Aaron Weiss

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Research Interests	Type systems; program analysis and verification; compilers and compiler verification; security; program synthesis; programming language design and implementation	

Education	**Northeastern University**, *Boston, MA.* Doctor of Philosophy in Computer Science Advisor: *Amal Ahmed*	2017 – Present
	University of Massachusetts, *Amherst, MA.* Bachelor of Science in Computer Science, *Summa Cum Laude*	2014 – 2017

Publications	**Tortoise: Interactive System Configuration Repair** Aaron Weiss, Arjun Guha, Yuriy Brun In *IEEE/ACM International Conference on Automated Software Engineering*, Urbana, IL, *To appear.*	ASE 2017
	Rehearsal: A Configuration Verification Tool for Puppet Rian Shambaugh, Aaron Weiss, Arjun Guha In *ACM SIGPLAN Conference on Programming Language Design and Implementation*, Santa Barbara, CA, June 2016.	PLDI 2016

Work Experience	**Visiting Researcher**, *Inria.* Host: *Cătălin Hriţcu*	2017 – 2018
	Undergraduate Course Assistant, *University of Massachusetts.* CMPSCI 220 *Programming Methodology* Spring 2016, Fall 2016, Spring 2017	2016 – 2017
	Research Assistant, *University of Massachusetts.* Advisor: *Arjun Guha* Developed novel techniques in static analysis and program synthesis for system configuration languages. Built open source tools that identify and repair bugs in real world Puppet manifests.	2015 – 2017
	Software Developer, *ProtoIPO, Inc.* Designed user interfaces and experiences for platform and clients. Wrote middleware modules for portal software in C#. Developed systems to allow users to control page and module layout.	2014 – 2015

Volunteer Experience	**Problem Writer**, *sCTF.* Developed problems for an international computer science competition reaching over 3,000 participants.	2015 – 2017
	Co-Founder, *HSCTF.* Founded the first ever computer science capture-the-flag competition run by high schoolers and reached over 2,700 participants.	2014

Presentations	**Automated System Configuration Repair**, *NEPLS.*	June 2017
	Presented and motivated a novel approach to program editing called *imperative configuration repair* and a corresponding prototype implementation for Puppet named *Tortoise*.	

Skills

Scala • Java • Rust • C • Haskell • OCaml • JavaScript • HTML • CSS • PHP
Bootstrap • Git • Linux • macOS • PostgreSQL • LaTeX • Puppet • SMTLIB2

Awards		
	CMMRS '17 Travel Award	2017
	RSSL '17 Travel Award	2017
	OPLSS '17 Travel Award	2017
	PLISS '17 Travel Award	2017
	Outstanding Undergraduate Course Assistant	2017
	NSF Graduate Research Fellowship	2017 – 2022
	PLDI '16 Distinguished Artifact Award	2016
	PLMW at ICFP 2015 Travel Scholarship	2015
	University of Massachusetts Chancellor's Scholarship	2014 – 2017