabourin. “Ensembles of Budgeted Kernel Support Vector Machines for Parallel Large Scale Learning”. *NIPS Workshop on Big Learning: Advances in Algorithms and Data Management*. 2013.
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Miscellaneous

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