

Hannah Gommerstadt

Education

Ph.D., *Computer Science*, Carnegie Mellon University, Pittsburgh, PA. 2014 - 2020 (expected).

Advisor: Frank Pfenning & Limin Jia

Research Interests: Using formal methods (logic-based and language-based) to solve security problems

B.A. (honors), *Computer Science & Mathematics*, Harvard University, Cambridge, MA. 2013.

Thesis: Securing Public-key Cryptography on the Android Platform. Advised by Stephen Chong and Aslan Askarov.

Minor: Near Eastern Languages and Civilizations. *Language Citation*: Modern Hebrew.

Study Abroad & Summer Schools

Oregon Programming Languages Summer School (OPLSS), Eugene, OR. 2014.

Summer Study Abroad, The Hebrew University, Jerusalem, Israel. 2011.

Awards & Honors

Microsoft Research Graduate Women's Scholarship, 2015 - 2016.

Achievement Rewards for College Scientists (ARCS) Scholarship, 2014 - 2017.

National Science Foundation Graduate Research Fellowship (NSF-GRFP) Honorable Mention, 2014.

Certificate of Distinction in Teaching, Harvard University, 2013.

Student Research Competition Finalist, Programming Languages Design & Implementation (PLDI), 2013.

Blumberg Creative Science Prize (undergraduate thesis award), Harvard University, 2013.

Travel Awards:

- GREPSEC: Underrepresented Groups in Security Research Workshop, 2015.
- Computer Research Association (CRA-W) Grad Cohort Workshop, 2016 & 2015.
- Programming Languages Mentoring Workshop (PLMW) Scholarship, 2015 & 2013.
- David Rockefeller International Experience Grant, Harvard University, 2011.

Publications

* indicates oral conference presentation

Conference Papers

***Monitors and Blame Assignment for Higher-Order Session Types**, *Limin Jia, Hannah Gommerstadt, Frank Pfenning*, Principles of Programming Languages (POPL) 2016, Saint Petersburg, FL, Jan 2016.

Long version appeared as Carnegie Mellon University Technical Report CMU-CyLab-15-004, 2015.

Theses

Securing Public-key Cryptography on the Android Platform, *Hannah Gommerstadt*, Senior Honors Thesis, Computer Science Department, Harvard University. March 2013.

Awarded High Honors. Advised by Stephen Chong and Aslan Askarov.

Posters

Contract Verification for Mobile Security, *Hannah Gommerstadt, Frank Pfenning, Limin Jia*, Poster at IEEE Symposium on Security and Privacy (S & P) 2015, San Jose, CA, May 2015.

***Securing Public-key Cryptography on the Android Platform**, *Hannah Gommerstadt*, Poster at Programming Languages Design and Implementation (PLDI) 2013 (Student Research Competition), Seattle, WA, June 2013.

Research & Industry Positions

Software Development Engineer, *Microsoft Inc.*, Redmond, WA, July 2013 - July 2014.

Specialized in full-stack engineering for content management systems and mentored new hire.

Software Developer, *Harvard Mathematics Department*, Cambridge, MA. June 2010 - Sep 2012.
Developed web-based course software and provided software support to students and staff.

Software Development Engineer Intern, *Microsoft Inc.*, Redmond, WA. May 2012 - Aug 2012.
Built a cloud-based searchable logging system using Lucene and Windows Azure.

Research Assistant, *Harvard University Computer Science Department*, Cambridge, MA, June 2011 - Jan 2012.
Worked on the DARPA CRASH-SAFE project writing test programs. Supervised by Greg Morrisett.

Software Developer, *Harvard Student Agencies*, Cambridge, MA. June 2010 - June 2011.
Implemented features for the Rick Steve's Travel Guides iPhone applications.

Teaching Experience

Carnegie Mellon University (Pittsburgh, PA)

15-317: Constructive Logic, *Teaching Assistant (Fall 2015)*. ~ 65 students.

Taught recitations, graded, designed course materials, and held office hours. Taught by André Platzer.

Harvard University (Cambridge, MA)

CS51: Introduction to Computer Science II, *Assistant Head Teaching Fellow (Spring 2013, Spring 2012), Teaching Fellow (Spring 2011)*. ~ 200 students.

Taught recitations on functional and object-oriented programming, graded, designed course materials, held office hours, supervised term projects, and managed teaching staff. Taught by Greg Morrisett.

Winter Session Discrete Math, *Head Course Assistant (Winter 2013, Winter 2012)*. ~ 40 students.

Designed and taught an accelerated introductory discrete math course to prepare students for advanced courses in theoretical computer science. Taught by Emily Riehl (2013) and Paul Bamberg (2012).

CS 186: Economics and Computation, *Course Development Assistant*, Summer 2011. ~ 15 students.

Wrote problem set specifications and worked on simulation frameworks. Taught by David Parkes.

Other

Teaching Assistant, *Technology Education & Literacy in Schools*, Lower Yukon, AK, Fall 2013.
Taught Introduction to Computer Science to high school students remotely.

Mentoring

Miguel Silva, Summer Internship at Carnegie Mellon University, Masters Student, University of Porto, Summer 2015.

Community

Service

Carnegie Mellon University, *Pittsburgh, PA*.

- Women@SCS Graduate Mentoring Program Co-founder and Coordinator, 2015 - present.
- Women@SCS Undergraduate Mentor, 2014 - present.
- Doctoral Review Committee, 2016 - present.
- Admitted Student Open House Coordinator, 2016 & 2015.
- Opportunities for Undergraduate Research in Computer Science (OurCS) Graduate Organizer, 2015.

Harvard University, *Cambridge, MA*.

- Alumni Interviewer, 2013 - present, Seattle, WA & Pittsburgh, PA.

Outreach

Volunteer, *Creative Technology Nights for Girls*, Pittsburgh, PA, 2014 - present.

Taught sessions on cryptography and security to middle school girls.

Memberships: ACM, ACM Special Interest Group on Programming Languages (ACM-SIGPLAN), IEEE

Skills

Languages

Native/Bilingual Proficiency in **English & Russian**. Advanced Proficiency in **French, Hebrew & Spanish**.

Programming

C, Java/C#, HTML/CSS, JavaScript/TypeScript, L^AT_EX, OCaml, Prolog, Python