Mathieu Garon | Curriculum Vitae

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Work Experience

- 2024-*Present* **Research advisor**, Depix Technologies Inc. Quebec, Canada

- 2021-2024 **CTO**, Depix Technologies Inc. Quebec, Canada

- 2015 **Computer vision R&D developer**, Frima Studio Inc. Quebec, Canada

Research Experience

- 2019-2020 **Research intern**, Facebook Reality Lab, Seattle, Washington

- 2018 **Research intern**, Adobe Systems, San-Jose, California

- 2015-2020 **Graduate research assistant**, Computer Vision and Systems Lab, Laval University

- 2014-2015 **Undergraduate research assistant**, Computer Vision and Systems Lab, Laval University

Patents

- **U.S. 10,692,277** Dynamically estimating lighting parameters for positions within augmented-reality scenes using a neural network.

- **U.S. 10,665,011** Dynamically estimating lighting parameters for positions within augmented-reality scenes based on global and local features.

- **U.S. 11,158,117** Estimating lighting parameters for positions within augmented-reality scenes.

- **PCT/CA2022/051479** Systems and methods for compositing a virtual object in a digital image.

- **US 18,196,887** Systems and methods for rendering virtual objects using editable light-source parameter estimation.

Education

- 2017-2021 **Ph.D. Electrical Engineering**, Laval University, Thesis: *Data-driven 3D reasoning for augmented reality*

- 2015-2017 **M.Sc. Electrical Engineering**, Laval University

- 2011-2015 **B.S. Computer Engineering**, Laval University

Publications

Refereed Conference Papers

1. Mercier, J.-P., Garon, M., Giguere, P. & Lalonde, J.-F. *Deep template-based object instance detection* in *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision* (2021), 1507–1516.

2. Dubeau, E., Garon, M., Debaque, B., de Charette, R. & Lalonde, J.-F. *Rgb-de: event camera calibration for fast 6-dof object tracking* in *2020 IEEE International Symposium on Mixed and Augmented Reality (ISMAR)* (2020), 127–135.

3. De Blois, S., Garon, M., Gagné, C. & Lalonde, J.-F. *Input dropout for spatially aligned modalities* in *2020 IEEE International Conference on Image Processing (ICIP)* (2020), 733–737.

4. Garon, M., Sunkavalli, K., Hadap, S., Carr, N. & Lalonde, J.-F. *Fast spatially-varying indoor lighting estimation* in *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)* (2019), 6908–6917.

5. Garon, M., Laurendeau, D. & Lalonde, J.-F. *A framework for evaluating 6-dof object trackers* in *European Conference on Computer Vision (ECCV)* (Sept. 2018).

6. Weber, H., Garon, M. & Lalonde, J.-F. *Editable indoor lighting estimation* in *European Conference on Computer Vision (ECCV)* (2022).

7. Garon, M., Boulet, P. O., Doironz, J. P., Beaulieu, L. & Lalonde, J. F.
    Real-time high resolution 3D data on the hololens
    in *2016 IEEE International Symposium on Mixed and Augmented Reality (ISMAR-Adjunct)* (Sept. 2016), 189–191.

Refereed Journal Articles..

8. Garon, M. & Lalonde, J. F. Deep 6-DOF tracking.
    IEEE Transactions on Visualization and Computer Graphics **23,** 2410–2418 (Nov. 2017).

Teaching Experience

- 2017-2020 **Teaching assistant**, Real-time Embedded Systems, Laval University

- 2019-2020 **Teaching assistant**, Computational Photography, Laval University

- 2019 **Teaching assistant**, Machine Learning, Laval University

Academic Projects

- 2012-2015 **Founder and technical director of Robocup ULaval**, Small size league team, Laval University

- 2015 **Embedded systems trainer of Robocup Academy**, Student to Student teaching platform, Laval University

Languages

French(Native) English(Fluent)