

# Christian Gagné, PhD, ing.

Director of the Institute Intelligence and Data (IID)  
Canada-CIFAR AI Chair, associate member to Mila  
Member of CVSL / CeRVIM / BDRC / REPARTI / UNIQUE / VITAM / OBVIA  
Full professor at the Electrical Engineering and Computer Engineering Department  
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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.
- 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)*

- **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
- **Mahdieh Abbasi**, Ph.D. in Electrical Engineering (cosupervisor: Denis Laurendeau), since 2015
- **Marc-André Gardner**, Ph.D. in Electrical Engineering (supervisor: Jean-François Lalonde), since 2014
- **Sophie Baillargeon**, Ph.D. in Mathematics (specialization in Statistic) (supervisor: Thierry Duchesne), since 2014

### *Master's Students with Thesis (on-going)*

- **Colin Panter**, M.Sc. in Electrical Engineering (supervisor: Flavie Lavoie-Cardinal), since 2020

- **Cyril Blanc**, M.Sc. in Electrical Engineering (cosupervisor: Jean-François Lalonde), since 2020
- **Catherine Bouchard**, M.Sc. in Electrical Engineering (cosupervisor: Flavie Lavoie-Cardinal), since 2019
- **Ali Assafiri**, M.Sc. in Geomatic Sciences (supervisor: Sylvie Daniel), since 2019
- **Mohamed Abderrahmen Abid**, M.Sc. in Electrical Engineering, since 2019
- **Sébastien De Blois**, M.Sc. in Electrical Engineering, since 2018
- **Hugo Siqueira Gomes**, M.Sc. in Electrical Engineering, since 2018
- **Ba Diep Nguyen**, M.Sc. in Electrical Engineering (cosupervisor: Daniel Reinharz), since 2018
- **Alexandre Hains**, M.Sc. in Electrical Engineering, since 2018
- **Gabriel Leclerc**, M.Sc. in Electrical Engineering (cosupervisor: Flavie Lavoie-Cardinal), since 2017
- **Louis-Émile Robitaille**, M.Sc. in Electrical Engineering (cosupervisors : Audrey Durand and Flavie Lavoie-Cardinal), since 2017

#### *PhD Students (completed)*

- **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)*

- **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*

- **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**, since January 2018.
- **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*

- *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, 2018–2019.
- 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*

- External reviewer, Discovery Grants, Natural Sciences and Engineering Research Council (NSERC), Canada, 9 applications reviewed, 2010, 2015, 2017 – 2020.
- External reviewer, Accelerate, Mitacs, Canada, 5 applications reviewed, 2011, 2013, 2016–2017, 2019, 2020.
- 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, *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, *Digital Entertainment Technology and Art track, Genetic and Evolutionary Computation Conference (GECCO)*, 2011.
- Senior reviewer, *International Joint Conference on Artificial Intelligence (IJCAI)*, 2019.
- Reviewer, *Neural Information Processing Systems (NeurIPS)*, 2016–2020.
- Reviewer, *International Conference on Learning Representations (ICLR)*, 2018–2020.
- Reviewer, *International Conference on Machine Learning (ICML)*, 2018–2020.
- Reviewer, *Uncertainty in Artificial Intelligence (UAI)*, 2019, 2020.
- Reviewer, *Genetic and Evolutionary Computation Conference (GECCO)*, 2003–2010, 2013–2014, 2016–2020.
- Reviewer, *European Conference on Genetic Programming (EuroGP)*, 2006–2011, 2013–2014, 2016–2017, 2019.
- 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, *Association for the Advancement of Artificial Intelligence (AAAI)*, 2015–2016.
- 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, since 2018.

- Graduate programs committee, Electrical Engineering and Computer Engineering Department, since 2017.
- 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*

- [J32] 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>.
- [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>.
- [J22] M.-A. Gardner, C. Gagné, and M. Parizeau. “Controlling Code Growth by Dynamically Shaping the Genotype Size Distribution”. *Genetic Programming and Evolvable Machines* 16.4 (2015), pp. 455–498. URL: <https://doi.org/10.1007/s10710-015-9242-8>.
- [J21] K. L. Lopez, C. Gagné, G. Castellanos-Dominguez, and M. Orozco-Alzate. “Training subset selection in Hourly Ontario Energy Price forecasting using time series clustering-based stratification”. *Neurocomputing* 156.25-05-2015 (2015), pp. 268–279. URL: <https://doi.org/10.1016/j.neucom.2014.12.052>.
- [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.
- [J16] J. Duplantie, O. M. Gonzalez, A. Bois, L. Nshimyumukiza, J. Gekas, E. Bujold, V. Morin, M. Vallée, Y. Giguère, C. Gagné, F. Rousseau, and D. Reinharz. “Cost-Effectiveness of the Management of Rh-Negative Pregnant Women”. *Journal of Obstetrics and Gynecology of Canada* 35.8 (2013), pp. 730–740.
- [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).
- [J13] M. Argany, M. A. Mostafavi, V. Akbarzadeh, C. Gagné, and R. Yaagoubi. “Impact of the Quality of Spatial 3D City Models on Sensor Networks Placement Optimization”. *GEOMATICA* 66.4 (2012), pp. 291–305. URL: <http://pubs.cig-acsg.ca/doi/abs/10.5623/cig2012-055>.
- [J12] F.-M. De Rainville, F.-A. Fortin, M.-A. Gardner, M. Parizeau, and C. Gagné. “DEAP: Evolutionary Algorithms Made Easy”. *Journal of Machine Learning Research* 13.Jul (2012), pp. 2171–2175.
- [J11] F.-M. De Rainville, C. Gagné, O. Teytaud, and D. Laurendeau. “Evolutionary Optimization of Low-Discrepancy Sequences”. *ACM Transactions on Modeling and Computer Simulation* 22.2 (2012), 9:1–9:25.
- [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*

- [C59] 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>.
- [C58] 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](https://doi.org/10.1007/978-3-030-39512-4_28).
- [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”. *Proceedings of the 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](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](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>.
- [C47] V. Akbarzadeh, C. Gagné, and M. Parizeau. “Sensor Control for Temporal Coverage Optimization”. *Proc. of the IEEE World Congress on Computational Intelligence (WCCI)*. July 2016. URL: <https://doi.org/10.1109/CEC.2016.7744358>.
- [C46] S. Baillargeon, S. Hallé, and C. Gagné. “Stream Clustering of Tweets”. *First International Workshop on Social Network Analysis Surveillance Techniques (SNAST)*. Aug. 2016. URL: <https://doi.org/10.1109/ASONAM.2016.7752399>.
- [C45] J.-C. Lévesque, C. Gagné, and R. Sabourin. “Bayesian Hyperparameter Optimization for Ensemble Learning”. *Uncertainty in Artificial Intelligence (UAI)*. June 2016. URL: <https://arxiv.org/abs/1605.06394>.
- [C44] M. Abbasi, H. R. Rabiee, and C. Gagné. “Monocular 3D Human Pose Estimation with a Semi-supervised Graph-based Method”. *Proc. of the International Conference on 3D Vision (3DV)*. Oct. 2015. URL: <https://doi.org/10.1109/3DV.2015.64>.
- [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](http://robotics.estec.esa.int/i-SAIRAS/isairas2014/Data/Session%206a/ISAIRAS_FinalPaper_0112.pdf).
- [C34] Z. Toony, D. Laurendeau, P. Giguère, and C. Gagné. “3D-NCuts: Adapting Normalized Cuts to 3D Triangulated Surface Segmentation”. *Proc. of the 9th International Conference on Computer Graphics Theory and Applications (GRAPP)*. Jan. 2014. URL: <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7296042>.
- [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.
- [C31] A. Cervantes, P. Isasi, C. Gagné, and M. Parizeau. “Learning from Non-Stationary Data using a Growing Network of Prototypes”. *Proc. of the IEEE Congress on Evolutionary Computation (IEEE-CEC 2013)*. 2013.
- [C30] M.-A. Gardner, C. Gagné, and M. Parizeau. “Combinatorial Optimization EDA using Hidden Markov Models”. *Student Workshop, Companion proc. of the Genetic and Evolutionary Computation Conference (GECCO)*. July 2013.
- [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.
- [C26] J.-C. Lévesque, L.-P. Morency, and C. Gagné. “Sequential Emotion Recognition using Latent-Dynamic Conditional Neural Fields”. *IEEE Conference on Automatic Face and Gesture Recognition*. 2013.
- [C25] F.-M. D. Rainville, M. Sebag, C. Gagné, M. Schoenauer, and D. Laurendeau. “Sustainable Cooperative Coevolution with a Multi-Armed Bandit”. *Proc. of the Genetic and Evolutionary Computation Conference (GECCO)*. 2013.
- [C24] Z. Toony, D. Laurendeau, P. Giguère, and C. Gagné. “Power Iteration Clustering for Segmenting Three-Dimensional Models (3D-PIC)”. *3DTV-CON Conference (Vision Beyond Depth) 2013*. 2013.
- [C23] F.-M. De Rainville, C. Gagné, and D. Laurendeau. “Co-adapting Mobile Sensor Networks to Maximize Coverage in Dynamic Environments”. *Companion proc. of the Genetic and Evolutionary Computation Conference (GECCO)*. 2012.
- [C22] J.-C. Lévesque, A. Durand, C. Gagné, and R. Sabourin. “Multi-Objective Evolutionary Optimization for Generating Ensembles of Classifiers in the ROC Space”. *Proc. of the Genetic and Evolutionary Computation Conference (GECCO)*. 2012.
- [C21] F.-M. D. Rainville, F.-A. Fortin, M.-A. Gardner, M. Parizeau, and C. Gagné. “DEAP: A Python Framework for Evolutionary Algorithms”. *EvoSoft Workshop, Companion proc. of the Genetic and Evolutionary Computation Conference (GECCO)*. 2012.

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- [C19] M.-A. Gardner, C. Gagné, and M. Parizeau. “Bloat Control in Genetic Programming with a Histogram-based Accept-Reject Method”. *Proc. of the Genetic and Evolutionary Computation Conference (GECCO)*. 2011.
- [C18] V. Akbarzadeh, A. Ko, C. Gagné, and M. Parizeau. “Topography-Aware Sensor Deployment Optimization with CMA-ES”. *Proc. of Parallel Problem-Solving from Nature (PPSN)*. 2010.
- [C17] A. Durand, C. Gagné, M.-A. Gardner, F. Rousseau, Y. Giguère, and D. Reinharz. “SCHNAPS: A Generic Population-based Simulator for Public Health Purposes”. *Proc. of the Summer Computer Simulation Conference (SCSC)*. 2010.
- [C16] N. M. Amil, N. Bredeche, C. Gagné, S. Gelly, M. Schoenauer, and O. Teytaud. “A Statistical Learning Perspective of Genetic Programming”. *Proc. of the European Conference on Genetic Programming (EuroGP)*. 2009.
- [C15] J. Berger, J. Happe, C. Gagné, and M. Lau. “Co-evolutionary Information Gathering for a Cooperative Unmanned Aerial Vehicle Team”. *Proc. of the International Conference on Information Fusion*. 2009.
- [C14] F.-M. De Rainville, C. Gagné, O. Teytaud, and D. Laurendeau. “Optimizing Low-Discrepancy Sequences with an Evolutionary Algorithm”. *Proc. of the Genetic and Evolutionary Computation Conference (GECCO)*. 2009.
- [C13] J. L. J. Laredo, C. Fernandes, J. J. Merelo, and C. Gagné. “Improving Genetic Algorithms Performance via Deterministic Population Shrinkage”. *Proc. of the Genetic and Evolutionary Computation Conference (GECCO)*. 2009.
- [C12] C. Gagné, M. Sebag, M. Schoenauer, and M. Tomassini. “Ensemble Learning for Free with Evolutionary Algorithms?” *Proc. of the Genetic and Evolutionary Computation Conference (GECCO)*. 2007.
- [C11] C. Gagné, M. Schoenauer, M. Parizeau, and M. Tomassini. “Genetic Programming, Validation Sets, and Parsimony Pressure”. *Proc. of the European Conference on Genetic Programming (EuroGP)*. 2006.
- [C10] C. Gagné, M. Schoenauer, M. Sebag, and M. Tomassini. “Genetic Programming for Kernel-based Learning with Co-evolving Subsets Selection”. *Proc. of Parallel Problem-Solving from Nature (PPSN)*. 2006.
- [C9] S. Gelly, O. Teytaud, and C. Gagné. “Resource-Aware Parameterizations of EDA”. *Proc. of the IEEE Congress on Evolutionary Computation (IEEE-CEC)*. 2006.
- [C8] S. Thibault, C. Gagné, J. Beaulieu, and M. Parizeau. “Evolutionary Algorithms Applied to Lens Design: Case Study and Analysis”. *Proc. of the International Symposium on Optical Systems Design (EOD)*. 2005.
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## Miscellaneous

- Languages: French (native), English (excellent).
- Citizenship: Canadian.

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