Talia Lily Ringer

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http://tlringer.github.io/

EDUCATION

University of Washington *2015 – Present*
Ph.D. in Computer Science
M.S. in Computer Science *2017*
Advisor: Dan Grossman
Programming Languages & Software Engineering

University of Maryland, College Park *2008 – 2012*
B.S. in Mathematics and Computer Science
Advisor: Lawrence Washington
Honors Thesis: An Elliptic Curve Threshold Key Establishment Scheme

HONORS & AWARDS

NSF GRFP Fellow *University of Washington*
Graduated with Honors in Computer Science *University of Maryland*
Graduation Speech Finalist *University of Maryland*
Corporate Scholar *University of Maryland*

PUBLICATIONS

Talia Ringer, Nathaniel Yazdani, John Leo, and Dan Grossman.
Adapting Proof Automation to Adapt Proofs.
To appear at CPP 2018.

Talia Ringer, Dan Grossman, Daniel Schwartz-Narbonne, and Serdar Tasiran.
A Solver-Aided Language for Test Input Generation.
OOPSLA 2017.

Talia Ringer, Dan Grossman, and Franziska Roesner.
AUDACIOUS: User-Driven Access Control with Unmodified Operating Systems.
CCS 2016.

CURRENT RESEARCH

Proof Patching
Talia Ringer, Nate Yazdani, John Leo, and Dan Grossman
Proof brittleness is a major barrier to development in interactive theorem provers like Coq. Our vision is a future of proof automation in interactive theorem provers that automatically adapts proofs to breaking changes. Our prototype tool PUMPKIN PATCH generalizes an example adaptation into a reusable patch that can fix broken proofs.

TEACHING

University of Washington *Winter 2016*
Teaching Assistant for Compilers

University of Maryland, College Park *Spring 2012*
Teaching Assistant for Computer and Network Security

University of Maryland Academic Support & Career Development Unit *2010*
Tutor
Tutored student-athletes in mathematics and computer science.

INDUSTRY

Amazon *2012 – 2015*
Software Development Engineer
Worked with a team to develop the AmazonSupply website. Contributed to the development of an internal framework and reusable components used company-wide. Developed a data flow analysis tool for the framework and components. Participated in the launch of the service that enabled the partnership between Amazon and DonorsChoose. Launched Amazon Business marketplace.

Amazon *Summer 2011*
Software Development Engineer Intern
Developed an internal Spring MVC web application to generate metadata for the AmazonSupply website in a safe and user-friendly manner. Enabled version control and staging for the metadata.

Carr Astronautics *2010 – 2011*
Corporate Scholars Program – Software Intern
Assisted in the development of a parallel image mosaicing application. Wrote code in C, MATLAB, and Java, dealing primarily with reading, altering, and writing TIFF images with associated geographic data. Awarded a scholarship through the University of Maryland's Corporate Scholars Program. Continued to work part-time during the school year.

MENTORSHIP

UW CSE *2015 – Present*
Mentor for undergraduate women and graduate students in computer science.

UW QMP *2016 – Present*
Mentor for LGBT students from any major.

TUNE House *2015 – 2016*
Mentor for a living-and-learning community for undergraduate women in computer science.

Amazon
Technical and career mentor for several software engineers. *2012-2015*

SERVICE

Artifact Evaluation Committee *POPL 2018*

ACTIVITIES

Club Northwest *2012 – Present*
Board Member *2015 – 2016*

NCAA Division I Cross-Country *2009*
Scholar-Athlete

University of Maryland Women in Mathematics *2008 – 2012*

SKILLS

Programming languages: Coq, OCaml, Rosette, Java, Ruby, Scala, C, MATLAB, JavaScript.
Other computer skills: Coq plugins, Android, Software Engineering, Spring MVC, Linux.
Languages: English, Hebrew.

INTERESTS

Academic: Verification, proof engineering, proof search, domain-specific languages, type theory, category theory, formal methods, computer security, program analysis, program synthesis, abstract algebra, cryptology.

Personal: Distance running, triathlon, logic and number puzzles, esoteric programming languages, singing, learning natural languages, piano composition.