

Jean-François Lalonde

Curriculum Vitae

Computer Vision and Systems Lab
Electrical and Computer Eng.
Université Laval
Québec QC G1V 0A6
☎ (418) 656-2131 #2659
✉ jflalonde@gel.ulaval.ca
🌐 www.jflalonde.ca

EDUCATION

- 2011 **Ph.D. in Robotics**, Carnegie Mellon University.
Thesis: Understanding and Recreating Visual Appearance Under Natural Illumination
Microsoft Research Fellow, School of Computer Science Distinguished Dissertation Award
- 2006 **M.S. in Robotics**, Carnegie Mellon University.
Thesis: Data Structure for Efficient Dynamic Processing in 3-D
- 2004 **B.S. in Computer Engineering (hons.)**, Université Laval.

PROFESSIONAL APPOINTMENTS

- 2018–... **Associate Professor**, Electrical and Computer Engineering, Université Laval, Québec, Canada.
Affiliated to the NSERC/Creaform Industrial Research Chair on 3D Scanning
Member of the Center for the Study of Distributed Intelligent Environments (REPARTI)
Member of the Big Data Research Center
- 2013–2018 **Assistant Professor**, Electrical and Computer Engineering, Université Laval, Québec, Canada.
- 2016–... **Associate Researcher**, Institut National d’Optique, Québec, Canada.
- 2012–2013 **Post-doctoral Associate**, Disney Research, Pittsburgh, USA.

PUBLICATIONS

Refereed Journal Articles

- [A1] Dan A. Calian, Jean-François Lalonde, Paulo F.U. Gotardo, Tomas Simon, Iain Matthews, and Kenny Mitchell. “From faces to outdoor light probes”. In: *Computer Graphics Forum* 37.2 (2018).
- [A2] Marc-André Gardner, Kalyan Sunkavalli, Ersin Yumer, Xiaohui Shen, Emiliano Gambaretto, Christian Gagné, and Jean-François Lalonde. “Learning to predict indoor illumination from a single image”. In: *ACM Transactions on Graphics (SIGGRAPH Asia)* 9.4 (2017).
- [A3] Mathieu Garon and Jean-François Lalonde. “Deep 6-DOF tracking”. In: *IEEE Transactions on Computer Graphics and Visualization* 23.11 (2017).
- [A4] Minghui Tan, Jean-François Lalonde, Lavanya Sharan, Holly Rushmeier, and Carol O’Sullivan. “The perception of lighting inconsistencies in composite outdoor scenes”. In: *ACM Transactions on Applied Perception* 12.4 (Aug. 2015).
- [A5] Jean-François Lalonde, Alexei A Efros, and Srinivasa G Narasimhan. “Estimating the natural illumination conditions from a single outdoor image”. In: *International Journal of Computer Vision* 98.2 (June 2012), pp. 123–145.
- [A6] Jean-François Lalonde, Srinivasa G Narasimhan, and Alexei A Efros. “What do the sun and the sky tell us about the camera?” In: *International Journal of Computer Vision* 88.1 (May 2010), pp. 24–51.
- [A7] Ranjith Unnikrishnan, Jean-François Lalonde, Nicolas Vandapel, and Martial Hebert. “Scale selection for geometric fitting in noisy point clouds”. In: *International Journal of Computational Geometry & Applications* 20.5 (Oct. 2010), pp. 543–575.
- [A8] Jean-François Lalonde, Alexei A Efros, and Srinivasa G Narasimhan. “Webcam Clip Art: appearance and illuminant transfer from time-lapse sequences”. In: *ACM Transactions on Graphics (SIGGRAPH Asia 2009)* 28.5 (Dec. 2009), 131:1–131:10.

- [A9] Minh Hoai Nguyen, Jean-François Lalonde, Alexei A Efros, and Fernando de la Torre. “Image-based shaving”. In: *Computer Graphics Forum Journal (Eurographics 2008)* 27.2 (2008), pp. 627–635.
- [A10] Jean-François Lalonde, Derek Hoiem, Alexei A Efros, Carsten Rother, John Winn, and Antonio Criminisi. “Photo Clip Art”. In: *ACM Transactions on Graphics (SIGGRAPH 2007)* 26.3 (Aug. 2007).
- [A11] Jean-François Lalonde, Nicolas Vandapel, and Martial Hebert. “Data structures for efficient dynamic processing in 3-D”. In: *International Journal of Robotics Research* 26.8 (Aug. 2007).
- [A12] Jean-François Lalonde, Nicolas Vandapel, Daniel F Huber, and Martial Hebert. “Natural terrain classification using three-dimensional lidar data for ground robot mobility”. In: *Journal of Field Robotics* 23.10 (Oct. 2006), pp. 839–861.

arXiv Articles

- [X1] Sławomir Bąk, Peter Carr, and Jean-François Lalonde. “Domain adaptation through synthesis for unsupervised person re-identification”. In: *arXiv:1804.10094* (2018).
- [X2] Mathieu Garon, Denis Laurendeau, and Jean-François Lalonde. “A framework for evaluating 6-DOF object trackers”. In: *arXiv:1803.10075* (2018).
- [X3] Yannick Hold-Geoffroy, Paulo F. U. Gotardo, and Jean-François Lalonde. “Deep photometric stereo on a sunny day”. In: *arXiv:1803.10850* (2018).
- [X4] Henrique Weber, Donald Prévost, and Jean-François Lalonde. “Learning to estimate indoor lighting from 3D objects”. In: *arXiv:1806.03994* (2018).

Refereed Conference Papers

- [C1] Yannick Hold-Geoffroy, Kalyan Sunkavalli, J. Eisenmann, Matthew Fisher, Emiliano Gambaretto, Sunil Hadap, and Jean-François Lalonde. “A perceptual measure for deep single image camera calibration”. In: *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*. 2018.
- [C2] Mathieu Garon and Jean-François Lalonde. “Deep 6-DOF tracking”. In: *International Symposium on Mixed and Augmented Reality (ISMAR)*. 2017.
- [C3] Yannick Hold-Geoffroy, Kalyan Sunkavalli, Sunil Hadap, Emiliano Gambaretto, and Jean-François Lalonde. “Deep outdoor illumination estimation”. In: *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*. 2017.
- [C4] Jinsong Zhang and Jean-François Lalonde. “Learning high dynamic range from outdoor panoramas”. In: *IEEE International Conference on Computer Vision (ICCV)*. 2017.
- [C5] Maryam Ziaeeafard, Jean-François Lalonde, and Robert Bergevin. “Deep uncertainty interpretation in dyadic human activity prediction”. In: *IEEE International Conference on Machine Learning and Applications*. 2017.
- [C6] Mathieu Garon, Pierre-Olivier Boulet, Jean-Philippe Doiron, Luc Beaulieu, and Jean-François Lalonde. “Real-time high resolution 3D data on the HoloLens”. In: *International Symposium on Mixed and Augmented Reality (ISMAR)*. 2016.
- [C7] Félix Labrie-Larrivé, Denis Laurendeau, and Jean-François Lalonde. “Depth texture synthesis for realistic architectural modeling”. In: *Computer and Robot Vision Conference (CRV)*. 2016.
- [C8] Miguel Granados, Tunç Ozan Aydın, Jose Rafael Tena, Jean-François Lalonde, and Christian Theobalt. “Contrast use metrics for tone mapping images”. In: *IEEE International Conference on Computational Photography (ICCP)*. 2015.
- [C9] Miguel Granados, Tunç Ozan Aydın, Jose Rafael Tena, Jean-François Lalonde, and Christian Theobalt. “HDR image noise calibration for denoising tone mapped images”. In: *European Conference on Visual Media and Production (CVMP)*. 2015.
- [C10] Yannick Hold-Geoffroy, Jinsong Zhang, Paulo F U Gotardo, and Jean-François Lalonde. “What is a good day for outdoor photometric stereo?” In: *IEEE International Conference on Computational Photography (ICCP)*. 2015.
- [C11] Yannick Hold-Geoffroy, Jinsong Zhang, Paulo F U Gotardo, and Jean-François Lalonde. “ x -hour outdoor photometric stereo”. In: *International Conference on 3-D Vision (3DV)*. 2015.
- [C12] Sébastien Michaud, Jean-François Lalonde, and Philippe Giguère. “Towards characterizing the behavior of LiDARs in snowy conditions”. In: *IROS Workshop on Planning, Perception and Navigation for Intelligent Vehicles*. 2015.

- [C13] Minghui Tan, Jean-François Lalonde, Lavanya Sharan, Holly Rushmeier, and Carol O’Sullivan. “The perception of lighting inconsistencies in composite outdoor scenes”. In: *ACM Symposium on Applied Perception*. 2015.
- [C14] Jean-François Lalonde and Iain Matthews. “Lighting estimation in outdoor image collections”. In: *International Conference on 3D Vision (3DV)*. 2014.
- [C15] Jean-François Lalonde, Alexei A Efros, and Srinivasa G Narasimhan. “Detecting ground shadows in outdoor consumer photographs”. In: *European Conference on Computer Vision (ECCV)*. 2010.
- [C16] Jean-François Lalonde, Alexei A Efros, and Srinivasa G Narasimhan. “Estimating natural illumination from a single outdoor image”. In: *IEEE International Conference on Computer Vision (ICCV)*. 2009.
- [C17] Jean-François Lalonde, Srinivasa G Narasimhan, and Alexei A Efros. “What does the sky tell us about the camera?” In: *European Conference on Computer Vision (ECCV)*. 2008.
- [C18] Nicholas Heckman, Jean-François Lalonde, Nicolas Vandapel, and Martial Hebert. “Potential negative obstacle detection by occlusion labeling”. In: *IEEE/RSJ International Conference on Intelligent Robots and Systems*. 2007, pp. 2168–2173.
- [C19] Jean-François Lalonde and Alexei A Efros. “Using color compatibility for assessing image realism”. In: *IEEE International Conference on Computer Vision (ICCV)*. 2007, pp. 1–8.
- [C20] Jean-François Lalonde, Christopher Bartley, and Illah Nourbakhsh. “Mobile robot programming in education”. In: *IEEE International Conference on Robotics and Automation (ICRA)*. May 2006.
- [C21] Ranjith Unnikrishnan, Jean-François Lalonde, Nicolas Vandapel, and Martial Hebert. “Scale selection for the analysis of point-sampled curves”. In: 2006, pp. 1026–1033.
- [C22] Jean-François Lalonde, Ranjith Unnikrishnan, Nicolas Vandapel, and Martial Hebert. “Scale selection for classification of point-sampled 3D surfaces”. In: *International Conference on 3-D Digital Imaging and Modeling (3DIM)*. 2005, pp. 285–292.
- [C23] Jean-François Lalonde, Nicolas Vandapel, and Martial Hebert. “Data structure for efficient processing in 3-D”. In: *Robotics: Science and Systems I*. MIT Press, June 2005.
- [C24] Guy Godin, Jean-François Lalonde, and Louis Borgeat. “Dual-resolution stereoscopic display with scene-adaptive fovea boundaries”. In: *International Immersive Projection Technology Workshop*. 2004.
- [C25] Guy Godin, Jean-François Lalonde, and Louis Borgeat. “Projector-based dual-resolution stereoscopic display”. In: *IEEE Virtual Reality*. IEEE Computer Society, 2004, pp. 223–224.
- [C26] Jerome Vignola, Jean-François Lalonde, and Robert Bergevin. “Progressive human skeleton fitting”. In: *Conference on Vision Interface*. 2003.

Refereed Symposia Talks

- [S1] Mathieu Garon and Jean-François Lalonde. “Deep 6-DOF tracking”. In: *Montreal AI Symposium*. 2017.

Refereed Symposia Posters

- [S2] Marc-André Gardner, Kalyan Sunkavalli, Ersin Yumer, Xiaohui Shen, Emiliano Gambaretto, Christian Gagné, and Jean-François Lalonde. “Deep indoor illumination”. In: *Montreal AI Symposium*. 2017.
- [S3] Yannick Hold-Geoffroy, Kalyan Sunkavalli, Sunil Hadap, Emiliano Gambaretto, and Jean-François Lalonde. “Deep outdoor illumination estimation”. In: *Montreal AI Symposium*. 2017.
- [S4] Jinsong Zhang and Jean-François Lalonde. “Learning high dynamic range from outdoor panoramas”. In: *Montreal AI Symposium*. 2017.
- [S5] Yannick Hold-Geoffroy, Jinsong Zhang, Paulo F U Gotardo, and Jean-François Lalonde. “ x -hour outdoor photometric stereo”. In: *International Conference on Computational Photography*. 2016.
- [S6] Jean-François Lalonde, Alexei A Efros, and Srinivasa G Narasimhan. “Estimating the natural illumination conditions from a single outdoor image”. In: *International Conference on Computational Photography*. 2011.

Patents

- [P1] Iain Matthews and Jean-François Lalonde. “Systems and methods for estimating sky light probes for outdoor images”. Patent 9,860,453 B2 (US). Jan. 2018.
- [P2] Jean-François Lalonde and Iain Matthews. “Predicting a light probe from an outdoor image”. Patent 9,639,773 B2 (US). May 2017.

- [P3] Miguel Granados, Rafael Tena, Tunç O. Aydin, Jean-François Lalonde, Christian Theobalt, and Iain Matthews. “High dynamic range and tone mapping imaging techniques”. Patent 9,275,445 B2 (US). Mar. 2016.
- [P4] Andrew N. Stein and Jean-François Lalonde. “Oriented, spatio-spectral illumination constraints for use in an image process”. Patent 8,934,735 B2 (US). Jan. 2015.
- [P5] Jean-François Lalonde. “Spatially-varying log-chromaticity normals for use in an image process”. Patent 8,842,910 B2 (US). Sept. 2014.
- [P6] Jean-François Lalonde. “Weighted entropy minimization for optimizing a log-chromaticity normal for use in an image process”. Patent 8,811,732 B2 (US). Aug. 2014.
- [P7] Jean-François Lalonde, Patrick Buehler, Bruce Maxwell, Casey Smith, Andrew Stein, and Richard Friedhoff. “Log-chromaticity clustering pipeline for use in an image process”. Patent 8,849,018 B2 (US). Sept. 2014.

Patent Applications

- [PA1] R. Craig Coulter, Ralph Gross, Jean-François Lalonde, and Barbara Simard. “Robotic management of patient care logistics”. Patent Application 12/791,208 (US). 2010.
- [PA2] R. Craig Coulter, Ralph Gross, Jean-François Lalonde, and Barbara Simard. “System and method of patient flow and treatment management”. Patent Application 20110054946 (US). 2009.

HONORS AND RECOGNITIONS

- 2014–18 Outstanding Reviewer Award: CVPR 2014, 2015, 2017, 2018
- 2017 Excellence in teaching award, category “digital educational resource”, Université Laval
- 2017 Best Professor Award, IEEE student branch
- 2015 Best Paper (Runner Up) Award, 3DV 2015
- 2015 Star Professor Award, School of Science and Engineering
- 2011 CMU School of Computer Science Distinguished Dissertation Award
- 2009–2011 Microsoft Research Ph.D. Fellowship
- 2006–2009 Ph.D. Scholarship, Fonds de Recherche sur la Nature et les Technologies (FQRNT)
- 2004–2006 M.S. Scholarship, Fonds de Recherche sur la Nature et les Technologies (FQRNT)

FUNDING

- 2018–2010 **FRQ-NT Samuel-de-Champlain**, “Vision par ordinateur en conditions difficiles”, PI, Co-PI: Raoul de Charrette, INRIA.
\$30,000 / 2 years
- 2018–2021 **FRQ-NT Team Grant 2019-PR-254912**, “Visual Place Recognition for Robots Operating in Changing Environments”, Co-PI (PI: Philippe Giguère (computer science), Co-PIs: Brahim Chaib-draa (computer science), David Meger (McGill, computer science)).
\$162,000 / 3 years
- 2017–2021 **Canada First Research Excellence Fund (Sentinel North)**, “Optimisation of biophilia in extreme climates through architecture”, Co-PI (PIs: Claude Demers (architecture) and Marc Hébert (medicine)).
\$625,640 / 4 years
- 2017–2018 **NSERC ENGAGE EGP 505674-16**, “Surface Reflectance Acquisition for Finished Materials”, with Arcane Technologies.
\$46,735 / 6 months
- 2017 **Research contract**, “High Resolution, High Dynamic Range Panorama Capture”, Adobe Systems.
\$33,500 / 6 months
- 2016–2018 **Unrestricted gift for research activities**, Adobe Systems.
\$85,000 (\$65,500 USD), unlimited duration

- 2016–2019 **Research grant**, “Automated method for replacing real-world objects present in a monocular video with a virtual object”, Institut National d’Optique.
\$60,000 / 4 years
- 2016 **Research grant**, “Change detection with autonomous mobile robots”, Umanx.
\$9,000 / 4 months
- 2016 **Nvidia Hardware grant**, donation of a Titan X Pascal GPU.
- 2016 **Educational innovation grant**, “Educational Tool for Teaching the Internal Structure of Computers”, Université Laval.
\$4,601.25 / 6 months
- 2016 **MITACS Accelerate IT06791**, “Improving Interactivity in Augmented Reality for Video Games Applications”, with Frima Studio.
\$15,000 / 4 months
- 2016 **NSERC ENGAGE EGP 491144-15**, “Precise and Robust Extraction of Physical Measurements by Processing Images Acquired by a Mobile Platform”, PI: Sylvie Daniel (U. Laval), with Bulldozer.
\$24,334 / 6 months
- 2015–2016 **NSERC ENGAGE EGP 485663-15**, “Monocular Face Reconstruction for Virtual Try-on Applications”, with Mentum.
\$24,994 / 6 months
- 2015 **Nvidia Hardware grant**, donation of a Tesla K40 GPU.
- 2015–2017 **FRQ-NT New Researcher Grant 2016NC189939**, “Outdoor Photometric Stereo Under Unknown Illumination”.
\$40,000 / 2 years, with an additional \$25,829 for equipment
- 2014–2019 **NSERC Discovery Grant RGPIN-2014-05314**, “Bringing Images to Light”.
\$185,000 / 5 years

TALKS

Invited talks

- 11/2017 “Learning to Predict Illumination from a Single Image”, NSERC CREATE Data Analytics & Visualization Bootcamp 2017, York University, Toronto, Canada
- 10/2017 “Deep Learning for Computer Graphics: Learning to Estimate Lighting from Photographs”, Re-Work Deep Learning Summit Montreal, Montreal, Canada
- 06/2015 “Richer Models for Outdoor Lighting”, Computer and Robot Vision Conference, Halifax, Canada
- 11/2012 “Understanding Illumination in Natural Images”, SCS Distinguished Dissertation Award Lecture, Pittsburgh, USA

Tutorials

- 09/2016 “Computational Photography Tutorial”, International Conference on Image Processing, Phoenix, USA
- 09/2015 “Computational Photography Tutorial”, International Conference on Image Processing, Quebec City, Canada

Research seminar talks

- 05/2018 “RA and AI”, INSR Eau-Terre-Environnement, Québec, Canada
- 05/2018 “From Faces to Outdoor Light Probes”, REPARTI Seminar, U. Laval
- 12/2017 “Deep Learning and Panoramas”, Immervision, Montreal, Canada
- 11/2017 “Learning to Estimate Lighting From Photographs”, Disney Research, Zürich, Switzerland
- 06/2017 “Object Detection and Deep Learning”, Umanx, Québec, Canada
- 05/2017 “Deep Learning and 3D”, Creaform Tech Lunches, Québec, Canada

- 05/2017 “Learning to Predict Illumination from a Single Image”, Montreal Institute for Learning Algorithms, Montreal, Canada
- 05/2017 “Opportunistic Lighting and Augmented Reality”, Thalès, Québec, Canada
- 11/2016 “Special Effects in Photographs”, Kyoto University, Kyoto, Japan
- 11/2016 “Modeling Outdoor Illumination”, Kyoto University, Kyoto, Japan
- 11/2015 “Data-driven Modeling of Outdoor Illumination”, University College, London, UK
- 10/2015 “Data-driven Modeling of Outdoor Illumination”, McGill University, Montreal, Canada
- 10/2015 “Computational Photography Overview”, Algolux, Montreal, Canada
- 03/2015 “Richer Models for Outdoor Lighting Synthesis and Understanding”, Uber Advanced Technology Center, Pittsburgh, USA
- 05/2014 “Special Effects in your Photos”, REPARTI workshop, Québec, Canada
- 03/2014 “Daylight and Material Estimation from Photo Collections”, REPARTI Seminar, U. Laval
- 11/2013 “Point-and-shoot Sky Probes”, REPARTI Seminar, U. Laval
- 09/2012 “Understanding Illumination in Natural Images”, National Robotics Engineering Consortium, Pittsburgh, USA
- 04/2012 “Understanding and Recreating Visual Appearance in a Single Outdoor Photograph”, Disney Research Pittsburgh, USA
- 01/2011 “Understanding and Recreating Visual Appearance Under Natural Illumination”, Carnegie Mellon University
- 10/2010 “Estimating Illumination Conditions from a Single Outdoor Image”, U. Laval
- 08/2010 “Understanding and Recreating Visual Appearance under Natural Illumination”, Tandent Vision Science, Pittsburgh, USA
- 11/2008 “What Does the Sky Tell Us About the Camera?”, VASC Seminar, Carnegie Mellon University
- 06/2008 “Capturing the Illumination of a Scene: 2 Data-driven Approaches”, U. Laval
- [Scientific conference talks](#)
- 11/2015 “HDR Image Noise Estimation for Denoising Tone Mapped Images”, Conference on Visual Media and Production, London, UK
- 04/2015 “Contrast Use Metrics for Tone Mapping Images”, International Conference on Computational Photography, Houston, TX, USA
- 05/2010 “Webcam Clip Art”, FMX, Stuttgart, Germany
- 12/2009 “Webcam Clip Art”, ACM SIGGRAPH Asia, Yokohama, Japan
- 10/2009 “Estimating Natural Illumination from a Single Outdoor Image”, ICCV, Kyoto, Japan
- 08/2007 “Photo Clip Art”, ACM SIGGRAPH, San Diego, CA, USA
- 08/2006 “Mobile Robot Programming in Education”, ICRA, Orlando, FL, USA
- 06/2005 “Data Structure for Efficient Processing in 3-D”, RSS, Boston, MA, USA
- 06/2005 “Scale Selection for Classification of Point-sampled 3-D Surfaces”, 3DIM, Ottawa, Canada
- [General public presentations](#)
- 04/2018 “Intelligence Artificielle et Réalité Augmentée”, Rendez-vous IA Québec, Québec, Canada
- 04/2018 “Le Futur de la Réalité Augmentée: Suivi d’Objets et Estimation d’Éclairage Automatiques”, Réalité Augmentée Québec (RAQ), Québec, Canada
- 04/2018 “Les Promesses de l’Apprentissage Profond en Réalité Mixte et Augmentée”, Web à Québec (WAQ), Québec, Canada
- 04/2018 “Du Rêve à la Réalité... Augmentée!”, Tempête des Sciences, Cégep Garneau, Québec, Canada

- 10/2017 “Enseigner aux ordinateurs à comprendre l’éclairage dans une photo”, Forum de l’Alliance culture numérique, Musée National des Beaux-Arts du Québec
- 11/2017 “Des effets spéciaux dans vos photos”, IEEE-Ordinateur/Section IEEE Québec, Québec
- 11/2017 “L’intelligence artificielle”, Semaine des réseaux sociaux, Québec
- 10/2017 “Enseigner aux ordinateurs à comprendre l’éclairage dans une photo”, Forum de l’Alliance culture numérique, Musée National des Beaux-Arts du Québec, Québec
- 08/2017 “Programme d’appui à l’innovation pédagogique”, Faculté des Sciences et de Génie, Université Laval
- 04/2016 “Éclairage d’objets virtuels 3D : approches et perspectives”, Journées Aux Frontières du Numérique, ITIS, Québec, Canada
- 11/2015 “Repousser les Limites de la Création 3D: Des Effets Spéciaux dans vos Photos”, École de Design, Québec, Canada
- 10/2015 “Repousser les Limites de la Création 3D: Lumières, Météo, et Objets Virtuels”, Radio interview, CKRL radio station, Québec, Canada
- 10/2015 “Repousser les Limites de la Création 3D: Lumières, Météo, et Objets Virtuels”, ITIS, Québec, Canada
- 08/2014 “An Account of Life as a Young Faculty Member”, Université Laval

TEACHING EXPERIENCE

Université Laval

- 2014–2017 Computational photography
- 2015–2017 Introduction to computer architecture

Carnegie Mellon University

- 2008–2012 Computational photography (guest lecturer, 4 lectures)
- 2010 Computer vision (guest lecturer)
- 2008–2010 Computer graphics (guest lecturer)

Teaching assistantships

- 2007 Learning-based methods in vision, Carnegie Mellon University
- 2003–2004 C++ programming on Linux, Université Laval *Best Teaching Assistant Award*

SERVICE

- 2018 Technical Advisor, Vocabulaire français de l’intelligence artificielle, Office Québécois de la Langue Française
- 2018 Technical Committee Member, ACM SIGGRAPH 2018
- 2018–2019 Publication Chair, IEEE International Conf. on Computational Photography 2018
- 2018 Local Arrangement Chair, Canadian Conf. on Electrical and Computer Eng. 2018
- 2017 Committee president (NC04), “Établissement de nouveaux chercheurs”, FRQ-NT
- 2017 Committee member (05B), “M.S. scholarship program”, FRQ-NT
- 2016–2018 Area Chair: International Conference on 3D Vision (2016–2017), Pacific Conference on Computer Graphics and Applications (2017)
- 2015–2016 Ambassador to the city of Quebec, project `1000raisons.quebec`. Program launched by Quebec’s Work Minister, Mr. Sam Hamad, with the goal of attracting international talent to Quebec City.
- 2015 Program committee member, Technical Briefs and Posters, SIGGRAPH Asia 2015
- 04/2012 Panelist, Quality of Life Technology Industry Panel, Carnegie Mellon University

- 2008–... Journal reviewer: IEEE TPAMI (2011–2014), IJCV (2010–2013), ACM TOG (2008–2017), IEEE TIP (2012–2014), JVBR (2009–2010), CGF (2008–2014), CVIU (2012–14)
- 2010–... Program committee reviewer: CVPR (2011–2017), ECCV (2010–2016), ICCV (2011–2017), ICCP (2014–2017)
- 2008–... External reviewer: RSS (2011), CVPR (2008–2010), ICPR (2010), ICCP (2008), ICRA (2007–2012), ICIP (2012–2014)
- 2009–2010 Graduate admissions committee, Robotics Institute, Carnegie Mellon University

MEDIA COVERAGE

- 04/05/2018 “Intelligence artificielle: un nouveau vocabulaire de 85 mots en français”, Le Soleil
- 11/09/2017 “Ces passionnés de l’enseignement”, Fil des Événements
- 10/31/2017 “The revolution will be unsupervised and other takeaways from the RE•WORK Deep Learning Summit”, CBC Digital Labs
- 10/09/2015 “Québec lance une campagne pour attirer des travailleurs”, Radio-Canada
- 10/09/2015 “70 000 emplois à pourvoir d’ici 3 ans à Québec”, Journal de Montréal
- 10/09/2015 “Campagne de promotion pour inciter les talents à revenir à Québec”, Le Soleil
- 10/08/2015 “Du 3D plus vraisemblable que jamais”, Fil des Événements
- 10/05/2015 Interview at CKRL, Quebec radio station
- 09/2015 “La 3D presque à portée de main”, Le magazine Contact
- 05/30/2015 “Un projet pour rapatrier les talents québécois de l’étranger”, Le Soleil
- 02/19/2015 “Pousser les limites de la création 3D”, Fil des Événements
- 01/31/2015 “Le Ciel de Québec inspire Disney”, Journal de Québec
- 01/26/2015 “Disney Research: La magie de l’image”, Impact Campus
- 04/15/2008 “Photo Clip Art”, CGWorld (Japan)
- 09/19/2007 “Instant makeup: perfect your holiday snaps”, The Independent (UK)
- 08/08/2007 “Photo tool could fix bad images”, BBC News (UK)
- 07/11/2007 “Researchers try Google approach to understanding photos”, News.com (USA)
- 07/11/2007 “Researchers try Google photo tactic”, USAToday (USA)
- 07/19/2007 “Le photomontage pour les nuls”, News.fr (France)
- 07/15/2007 C’t—Magazin für Computertechnik (Germany)

SUPERVISION

Current Ph.D. Students

- 2017–... **Mojtaba Parsaee**, *Sentinel North Ph.D. scholarship*, co-supervised with Claude Demers (architecture) and Marc Hébert (medicine).
- 2017–... **Mathieu Garon**, co-supervised with Denis Laurendeau (ECE), in collaboration with Creaform.
- 2016–... **Henrique Weber**, *INO excellence scholarship*, co-supervised with Donald Prévost (Institut National d’Optique).
Thesis: “Object Replacement in Indoor Video Sequences”
- 2016–... **Jinsong Zhang**.
Thesis: “Data-driven HDR Illumination from Outdoor Images”
- 2014–... **Yannick Hold-Geoffroy**, *FRQ-NT Ph.D. Scholarship*, co-supervised with Paulo Gotardo (Disney Research Zurich).
Thesis: “Understanding Outdoor Photometric Stereo”

2014–... **Marc-André Gardner**, *Alexander Graham Bell Canada Graduate Scholarship*, co-supervised with Christian Gagné (ECE).
Thesis: “Semantics in Deep Neural Networks”

Current M.S. Students

2018–... **Louis-Philippe Asselin**, co-supervised with Denis Laurendeau (ECE).

2018–... **Jonathan Marek**, co-supervised with Christian Gagné (ECE).

2017–... **Geoffroi Côté**, co-supervised with Simon Thibault (physics).
Thesis: “Deep Learning for Lens Design”

Current Post-Doctoral Researchers

2017–... **Filippo Ferrario**, *Sentinel North Post-doc scholarship*, co-supervised with Philippe Archambault (biology), Philippe Giguère (CS), Sylvie Daniel (geomatics), and Patrick Lajeunesse (forestry).
Project: “Flexible Imaging Device: packaging an optic-based citizen science solution for mapping habitats in coastal areas”

Previous Post-Doctoral Researchers

2016–2018 **Fahim Mannan**, co-supervised with Derek Nowrouzezahrai (McGill), in collaboration with Algolux.
Project: “Learning to improve camera ISPs”

Graduated M.S. Students

2015–2017 **Félix Labrie-Larrivée**, co-supervised with Denis Laurendeau (ECE), in collaboration with Creaform.
Thesis: “Depth Texture Synthesis for Realistic Architectural Modeling”

2014–2016 **Sébastien Michaud**.
Thesis: “Influence of Complex Environments on LiDAR-Based Robot Navigation”
last seen at Can-Explore

Graduate research interns

2014–... **Dan Calian**, University College London (UK), project in collaboration with Disney Research.

2014 **Jinsong Zhang**, Beihang University (China).
now Ph.D. student in my group

2014 **Mert Kiliçkaya, Hacettepe U. (Turkey)**, *REPARTI International Internship*.
now Ph.D. student at University of Amsterdam

2014–2015 **Minghui Tan**, Yale (USA), project in collaboration with Disney Research, LA.
last seen at Google

2013–2015 **Miguel Granados**, Max Planck Institute (Germany), project in collaboration with Disney Research, Pittsburgh.
last seen at Magic Leap

2013 **Natasha Kholgade Banerjee**, CMU (USA), project in collaboration with Disney Research, Pittsburgh.
now Assistant Professor at Clarkson U.

Undergraduate research interns

2017 **Marie-Joëlle Gosselin**, *NSERC Undergraduate Research Award*, ECE undergraduate.

2017 **Aditya Shekhar**, *MITACS Globalink International Scholarship*, ECE undergraduate, IIT Guwahati, India.

2016–2017 **Pierre-Olivier Boulet**, CS undergraduate.
last seen at Ubisoft

2016–2017 **Dominic Bilodeau**, ECE undergraduate, project in collaboration with University of Kyoto.

- 2016 **Charles-Olivier Dufresne Camaro**, *NSERC Undergraduate Research Award*, ECE undergraduate, project in collaboration with Umanx.
now M.S. student at University of Toronto
- 2015–2016 **Louis-Philippe Asselin**, *Faculty of Science and Engineering Research Fellowship*, ECE undergraduate.
now M.S. student in my group
- 2015–2016 **Frédéric St-Pierre**, *NSERC Undergraduate Research Award 2015–16*, ECE undergraduate.
- 2014–2016 **Louis-Émile Robitaille**, ECE undergraduate.
now M.S. student at Université Laval
- 2014–2015 **Mathieu Garon**, ECE undergraduate (now graduated).
now Ph.D. student in my group
- 2015 **Julien Becirovski**, ECE undergraduate.
- 2014–2015 **Diane Fournier**, ECE undergraduate (now graduated).
last seen at Optel Vision
- 2014 **Michael Monette**, Physical eng. undergraduate (now graduated).
last seen at EXFO
- 2008 **Joseph Rollo**, CS undergraduate (now graduated).
last seen at General Dynamics
- 2007 **Nicholas Heckman**, CS undergraduate (now graduated).
last seen at Microsoft

Research professionals

- 2016–... **Maxime Tremblay**, Computer Vision and Systems Lab, supervision of 50% of his time during 2 periods of 6 months.
- 2017 **Thierry Moszkowicz**, Computer Vision and Systems Lab, supervision of 40% of his time during 6 months.
- 2016 **Benoit Duinat**, Geomatics Lab, supervision of 30% of his time during 4 months, in collaboration with Sylvie Daniel.
- 2016 **Oleg Boulanov**, Computer Vision and Systems Lab, supervision of 50% of his time during 6 months.

PROFESSIONAL EXPERIENCE

- 2013–2016 **Research Consultant**, *Disney Research*, Pittsburgh, USA.
Part-time consultant.
- 2011–2012 **Computer Vision Scientist**, *Tandent Vision Science Inc.*, Pittsburgh, USA.
Full-time researcher.
- 2006 **Software Engineer**, *Penthera Technologies Inc.*, Pittsburgh, USA.
Full-time software engineer.

LANGUAGES

- French Native
English Excellent
Spanish Conversational

PROFESSIONAL AFFILIATIONS

- 2014–... **Ordre des Ingénieurs du Québec**