Ben Greenman University of Utah College of Engineering Kahlert School of Computing MEB 3252 50 S. Central Campus Drive Salt Lake City, UT, 84112

benjamin.1.greenman@gmail.com office: 801-585-1039 cell: 781-924-9989

RESEARCH INTERESTS _

Assistant Professor

Postdoctoral Researcher, CIFellows 2020

• Brown University

General interests: Language design issues regarding proofs, performance, and people. What guarantees do languages offer, how efficiently can they run, and to what extent do they help users meet their goals?

Specific interests: Migratory Typing, Language Interoperability, Type Theory, Formal Methods

Neuthernton Heimenton	2014 2020
Northeastern University Plantage Ph D	2014 - 2020
Degree Ph.D	
Area Programming Languages Advisor Matthias Felleisen	
Thesis Deep and Shallow Types	
Cornell University	2013 - 2014
Degree Master of Engineering	
Major Computer Science	
Advisor Ross Tate	
Cornell University	2010 - 2013
Degree Bachelor of Science	
Major Industrial and Labor Relations	
Minor Computer Science	
Hudson Valley Community College	2009 - 2010
General Studies	
MPLOYMENT	
University of Utah	2023 – ongoing

2023 - ongoing

2021 - 2023

Mentor Shriram Krishnamurthi

 Knightsbridge Park Consultant, Web Scraping 	2017
Cornell University Research Assistant	2012 - 2014
• Rentenna Inc. Software Engineering Intern	2012 - 2014
TEACHING	
• Topics in PL and Systems: Tables and Humans Organizer	2021
• Software Development Teaching Assistant	2018, 2020
• Fundamentals I (Computing and Programming) Teaching Assistant	2016
Object-Oriented Design Teaching Assistant	2016
 Functional Programming and Data Structures Teaching Assistant 	2012 - 2014
STUDENTS SUPERVISED	
Rob Durst–, not a student	2023 - 2023
Caspar Popova–, not a student	2023 – ongoing
Vivaan Rajesh–, Hillcrest High School	2023 – ongoing
• Dibri Nsofor Ph.D., University of Utah	2023 – ongoing
 Ashton Wiersdorf Ph.D., University of Utah 	2022 – ongoing
 Taylor Allred M.S., University of Utah 	2022 - 2023
Siddhartha Prasad Ph.D., Brown University	2022 – ongoing

 Qianfan Chen Sc.B. with Honors [thesis], Brown University 	2021 - 2022
Kuang-Chen Lu Ph.D., Brown University	2021 - 2022
• Milo Davis B.S., Northeastern University	2017
• Zeina Migeed B.S., Northeastern University	2016 – 2017
Awards	
NSF SHF: Small: Little Tricky Logics Postdoc	2023 - 2025
• CRA/CCC/NSF CI Fellowship	2021 - 2023
• SIGPLAN Student Scholarship to: 50 Years of the ACM A.M. Tu	uring Award 2017
Northeastern CCIS Graduate Community Service Award	2016
Cornell CS Teaching Award	2014
Cornell CS Teaching Award	2013
Professional Service	
• Co-Chair of Artifact Evaluation Committee & ERC	OOPSLA 2022, 2023
Program Committee	TFP 2023 HATRA 2022, 2023 DLS 2023 ICFP 2023 PLDI 2023
External Review Committee	ESOP 2023, ICFP 2023
Artifact Evaluation Committee	ECOOP 2017, OOPSLA 2016, 2017
Publications	

Journal

• Ben Greenman, Christos Dimoulas, and Matthias Felleisen. Typed–Untyped Interactions: A Comparative Analysis TOPLAS 2023

Ben Greenman, Asumu Takikawa, Max S. New, Daniel Feltey, Robert Bruce Findler,
Jan Vitek, and Matthias Felleisen.

How to Evaluate the Performance of Gradual Type Systems

Conference, Symposium, and Hybrid Conference / Journal

- Siddhartha Prasad, Ben Greenman, Tim Nelson, and Shriram Krishnamurthi Programming 8.2, 2024 Conceptual Mutation Testing for Student Programming Misconceptions
- Siddhartha Prasad, Ben Greenman, Tim Nelson, and Shriram Krishnamurthi CompEd, 2023 Generating Programs Trivially: Student Use of Large Language Models
- Ben Greenman, Matthias Felleisen, and Christos Dimoulas

 OOPSLA 2023

 How Profilers Can Help Navigate Type Migration
- Matthew Flatt, Taylor Allred, Nia Angle, Stephen De Gabrielle, Robert Bruce Finder, OOPSLA 2023 Jack Firth, Kiran Gopinathan, Ben Greenman, Siddhartha Kasivajhula, Alex Knauth, Jay McCarthy, Sam Phillips, Sorawee Porncharoenwase, Jens Axel Søgaard, and Sam Tobin-Hochstadt Rhombus: A New Spin on Macros Without All The Parentheses
- Lukas Lazarek, Ben Greenman, Matthias Felleisen, and Christos Dimoulas
 How to Evaluate Blame for Gradual Types, Part 2
- Ben Greenman ACM REP 2023 GTP Benchmarks for Gradual Typing Performance
- Ben Greenman, Sam Saarinen, Tim Nelson, and Shriram Krishnamurthi Programming 7.2, 2023 Little Tricky Logic: Misconceptions in the Understanding of LTL
- Kuang-Chen Lu, Ben Greenman, Carl Meyer, Dino Viehland,
 Aniket Panse, and Shriram Krishnamurthi
 Gradual Soundness: Lessons from Static Python
- Siddhartha Prasad, Ben Greenman, Tim Nelson, John Wrenn, and Shriram Krishnamurthi
 Making Hay from Wheats: A Classsourcing Method to Identify Misconceptions
- Ben Greenman

 PLDI 2022

 Deep and Shallow Types for Gradual Languages
- Ben Greenman, Lukas Lazarek, Christos Dimoulas, and Matthias Felleisen Programming 6.2, 2022 A Transient Semantics for Typed Racket
- Kuang-Chen Lu, Ben Greenman, and Shriram Krishnamurthi Programming 6.1, 2022 Types for Tables: A Language Design Benchmark
- Lukas Lazarek, Ben Greenman, Matthias Felleisen, and Christos Dimoulas

 ICFP 2021

 How to Evaluate Blame for Gradual Types
- Ben Greenman, Matthias Felleisen, and Christos Dimoulas

 Complete Monitors for Gradual Types

• Preston Tunnell Wilson, Ben Greenman, Justin Pombrio, Shriram Krishnamurthi. <i>The Behavior of Gradual Types: A User Study</i>	DLS 2018
 Daniel Feltey, Ben Greenman, Christophe Scholliers, Robert Bruce Findler, and Vincent St. Amour. Collapsible Contracts: Fixing a Pathology of Gradual Typing 	OOPSLA 2018
• Ben Greenman, Matthias Felleisen. A Spectrum of Type Soundness and Performance	ICFP 2018
Ben Greenman, Zeina Migeed. On the Cost of Type-Tag Soundness	PEPM 2018
• Sam Tobin-Hochstadt, Matthias Felleisen, Robert Bruce Findler, Matthew Flatt, Ben Greenman, Andrew M. Kent, Vincent St-Amour, T. Stephen Strickland, and Asumu Takikawa. Migratory Typing: 10 Years Later	SNAPL 2017
• Stephen Chang, Ben Greenman, and Alex Knauth. Type Systems as Macros	POPL 2017
 Asumu Takikawa, Daniel Feltey, Ben Greenman, Max S. New, Jan Vitek, and Matthias Felleisen. Is Sound Gradual Typing Dead? 	POPL 2016
• Ben Greenman, Fabian Muehlboeck, and Ross Tate. Getting F-Bounded Polymorphism into Shape	PLDI 2014
Workshop	
• Taylor Allred, Xinyi Li, Ashton Wiersdorf, Ben Greenman, and Ganesh Gopalakrishnan FlowFPX: Nimble Tools for Debugging Floating-Point Exceptions	JuliaCon 2023
 Asumu Takikawa, Daniel Feltey, Ben Greenman, Max S. New, Jan Vitek, and Matthias Felleisen. Position Paper: Performance Evaluation for Gradual Typing 	STOP 2015
Invited Talks	
• TLf@AAAI-SSS'23 Towards LTLf Misconceptions	2023
• VardiFest, NJPLS Little Tricky Logic: Misconceptions in the Understanding of LTL	2022
• Racket Con Shallow Typed Racket Shallow and Optional Types for Typed Racket	2020, 2022

• Boston University POPV Seminar Complete Monitoring for Gradual Types	2020
• GRACE Workshop Three Approaches to Gradual Typing	2018
VOLUNTEERING	
• Bootstrap Professional Development Teaching Assistant	Summer 2021
Housing Chair	SPLASH 2018
• Northeastern CCIS Hiring Committee Student Representative	Spring 2018
• PRL Offsite Organizer	Fall 2019
• Each One Teach One AP Java Tutor	Fall 2015
• Student Volunteer	OOPSLA 2019; Turing Celebration 2017; POPL 2016, 2018; PLDI 2016; ICFP 2015, 2018; ECOOP 2015, 2016
• Ithaca Media Arts Teacher, LEGO Mindstorms Camp	Summer 2012
• Cornell Math Explorers Module Designer	Winter 2011