

## EDUCATION

**McGill University**, Montreal, Quebec

PhD, Computer Science

- Started September 2015
- Under the supervision of Prof. Brigitte Pientka
- Area: Theory of programming languages
- “Reasoning about coinduction through observations”

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**

- 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
- 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
  - 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
  - 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, Haskell, Coq, Agda, Beluga, MIPS assembly language, Unix shell scripting, MATLAB, Mathematica
- Productivity Applications:
- $\text{T}_{\text{E}}\text{X}$  ( $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}$ ,  $\text{BIB}_{\text{E}}\text{X}$ ), 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