

Talia Lily Ringer

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<http://tlringer.github.io/>

EDUCATION

University of Washington

2015 – Present

Ph.D. in Computer Science

Programming Languages & Software Engineering

University of Maryland, College Park

2008 – 2012

B.S. in Mathematics and Computer Science

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

CURRENT RESEARCH

Practical Access Control Gadgets in Android

Advisors: Dan Grossman and Franzi Roesner

Applying program analysis techniques to verify that Android applications only access resources in a manner that is consistent with user expectations.

Exposing Definitional Equality in Interfaces in Proof Assistants

Extending the Calculus of Inductive Constructions to allow interfaces to specify definitional equalities.

FUTURE RESEARCH

Amazon Web Services

Summer 2016

Interning with Byron Cook's research group at Amazon. Using formal methods to reason about AWS security.

PAST RESEARCH

Honors Thesis: An Elliptic Curve Threshold Key Establishment Scheme

2011 – 2012

Advisor: Lawrence Washington

Designed a protocol to allow two groups to communicate only if enough people are present [a (t, n) -threshold scheme]. Wrote a thesis which is available on the honors website:

<http://honors.cs.umd.edu/reports/ringer.pdf>

Tight Frames

2010 – 2011

Advisor: Kasso Okoudjou

Determined properties of generalized bases of vector spaces which strictly adhere to a bound.

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. Served as a mentor for several engineers.
- 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.

ACTIVITIES

- UW CSE** 2015 – Present
Mentor
Mentor for undergraduate women in computer science.
- TUNE House** 2015 – Present
Mentor
Living-and-learning community for undergraduate women in computer science.
- Club Northwest** 2012 – Present
Board Member

NCAA Division I Cross-Country
Scholar-Athlete

2009

University of Maryland Women in Mathematics

2008 – 2012

SKILLS

Programming languages: Java, Ruby, OCaml, Scala, C, MATLAB, JavaScript.

Other computer skills: Android, Coq, Software Engineering, Spring MVC, Linux.

Languages: English, Hebrew.

INTERESTS

Academic: Type theory, verification, formal methods, computer security, program analysis, program synthesis, abstract algebra, cryptology, complexity theory.

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