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 2260 Hayward Street
 Ann Arbor, MI 48109 USA

CITIZENSHIP USA

EMPLOYMENT ♦ University of Michigan (Ann Arbor, MI, USA) *Aug. 2021 – Present*
 Assistant Professor
 Computer Science & Engineering

 ♦ Wesleyan University (Middletown, CT, USA) *Dec. 2020 – Aug. 2021*
 Postdoctoral Researcher

EDUCATION **Northeastern University**, Boston, MA *2012 – 2020*
 PhD in Computer Science, *Dec, 2020*
 Thesis: *A Semantic Foundation for Sound 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*

RESEARCH Programming language design, semantics and implementation; gradually typed
 INTERESTS programming languages; compiler intermediate languages; type theory; category
 theory

PHD ADVISEES Eric Giovannini *Fall 2021-Present*, PhD Candidate, Metatheory of Gradually Typed
 Programming Languages.
 Steven Schaefer *Summer 2023-Present*, PhD Candidate
 Yuchen Jiang *Fall 2023-Present*, PhD Candidate
 Eric Bond *Fall 2023-Present*, PhD Candidate
 Yichen Tao *Fall 2023-Present*, PhD Candidate, Co-advised with Jean-Baptiste
 Jeannin
 Jesse Slater *Fall 2024-Present*, PhD Candidate, Co-advised with Xinyu Wang

UNIVERSITY **University of Michigan** Hosting Committee *Fall 2022-Present*
 SERVICE Graduate Committee *Fall 2021-Winter 2022*

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| PROFESSIONAL ACTIVITIES AND SERVICE | Program Co-chair with Guilhem Jabert Twelfth Workshop on Higher Order Programming with Effects (HOPE 2024) | <i>Fall 2024</i> |
| | Co-organizer with Jean-Baptiste Jeannin, Cyrus Omar, Xinyu Wang Midwest Programming Languages Symposium 2023 | <i>Fall 2023</i> |
| | Program Co-chair with Daniel Hillerström Eleventh Workshop on Higher Order Programming with Effects (HOPE 2023) | <i>Fall 2023</i> |
| | Program Co-chair with Jeremy Gibbons Ninth Workshop on Mathematically Structured Functional Programming (MSFP 2022) | <i>April 2022</i> |
| | Program Co-chair with Sam Lindley Eighth Workshop on Mathematically Structured Functional Programming (MSFP 2020) | <i>April 2020</i> |
| | Invited Participant Shonan Meeting No. 146: Programming and Reasoning with Algebraic Effects and Effect Handlers | <i>March 2019</i> |
| | Dagstuhl Seminar 18201: Secure Compilation | <i>May 2018</i> |
| | Panelist NSF Proposal Reviewer, 2022 | |
| | Panelist Programming Languages Mentoring Workshop at POPL 2019 Panel: Grad School and Beyond | <i>January 2019</i> |
| | Co-chair with Gabriel Scherer New England Programming Languages and Systems Symposium (Selection Committee May 2016, June 2017, August 2018) | <i>October 2016</i> |
| | Program Committee Member (Conference) | |
| | • ACM SIGPLAN Conference Principles of Programming Languages (POPL) 2024 | |
| | • ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages and Applications (OOPSLA) 2023 (External Review / Artifact Evaluation Committee) | |
| | • 38th International Conference on Mathematical Foundations of Programming Semantics (MFPS) 2022 | |
| | • ACM SIGPLAN International Conference on Functional Programming (ICFP) 2019 | |
| | Program Committee Member (Workshop) | |
| | • Human Aspects of Types and Reasoning Assistants (HATRA) 2021 | |
| | • Human Aspects of Types and Reasoning Assistants (HATRA) 2020 | |
| | Journal Reviewing for: ACM Transactions on Programming Languages and Systems (TOPLAS), Journal of Functional Programming (JFP), Logical Methods in Computer Science (LMCS) | |
| | External Conference Reviewer POPL, ICFP, LICS, FoSSaCs, LNCS, TOPLAS, OOPSLA | |

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| PUBLICATIONS | Denotational Semantics of Gradual Typing using Synthetic Guarded Domain Theory Eric Giovannini, Tingting Ding, Max S. New <i>Proceedings of the ACM on Programming Languages</i> | POPL 2025 |
| | Gradual Typing for Effect Handlers Max S. New, Eric Giovannini, Daniel R. Licata <i>Proceedings of the ACM on Programming Languages</i> | OOPSLA 2023 |
| | A Formal Logic for Formal Category Theory Max S. New, Daniel R. Licata <i>International Conference on Foundations of Software Science and Computation Structures</i> | FoSSaCs 2023 |
| | Gradual Type Theory Max S. New, Daniel R. Licata <i>Journal of Functional Programming</i> | JFP Vol 31, 2021 |
| | Call-by-name Gradual Type Theory Max S. New, Daniel R. Licata <i>Logical Methods in Computer Science</i> | LMCS Vol 16, Issue 1, 2020 |
| | Graduality and Parametricity: Together Again for the First Time Max S. New, Dustin Jamner, Amal Ahmed <i>Proceedings of the ACM on Programming Languages</i> | POPL 2020 |
| | How to evaluate the performance of gradual type systems Ben Greenman, Asumu Takikawa, Max S. New, Daniel Feltey, Robert Bruce Findler, Jan Vitek, Matthias Felleisen <i>Journal of Functional Programming</i> | JFP Vol 29, 2019 |
| | Gradual Type Theory Max S. New, Daniel R. Licata, Amal Ahmed <i>Proceedings of the ACM on Programming Languages</i> | POPL 2019 |
| | Graduality from Embedding-projection Pairs Max S. New, Amal Ahmed <i>Proceedings of the ACM on Programming Languages</i> | ICFP 2018 |
| | Call-by-name Gradual Type Theory Max S. New, Daniel R. Licata <i>International Conference on Formal Structures for Computation and Deduction</i> | FSCD 2018 |
| | FabULous Interoperability for ML and a Linear Language Gabriel Scherer, Max S. New, Nick Rioux and Amal Ahmed <i>International Conference on Foundations of Software Science and Computation Structures</i> | FoSSaCS 2018 |
| | Fair Enumeration Combinators Max S. New, Burke Fetscher, Robert Bruce Findler, Jay McCarthy <i>Journal of Functional Programming</i> | JFP Vol 27, 2017 |
| | Fully Abstract Compilation via Universal Embedding Max S. New, William J. Bowman, and Amal Ahmed <i>Proceedings of the ACM on Programming Languages</i> | ICFP 2017 |
| | Oh Lord, Please Don't Let Contracts be Misunderstood (Functional Pearl) Christos Dimoulas, Max S. New, Robert Bruce Findler, Matthias Felleisen <i>ACM SIGPLAN Conference on Object-oriented Programming, Systems, Languages, and Applications</i> | ICFP 2016 |
| | A Coq Library For Internal Verification of Running-Times Jay McCarthy, Burke Fetscher, Max New, Daniel Feltey, Robert Bruce Findler <i>International Symposium on Functional and Logic Programming</i> | FLOPS 2016 |
| | Is Sound Gradual Typing Dead? Asumu Takikawa, Daniel Feltey, Ben Greenman, Max S. New, Jan Vitek, Matthias Felleisen <i>ACM SIGPLAN Symposium on Principles of Programming Languages</i> | POPL 2016 |

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| WORKSHOP TALKS | Relative Monads in Call-by-push-value as an Abstraction of Stack-Based Effects | <i>HOPE 2022</i> |
| | Max S. New <i>Higher-order Programming with Effects</i> | |
| | From Call-by-push-value to Stack-based TAL? | <i>LOLA 2019</i> |
| TEACHING | Max S. New <i>Syntax and Semantics of Low-Level Languages</i> | |
| | Every Program in Your Redex Model, in Order | <i>September 2013</i> |
| | RacketCon 2013 | |
| TEACHING | University of Michigan | |
| | ◇ EECS 483, <i>Compiler Construction</i> | <i>Fall 2021, Fall 2022, Fall 2023, Winter 2024</i> |
| | Upper-level undergraduate compilers course | |
| TEACHING | ◇ EECS 598, <i>Category Theory for Computer Scientists</i> | <i>Winter 2022, Winter 2023</i> |
| | Graduate-level course on category theory and programming language semantics | |
| INVITED TALKS | Compiling with Call-by-push-value | <i>June 2023</i> |
| | Mathematical Foundations of Program Semantics 2023 | |
| | Gradual Typing for Effect Handlers | <i>May 2023</i> |
| INVITED TALKS | POPV Seminar, Boston University | |
| | A Type Theory for Formal Category Theory | <i>March 2023</i> |
| | Tallinn Institute of Technology | |
| INVITED TALKS | A Type theory for Formal Category Theory | <i>October 2022</i> |
| | LIX Proofs and Algorithms Seminar, École polytechnique | |
| | Type Theoretic Gradual Typing | <i>June 2019</i> |
| INVITED TALKS | PL Club, University of Pennsylvania | |
| | A Type Theoretic Approach to Gradual Typing | <i>October 2018</i> |
| | Principles of Programming Seminar, Carnegie Mellon University | |
| INVITED TALKS | Semantic Foundations for Gradual Typing | <i>June 2018</i> |
| | Mathematical Foundations of Program Semantics 2018 | |
| | Call-by-name Gradual Type Theory | <i>April 2018</i> |
| INVITED TALKS | Northeastern PL Seminar | |
| | Retractions and Blame | <i>December 2016</i> |
| | Northeastern PL Seminar | |