

# Burke Fetscher

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## Education

- 2011 - 2015 **Northwestern University**  
Ph.D., Computer Science  
Dissertation: *Automated Testing for Operational Semantics*  
Advisor: Robby Findler
- 2014 **Northwestern University** M.S., Computer Science
- 2009 - 2011 **DePaul University** Computer Science (part time)
- 2002 - 2005 **University of Montana** B.A., Physics, with honors
- 1996 - 2000 **Northwestern University** B.A., Comparative Literature

## Work Experience

- 2015 **Lecturer**, Northwestern University
- 2011 - 2015 **Research Assistant**, Northwestern University  
Research and software development for PLT Redex (<http://redex.racket-lang.org>),  
a Racket DSL for semantics modeling, focusing on automated testing
- 2010 - 2015 **Consulting** for Mata Traders, Ltd.  
IT support including development of an application (in Scala) linking Quickbooks,  
CubeCart, and eBay
- 2009 - 2011 **Software Developer**, Backstop Solutions Group, Chicago, IL  
Worked on an accounting/CRM web application for hedge funds, in Java  
<http://www.backstopsolutions.com/>
- 2007 - 2009 **Teacher**, Dartmoor School, Seattle, WA  
Physical Science and Mathematics for high school and middle school

## Publications

- **A Coq Library For Internal Verification of Running-Times**  
with Jay McCarthy, Max New, Daniel Feltey, and Robby Findler  
*Functional and Logic Programming, 2016*
- **POP-PL: A Patient-Oriented Prescription Programming Language**  
with Spencer P. Florence, Matthew Flatt, William H. Temps, Tina Kiguradze,  
Dennis P. West, Charlotte Niznik, Robby Findler, and Steven M. Belknap  
*International Conference on Generative Programming: Concepts & Experience 2015*
- **Making Random Judgments:**  
**Generating Well-typed Terms from the Definition of a Type System**  
with Koen Claessen, Michał Pałka, John Hughes, and Robby Findler  
*European Symposium on Programming, 2015*
- **Seeing the Futures: Profiling Shared-Memory Parallel Racket**  
with James Swaine, Vincent St-Amour, Matthew Flatt, and Robby Findler  
*Functional High-Performance Computing, 2012*
- **Fair Enumeration Combinators**  
with Max New, Jay McCarthy, and Robby Findler  
*in preparation*

## Technical Reports

- **The Random Generation of Well-Typed Terms**  
*Technical Report NU-EECS-14-05, Northwestern University EECS*

## Teaching

- **Instructor** for Northwestern EECS 495, Intensive Program Design  
Co-instructor for this course with Jesse Tov: we designed and adapted a new curriculum for incoming Master's students, covering the basics of the first year, including data-oriented programming, data structures, and modern C++  
Fall 2015
- **TA** for Northwestern EECS 322, Compiler Construction  
Spring 2015
- **TA** for Northwestern EECS 111, Fundamentals of Programming  
Held discussion section, wrote auto-grading scripts, coordinated grading  
Fall 2014, Winter 2015
- **TA** for Northwestern EECS 321, Programming Languages  
Held discussion section, wrote and delivered two lectures  
Winter 2013

## Activities/Awards

- July 2015 PLT Redex Summer School
- July 2012 Summer School on Language Frameworks, Sinaia, Romania
- 2011 - 2012 Walter P. Murphy Graduate Student Fellowship