

# Eric Crawford

PHD STUDENT IN MACHINE LEARNING

McGill University, Montreal, Quebec

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## Education

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### Candidate for PhD, Computer Science

Montreal, Quebec, Canada

McGILL UNIVERSITY

2014-Present

- Cumulative GPA: 4.0/4.0
- Member of Reasoning and Learning Lab

### Master of Mathematics, Computer Science

Waterloo, Ontario, Canada

UNIVERSITY OF WATERLOO

2012-2014

- Cumulative GPA: 91.80%
- Member of Computational Neuroscience Research Group

### Bachelor of Mathematics, Honours Computer Science, Co-op, CogSci Option

Waterloo, Ontario, Canada

UNIVERSITY OF WATERLOO

2007-2012

- Cumulative GPA: 88.07%
- Dean's Honours List with Distinction

## Publications

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### REFEREED

- Kroger, B., **Crawford, E.**, Bekolay, T., and Eliasmith, C. (2016). Modeling interactions between speech production and perception: speech error detection at semantic and phonological levels and the inner speech loop. *Frontiers in Computational Neuroscience*. doi:10.3389/fncom.2016.00051.
- **Crawford, E.**, Gingerich, M., and Eliasmith, C. (2015). Biologically plausible, human-scale knowledge representation. *Cognitive science*. doi: 10.1111/cogs.12261.
- **Crawford, E.**, Gingerich, M., and Eliasmith, C. (2013). Biologically plausible, human-scale knowledge representation. In *35th Annual Conference of the Cognitive Science Society*, 412-417.

### NON-REFEREED

- **Crawford, E.** (2015). Biologically plausible, human-scale knowledge representation. Master of Mathematics Thesis, University of Waterloo.
- Voelker, A., **Crawford, E.**, and Eliasmith, C. Learning large-scale heteroassociative memories in spiking neurons. In *Unconventional Computation and Natural Computation*. London, Ontario, 07/2014 2014.

### SOFTWARE

- **Crawford, E.** (2013-Present). MPI backend for the Nengo neural simulator.
- **Crawford, E.** (2010-Present). Contributions to Nengo neural simulator core library.

## Awards & Scholarships

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<b>Alexander Graham Bell Canada Graduate Scholarship - Doctoral - \$70,000</b> NSERC	2016/09-2018/09
<b>David R. Cheriton Graduate Scholarship - \$20,000</b> University of Waterloo, CS	2012/09-2014/09
<b>Alexander Graham Bell Canada Graduate Scholarship - Masters - \$17,000</b> NSERC	2012/09-2013/09
<b>President's Graduate Scholarship - \$10,000</b> University of Waterloo, CS	2012/09-2013/09
<b>Ontario Graduate Scholarship - \$15,000 (Declined)</b> Gov. of Ontario	2012/09-2013/09
<b>Computational Neuroscience Summer Program - \$4,000</b> University of Pennsylvania	2011/05-2011/08
<b>Undergraduate Student Research Award - \$4,500</b> NSERC	2011/01-2011/05
<b>Undergraduate Student Research Award - \$4,500</b> NSERC	2010/01-2010/05
<b>Industrial Undergraduate Student Research Award - \$4,500</b> NSERC	2008/09-2009/01
<b>President's Scholarship - \$2,000</b> University of Waterloo	2007/09-2008/01

## Experience

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### Teaching Assistant

*Montreal, Quebec, Canada*

SCHOOL OF COMPUTER SCIENCE, MCGILL UNIVERSITY

2014-2016

- Implemented game-playing platform for AI course project, ran tournament between submitted agents.
- Held office hours, marked papers, gave tutorials.

### Teaching Assistant

*Waterloo, Ontario, Canada*

DEPARTMENT OF COMPUTER SCIENCE, UNIVERSITY OF WATERLOO

2012-2014

- Held office hours, marked papers, gave tutorials.

### Research Assistant

*Philadelphia, Pennsylvania, USA*

DEPARTMENT OF OTORHINOLARYNGOLOGY, UNIVERSITY OF PENNSYLVANIA

2011/05-2011/08

- Implemented computational methods for identifying neural receptive fields based on neurophysiological data.

### Lead Developer

*Waterloo, Ontario, Canada*

COMPUTATIONAL NEUROSCIENCE RESEARCH GROUP, UNIVERSITY OF WATERLOO

2010/01-2010/05, 2011/01-2011/05

- Designed and implemented GPU backend for Nengo neural simulation package.

### Developer

*Waterloo, Ontario, Canada*

ACRONYM SOFTWARE

2009/05-2009/09

- Implemented UI features for wood and masonry engineering software in C++ and C#.