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EDUCATION

- 2012– PH.D. in COMPUTER SCIENCE, **Université de Sherbrooke**
Subject: “Machine learning applied to neuroimaging”
Advisors: Pr Hugo LAROCHELLE & Pr Maxime DESCOTEAUX
- 2010–2012 M.Sc. in COMPUTER SCIENCE, **Université de Sherbrooke**
Thesis: “Segmentation des fibres de la matière blanche”
Advisors: Pr Shengrui WANG & Pr Maxime DESCOTEAUX
GPA: 4.24/4.3
- 2007–2010 B.Sc. in COMPUTER SCIENCE, **Université de Sherbrooke**
Specialization in Artificial Intelligence
GPA: 4.11/4.3
- 2004–2007 DEC, Techniques de l’informatique, **Cégep de Saint-Jean-sur-Richelieu**

WORK EXPERIENCE

- 2012-2015 | Teaching assistant for the AI course at UNIVERSITÉ DE SHERBROOKE, *Sherbrooke*
 - Marked assignments and answered student questions.
 - Taught Introduction to Python course.
- 2009 | Research internship at NUANCE COMMUNICATIONS, *Montréal*
 - Developed a semantic classification tool for phone call transcripts.
 - Automated a training procedure for call routing.
 - Designed several tools used by the R&D department.
- 2008 | Research internship at NUANCE COMMUNICATIONS, *Montréal*
 - Participated in the development of Advanced Dialog Framework.
 - Created a prototype of virtual calendar controlled by voice.
 - Improved grammars used by the vocal recognition system.
- 2008 | Programming internship at AXESNETWORK, *Sherbrooke*
 - Developed an audit system for smart card reader.
 - Designed a web application to manage users and products.
- 2007 | Programming internship at NETCOMMUNICATIONS, *Saint-Jean-sur-Richelieu*
 - Developed an AI framework of multi-agents for network monitoring.
 - Created an online survey’s framework for Investissement Québec.

SCHOLARSHIP AND AWARDS

- 2012 MICCAI Travel Award (*400€*)
- 2012 NSERC Graduate scholarship Ph.D. (*63 000\$ over three years*)
- 2011 NSERC Graduate scholarship M.Sc. (*17 500\$*)
- 2010 FQRNT Graduate scholarship M.Sc. (*15 000\$*)
- 2010 Université de Sherbrooke – Faculty award of excellence
- 2008 Université de Sherbrooke – Faculty award of excellence
- 2007 Université de Sherbrooke – Welcoming scholarship (*1 000\$*)

PUBLICATIONS

Journals

1. Al-Rfou, R. et al. (2016). Theano: A Python framework for fast computation of mathematical expressions. *arXiv e-prints arXiv:1605.02688*. [PDF].
2. **Marc-Alexandre Côté** and H. Larochelle (2016). An Infinite Restricted Boltzmann Machine. *Neural Computation* **28**(7). [PDF].
3. Uria, B., **Marc-Alexandre Côté** Karol Gregor, I. Murray, and H. Larochelle (Accepted). Neural Autoregressive Distribution Estimation. *Journal of Machine Learning Research*. [PDF].
4. **Marc-Alexandre Côté**, G. Girard, A. Boré, E. Garyfallidis, J.-C. Houde, and M. Descoteaux (2013). Tractometer: Towards validation of tractography pipelines. *Medical Image Analysis* **17**(7). [PDF].

Conference proceedings

1. Cousineau, M., E. Garyfallidis, **Marc-Alexandre Côté**, P.-M. Jodoin, and M. Descoteaux (2016). Tract-profiling and bundle statistics: a test-retest validation study. In: *International Society of Magnetic Resonance in Medicine – ISMRM 2016*.
2. Garyfallidis, E., **Marc-Alexandre Côté**, F. Rheault, and M. Descoteaux (2016). QuickBundlesX: Sequential Clustering of Millions of Streamlines in Multiple Levels of Detail at Record Execution Time. In: *International Society of Magnetic Resonance in Medicine – ISMRM 2016*.
3. Garyfallidis, E., **Marc-Alexandre Côté**, J. Hau, G. Perchey, L. Petit, S. C. Cunanne, and M. Descoteaux (2015). Recognition of bundles in healthy and severely diseased brains. In: *International Society of Magnetic Resonance in Medicine – ISMRM 2015*.
4. Houde, J.-C., **Marc-Alexandre Côté**, and M. Descoteaux (2015). How to avoid biased streamlines-based metrics for streamlines with variable step sizes. In: *International Society of Magnetic Resonance in Medicine – ISMRM 2015*.
5. **Marc-Alexandre Côté**, E. Garyfallidis, H. Larochelle, and M. Descoteaux (2015). Cleaning up the mess: tractography outlier removal using hierarchical QuickBundles clustering. In: *International Society of Magnetic Resonance in Medicine – ISMRM 2015*.
6. Chekir, A., M. Descoteaux, E. Garyfallidis, **Marc-Alexandre Côté**, and F. Oulebsir-Boumghar (2014). A Hybrid Approach for Optimal Automatic Segmentation of White Matter Tracts in HARDI. In: *IEEE Conference on Biomedical Engineering and Sciences*, pp.177–180.
7. **Marc-Alexandre Côté**, A. Boré, G. Girard, J.-C. Houde, and M. Descoteaux (2012). Tractometer: Online Evaluation System for Tractography. In: *Medical Image Computing and Computer-Assisted Intervention – MICCAI 2012*. Vol. 7510. Springer Berlin Heidelberg, pp.699–706.

Master thesis

1. **Marc-Alexandre Côté** (2012). “Segmentation des fibres de la matière blanche”. [PDF]. MA thesis. Université de Sherbrooke.

Research reports

1. **Marc-Alexandre Côté**, G. Girard, S. Wang, and M. Descoteaux (2010). *Représentation et segmentation des fibres de matière blanche basées sur les zéros de la transformée en ondelettes et sur l’alignement de séquences*. Tech. rep. 32. Université de Sherbrooke.

Miscellaneous

1. Brett, M. et al. (2016). *nibabel: 2.1.0*. <http://dx.doi.org/10.5281/zenodo.60808>.