

Vincent St-Amour

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- Employment*
- ◇ **Warren Teaching Fellow** – Northwestern University, Evanston, IL.
Electrical Engineering and Computer Science, McCormick School of Engineering.
June 2017 – Present
Move towards a greater emphasis on teaching.
 - ◇ **Research Assistant Professor** – Northwestern University, Evanston, IL.
Electrical Engineering and Computer Science, McCormick School of Engineering.
September 2016 – May 2017
with Robby Findler
Continuation of the next item.
 - ◇ **Research Associate** – Northwestern University, Evanston, IL.
Electrical Engineering and Computer Science, McCormick School of Engineering.
June 2015 – August 2016
with Robby Findler
Co-managing the programming languages group: mentoring, fundraising, strategic planning.
 - ◇ **Research Intern** – Mozilla Corporation, San Francisco, CA.
May 2014 – August 2014
with Shu-yu Guo
Research and development work on optimization coaching for JavaScript.
 - ◇ **Research Assistant** – Université de Montréal, Montréal, Québec.
Linguistics and Translation, School of Arts and Sciences.
October 2007 – December 2007
with Guy Lapalme and Marie-Claude l’Homme
Work on XML representations and transformations for a lexicographic dictionary.
 - ◇ **Developer** – Insum Solutions, Montréal, Québec.
May 2006 – August 2006
with Francis Mignault
Developed enterprise and association management software using Oracle APEX.
- Education*
- ◇ **Northeastern University**, Boston, MA.
Ph.D. in Computer Science
September 2009 – May 2015
Thesis: *How to Generate Actionable Advice about Performance Problems*
Under the direction of Matthias Felleisen and Sam Tobin-Hochstadt
 - ◇ **Université de Montréal**, Montréal, Québec.
B.Sc. with honors in Computer Science, Dean’s List (School of Arts and Sciences)
August 2006 – April 2009
 - ◇ **Collège Jean-de-Brébeuf**, Montréal, Québec.
Diploma of College Studies – Pure and Applied Sciences
August 2004 – May 2006

- Teaching*
- ◇ **Instructor** – Northwestern University – Winter 2017 – Present
Introduction to Programming Languages: Winter 2017, scheduled Spring 2018
Introduction to Computer Systems: Fall 2017 (with Nikos Hardavellas), Winter 2018, scheduled Spring 2018
 - ◇ **Teaching Assistant** – Northeastern University – Fall 2009 – Spring 2012
Compilers: Spring 2012
Systematic program design (How To Design Programs): Spring 2010, Fall 2010
Object-oriented design: Fall 2009
 - ◇ **Teaching Assistant** – Camp Informatique – Université de Montréal – Summer 2008, 2009
Programming Robots in Scheme
 - ◇ **Teaching Assistant** – Université de Montréal – Winter 2009
Operating systems
 - ◇ **Teaching Assistant** – Collège Jean-de-Brébeuf – Fall 2005
Information and communication technologies
- Advising*
- ◇ Shu-Hung You, PhD, Northwestern, Fall 2016 – Present, with Robby Findler
 - ◇ Daniel Feltey, PhD, Northwestern, Fall 2015 – Present, with Robby Findler
 - ◇ Spencer P. Florence, PhD, Northwestern, Fall 2015 – Present, with Robby Findler
 - ◇ Leif Andersen, PhD, Northeastern, Fall 2014 – Present, with Matthias Felleisen
 - ◇ Adrien Tateno, BS, Northwestern, Spring 2016, with Robby Findler
 - ◇ Zavier Henry, BS, Northwestern, Spring 2016, with Robby Findler
 - ◇ Claire Alvis, PhD, Northeastern, Fall 2012 – Fall 2014, with Matthias Felleisen
 - ◇ Josh McGrath, MS, Northeastern, Fall 2013, with Matthias Felleisen
 - ◇ Jim Shargo, BS, Northeastern, Fall 2010 – Spring 2011, with Matthias Felleisen
- Service*
- ◇ **Organizer / Program Chair** RacketCon 2014, 2015, 2016, 2017
 - ◇ **Committees** OOPSLA 2013 Artifact Evaluation Committee, PLDI 2014 Artifact Evaluation Committee, ManLang 2017 Program Committee, GPCE 2017 Program Committee, DSLDI 2017 Program Committee, PLDI 2017 External Review Committee
 - ◇ **Reviewer** ICFP 2011, ICFP 2012, OOPSLA 2013, JFP (2013, 2014), Programming 2017
 - ◇ **Panelist** SPLASH 2016 Programming Languages Mentoring Workshop
 - ◇ **Co-Organizer** Northwestern Computer Science Education Day, May 2016
 - ◇ **Organizer** Programming languages seminars – Northeastern University
September 2012 – December 2014
 - ◇ **Organizer** Ph.D. seminars – Northeastern University
May 2011 – September 2011
 - ◇ **Organizer** Programming languages Jr. seminars – Northeastern University
January 2010 – December 2011
 - ◇ **President** Computer Science Student Association – Université de Montréal
June 2008 – June 2009
 - ◇ **Vice-President** Computer Science Student Association – Université de Montréal
January 2007 – February 2008
- Interests*
- Programming tools, language and library building, extensible languages, compilers.

- Selectively Reviewed Conference Publications*
- ◇ **Unconventional Parallelization of Nondeterministic Applications**
Enrico Armenio Deiana, Vincent St-Amour, Peter Dinda, Nikos Hardavellas, and Simone Campanoni
Proc. Conf. on Architectural Support for Programming Languages and Operating Systems 2018
 - ◇ **Herbarium Racketensis: A Stroll Through the Woods (Functional Pearl)**
Vincent St-Amour, Daniel Feltey, Spencer P. Florence, Shu-Hung You, and Robert Bruce Findler
Proc. International Conf. Functional Programming 2017
 - ◇ **Migratory Typing: Ten Years Later**
Sam Tobin-Hochstadt, Matthias Felleisen, Robert Bruce Findler, Matthew Flatt, Ben Greenman, Andrew M. Kent, Vincent St-Amour, T. Stephen Strickland, Asumu Takikawa
Proc. Summit on Advances in Programming Languages 2017
 - ◇ **Optimization Coaching for JavaScript**
Vincent St-Amour and Shu-yu Guo
Proc. European Conf. on Object-Oriented Programming 2015
 - ◇ **Profile-Guided Meta-Programming**
William J. Bowman, Swaha Miller, Vincent St-Amour, and R. Kent Dybvig
Proc. Conf. on Programming Language Design and Implementation 2015
 - ◇ **Feature-Specific Profiling**
Vincent St-Amour, Leif Andersen, and Matthias Felleisen
Proc. Conf. Compiler Construction 2015
 - ◇ **Experience Report: Applying Random Testing to a Base Type Environment**
Vincent St-Amour and Neil Toronto
Proc. International Conf. Functional Programming 2013
 - ◇ **Optimization Coaching: Optimizers Learn to Communicate with Programmers**
Vincent St-Amour, Sam Tobin-Hochstadt, and Matthias Felleisen
Proc. Conf. Object-Oriented Programming Systems, Languages, and Applications 2012
 - ◇ **Typing the Numeric Tower**
Vincent St-Amour, Sam Tobin-Hochstadt, Matthew Flatt, and Matthias Felleisen
Proc. International Symp. on Practical Aspects of Declarative Languages 2012
 - ◇ **Languages as Libraries**
Sam Tobin-Hochstadt, Vincent St-Amour, Ryan Culpepper, Matthew Flatt, and Matthias Felleisen
Proc. Conf. on Programming Language Design and Implementation 2011
 - ◇ **PICOBIT: A Compact Scheme System for Microcontrollers**
Vincent St-Amour and Marc Feeley
Proc. Symp. on Implementation and Application of Functional Languages 2009
Recipient of the Peter J. Landin Award for the best IFL 2009 paper
- Workshop Publications*
- ◇ **Languages the Racket Way**
Daniel Feltey, Spencer P. Florence, Tim Knutson, Vincent St-Amour, Ryan Culpepper, Matthew Flatt, Robert Bruce Findler, and Matthias Felleisen
Proc. Language Workbench Challenge 2016
 - ◇ **Seeing the Futures: Profiling Shared-Memory Parallel Racket**
James Swaine, Burke Fetscher, Vincent St-Amour, Robert Bruce Findler, and Matthew Flatt
Proc. Works. on Functional High-Performance Computing 2012

- ◇ **Small Scheme Stack: A Scheme TCP/IP Stack Targeting Small Embedded Applications**
Vincent St-Amour, Lysiane Bouchard, and Marc Feeley
Proc. Scheme and Functional Programming Workshop 2008

Posters

- ◇ **Soft Dependences**
Enrico Armenio Deiana, Vincent St-Amour, Peter Dinda, Nikos Hardavellas, and Simone Campanoni
Greater Chicago Systems Research Workshop 2017, Parallel Architectures and Compilation Techniques 2017

Talks

- ◇ **Optimization Coaching**
University of Iowa (July 2016)
- ◇ **Optimization in Typed Racket**
Inside Racket Seminars (June 2016)
- ◇ **Optimization Coaching**
Northwestern University (February 2015)
- ◇ **Optimization Coaching for JavaScript**
Mozilla (July 2014)
<https://air.mozilla.org/optimization-coaching-for-spidermonkey/>
- ◇ **Optimization Coaching**
Samsung Research (July 2014)
- ◇ **The Typed Racket Numeric Tower**
Boston Racket Salon (January 2014)
- ◇ **Optimization Coaching**
Indiana University Programming Languages Fest (October 2013)
- ◇ **Contract Profiling**
Racketcon 2013
<https://www.youtube.com/watch?v=D7uPm3J-o6g>
- ◇ **Optimization Coaching**
Harvard Programming Languages seminar (October 2012)
- ◇ **Optimization Coaching in DrRacket**
Racketcon 2012
- ◇ **The Performance Report DrRacket Tool**
Racketcon 2011 (Lightning Talk)
- ◇ **Where Are You Going with These Types?**
Symp. on Implementation and Application of Functional Languages 2010
- ◇ **Type-Driven Optimization in Typed Racket**
Scheme and Functional Programming Workshop 2010 (Lightning Talk)
- ◇ **Small Scheme Stack**
Montreal Scheme and Lisp User Group (August 2008)
- ◇ **DiCoInfo**
RALI-OLST Seminar (July 2007)

Free Software
Development

- ◇ **Racket (core developer)**
April 2010 – present
Release management.
Performance tools, optimization, and benchmarking.
Typed Racket development and maintenance.
General standard library and infrastructure development and maintenance.

- ◇ **Firefox**
May 2014 – August 2014
Prototype optimization coach for SpiderMonkey.
Miscellaneous small contributions to SpiderMonkey.
- ◇ **Scheme Now!**
January 2007 – April 2007
Generic installation script for Scheme systems for use with the Snow package manager.

- Scholarships*
- ◇ NSERC Graduate Scholarship (Fall 2009 – Spring 2013)
 - ◇ SIGPLAN Professional Activities Committee Grant (Fall 2012)
 - ◇ NSERC Undergraduate Student Research Awards (Summer 2007, 2008, 2009)
 - ◇ CAE-Fraser Elliott Fund Excellence Scholarship (Winter 2008)

- Awards*
- ◇ **Peter J. Landin Award 2009**, best paper at IFL 2009
 - ◇ **Computer Science Games 2009**, 1st place
 - ◇ **Computer Science Games 2008**, 3rd place
 - ◇ **Computer Science Games 2007**, 2nd place

Languages Fluent spoken and written French and English