Max S. New — Curriculum Vitae

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Research interests Language interoperability; gradual typing; language semantics and design

Current position
◇ Northeastern University (Boston, MA, USA) *Aug. 2014* – Present
PhD Candidate

Education

Northeastern University, Boston, MA *2012 – 2018*
PhD in Computer Science, *Expected April, 2020*
Thesis: *A Semantic Foundation for Gradual Typing*
Advisor: Amal Ahmed
Committee: Matthias Felleisen, Ronald Garcia, Daniel R. Licata, Peter Thiemann, Mitchell Wand

Northwestern University, Evanston, IL *2009 – 2014*
MS in Computer Science, *June 2014*
BA in Computer Science and Mathematics, *June 2013*

Service

Co-chair *April 2020*
Eighth Workshop on Mathematically Structured Functional Programming (MSFP 2020)

Panelist *January 2019*
Programming Languages Mentoring Workshop
Panel: Grad School and Beyond

New England Programming Languages and Systems Symposium
Co-chair October 2016
Selection Committee May 2016, June 2017, August 2018

Reviewer for: FoSSaCS, ICFP, JFP, LNCS, LICS, POPL, TOPLAS

Awards

POPL Student Research Competition, Third Place *2017*
Northeastern University Fellowship *2014* – Present

Publications (Journal)

How to evaluate the performance of gradual type systems *JFP Vol 29, 2019*
Ben Greenman, Asumu Takikawa, Max S. New, Daniel Feltey, Robert Bruce Findler, Jan Vitek, Matthias Felleisen
Journal of Functional Programming

Fair Enumeration Combinators *JFP Vol 27, 2017*
Max S. New, Burke Fetscher, Robert Bruce Findler, Jay McCarthy
Journal of Functional Programming

Publications (Conferences)

Graduality and Parametricity: Together Again for the First Time *POPL 2020*
Max S. New, Dustin Jamner, Amal Ahmed
ACM SIGPLAN Symposium on Principles of Programming Languages

Gradual Type Theory *POPL 2019*
Max S. New, Daniel R. Licata, Amal Ahmed
ACM SIGPLAN Symposium on Principles of Programming Languages

Graduality from Embedding-projection Pairs *ICFP 2018*
Max S. New, Amal Ahmed
ACM SIGPLAN International Conference on Functional Programming

Call-by-name Gradual Type Theory *FSCD 2018*
Max S. New, Daniel R. Licata
International Conference on Formal Structures for Computation and Deduction

FabULous Interoperability for ML and a Linear Language *FoSSaCS 2018*
Gabriel Scherer, Max S. New, Nick Rioux and Amal Ahmed
International Conference on Foundations of Software Science and Computation Structures

Fully Abstract Compilation via Universal Embedding *ICFP 2017*
Max S. New, William J. Bowman, and Amal Ahmed
ACM SIGPLAN International Conference on Functional Programming

Oh Lord, Please Don't Let Contracts be Misunderstood (Functional Pearl) *ICFP 2016*
Christos Dimoulas, Max S. New, Robert Bruce Findler, Matthias Felleisen
ACM SIGPLAN International Conference on Functional Programming

A Coq Library For Internal Verification of Running-Times *FLOPS 2016*
Jay McCarthy, Burke Fetscher, Max New, Daniel Feltey, Robert Bruce Findler
International Symposium on Functional and Logic Programming

Is Sound Gradual Typing Dead? *POPL 2016*
Asumu Takikawa, Daniel Feltey, Ben Greenman, Max S. New, Jan Vitek, Matthias Felleisen
ACM SIGPLAN Symposium on Principles of Programming Languages

Teaching Experience

Northeastern University

- Teaching assistant, *Intensive Principles of Programming Languages* *Spring 2016*
  PhD course on programming languages
- Teaching Assistant, *Fundamentals of Computer Science I* *Fall 2015*
  Undergraduate introductory programming course

Northwestern University

- Teaching Assistant, *Compiler Construction* *Spring 2014*
  Upper-level undergraduate course on compilers
- Teaching Assitant, *Programming Languages* *Winter 2014*
  Undergraduate course on programming languages

Talks

Type Theoretic Gradual Typing *June 2019*
UPenn PL Club

A Type Theoretic Approach to Gradual Typing *October 2018*
CMU Principles of Programming Seminar

Semantic Foundations for Gradual Typing *June 2018*
Invited Talk, MFPS 2018

Call-by-name Gradual Type Theory *April 2018*
Northeastern PL Seminar

Retractions and Blame *December 2016*
Northeastern PL Seminar

Abstract Interpretation *February 2016*
Northeastern PL Seminar, Jr

The Expression Problem & Inductive Data Types *July 2015*
Northeastern PL Seminar, Jr

System F and Parametricity *March 2015*
Northeastern PL Seminar, Jr

Intro to Categories *November 2014*
Northeastern PL Seminar, Jr

Every Program in Your Redex Model, in Order *September 2013*
RacketCon 2013