

David Thibodeau

CONTACT INFORMATION

159 Labonté
Longueuil, Québec
Canada, J4H 2P6

Mobile: 514-616-8802
E-mail: david.thibodeau@mail.mcgill.ca

EDUCATION

McGill University, Montreal, Quebec

PhD, Computer Science

- Started September 2015
- Expected graduation by May 2019
- Under the supervision of Prof. Brigitte Pientka
- Area: theory of programming languages
- “An Intensional Type Theory of Coinduction using Copatterns”

M.Sc., Computer Science

- Graduation on February 2016
- Under the supervision of Prof. Brigitte Pientka
- Area: Theory of programming languages
- Thesis: Programming Infinite Structures Using Copatterns

B.Sc., Mathematics and Computer Science

- Graduation on February 2013
- First Class Honours in Mathematics and Computer Science
- GPA: 3.82

Collège Édouard-Montpetit, Longueuil, Quebec

D.E.C, Natural Sciences, December 2008

- Pure and applied sciences specialization

PROFESSIONAL EXPERIENCE

McGill University, Montreal, QC

Teaching Assistant

Winter 2013, Fall 2013, Fall 2014, Winter 2016

- Graded students’ assignments and exams
- Held office hours
- Answered to students’ questions and comments via email or the class’ discussion board

McGill University, Montreal, QC and **Ludwig-Maximilians-Universität**, Munich, Germany

Research Assistant

Summer 2012

- Funded by the Undergraduate Student Research Award (USRA) of the National Science and Engineering Research Council (NSERC) and the Graduiertenkolleg Programm und Modellanalyse (PUMA) of the Deutsche Forschungsgemeinschaft DFG
- Supervised by Prof. Brigitte Pientka (McGill) and Prof. Andreas Abel (LMU)
- Proved properties about a core calculus for coinductive structures designed by Prof. Andreas Abel (LMU), Prof. Brigitte Pientka (McGill) and Prof. Anton Setzer (Swansea)
- Lead to a POPL’13 submission coauthored with Prof. Andreas Abel (LMU), Prof. Brigitte Pientka (McGill) and Prof. Anton Setzer (Swansea)

McGill University, Montreal, QC

Research Assistant

Summer 2011

- Funded by McGill's Science Undergraduate Research Award (SURA)
- Supervised by Prof. Brigitte Pientka (McGill)
- Investigated how the features of the programming language Beluga can be used to implement different type systems.
- Extended hereditary substitution to type systems in the lambda cube and proved its termination for these type systems.

PUBLICATIONS D. Thibodeau, A. Cave, B. and B. Pientka. Indexed Codata Types. In *Proceedings of the 21st ACM SIGPLAN International Conference on Functional Programming, ICFP 2016*, pages 351-363. 2016.

A. Setzer, A. Abel, B. Pientka, and D. Thibodeau. Unnesting of Copatterns. In *Rewriting and Typed Lambda Calculi, RTA-TLCA 2014*, pages 31-45. 2014.

A. Abel, B. Pientka, D. Thibodeau, and A. Setzer. Copatterns: Programming infinite structures by observations. In *Proceedings of the 40th ACM Symposium on Principles of Programming Languages, POPL 2013*, pages 27-38. 2013.

AWARDS

McGill University

- NSERC's Alexander Graham Bell CGS - PhD, January 2016 - December 2018
- Lorne Trottier Fellowship, 2016-2017
- Lorne Trottier Science Accelerator Fellowship, 2015-2016
- McGill's Grad Excellence Award, 2013-2014, 2014-2015
- FQRNT's Master's Research Scholarships, 2013-2014
- NSERC's Alexander Graham Bell CGS - Master's Program, 2013-2014
- Herbert J. Brennen Scholarship, 2012-2013
- Dean's Honours List - Science, 2011-2013
- NSERC's Undergraduate Student Research Awards, Summer 2012
- Dikran Ohannessian Scholarship in Science, 2011-2012
- Robert Bruce Scholarship, 2011-2012
- Science Undergraduate Research Award, Summer 2011

OTHER SKILLS

Programming Skills:

- C, C#, Java, SML, Ocaml, F#, Haskell, Agda, Beluga, MIPS assembly language, Unix shell scripting, MATLAB

Productivity Applications:

- \TeX (\LaTeX , \BibTeX), Emacs, Vim, Microsoft Office softwares, OpenOffice

Operating Systems:

- Microsoft Windows family, Apple OS X, Linux

EXTRA-CURRICULAR ACTIVITIES

Temrael, Private Ultima Online Server

Administrator

December 2013 to June 2015

- Lead development team
- Maintained game server
- Implemented new game elements and systems
- Provided technical help to the users

Teilia, Private Ultima Online Server

Developer

July to December 2012

- Debugged existing scripts
- Implemented new game elements and systems
- Provided technical help to the users

Librairie Coopérative Édouard-Montpetit, Longueuil, QC

Member of the board

September 2008 to September 2010

- Participated to special activities of the cooperative
- Attended to different COOPSCO congresses

**Association des étudiants du Collège Édouard-Montpetit (AGECEM),
Longueuil, QC**

General Secretary

June 2008 to May 2009

- Wrote minutes and other administrative documents
- Managed human and material resources
- Ensured application and respect of constitution and bylaws and follow up decisions of the different comities

Vice-President: Finance and Development

October 2007 to May 2008

- Managed financial resources
- Wrote financial budgets and reports

Centre d'aide en français du Collège Édouard-Montpetit, Longueuil, QC

Tutor

Fall 2008

- Prepared adequate teaching material based on assessment of knowledge and weaknesses of students
- Guided students through material and exercises to ensure better comprehension of French grammar