

# Hannah Gommerstadt

## Education

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

*Advisors:* Frank Pfenning & Limin Jia

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

**M.S.**, *Computer Science*, Carnegie Mellon University, Pittsburgh, PA. 2016.

**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

Carnegie Mellon University Presidential Fellowship, 2017 - 2018.

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:

- New Educators Workshop Scholarship (for SIGSCE), 2017.
- Carnegie Mellon Graduate Student Association/Provost Conference Funding (for SIGSCE), 2017.
- Computer Research Association (CRA-W) Grad Cohort Workshop, 2016 & 2015.
- GREPSEC: Underrepresented Groups in Security Research Workshop (for S & P), 2015.
- Programming Languages Mentoring Workshop (PLMW) Scholarship (for POPL), 2015 & 2013.

## Invited Talks

**Monitors and Blame Assignment for Higher-Order Session Types**, *University of Maryland College Park Programming Languages Seminar*, College Park, MD, Nov 2016.

## Publications

\* indicates oral conference presentation

### Conference Papers

\***Session-typed Concurrent Contracts**, *Hannah Gommerstadt, Limin Jia, Frank Pfenning*, European Symposium on Programming Languages (ESOP) 2018, Thessaloniki, Greece, Apr 2018.

\***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.

## Teaching Experience

### Carnegie Mellon University

**15-122: Introduction to Imperative Programming**, *Instructor (Summer 2017)*.

Undergraduate course on code correctness, imperative programming and data structures. 60 students. Rating: 4.5/5

**15-122: Introduction to Imperative Programming**, *Guest Lecturer (S18, F17, S17), Head TA (F16)*.

Undergraduate course on code correctness, imperative programming and data structures. 400 students.

**15-317: Constructive Logic**, *Teaching Assistant (F15)*.

Undergraduate and masters level logic course. 65 students.

### Harvard University

**CS51: Introduction to Computer Science II**, *Asst. Head Teaching Fellow (S13, S12), Teaching Fellow (S11)*.

Undergraduate course on functional and object-oriented programming. 200 students.

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

Undergraduate short course on discrete mathematics. 40 students.

### Pedagogical Volunteering

Volunteer, *Technology Education & Literacy in Schools (TEALS)*, Pittsburgh, PA. 2017 - 2018.

Volunteer, *Creative Technology Nights for Girls*, Pittsburgh, PA, 2014 - 2016.

Remote Volunteer, *Technology Education & Literacy in Schools (TEALS)*, Lower Yukon, AK. 2013 - 2014.

### Mentoring

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

## Industry Positions

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

Software Development Engineer Intern, *Microsoft Inc.*, Redmond, WA. May 2012 - Aug 2012.

Software Developer, *Harvard Student Agencies*, Cambridge, MA. June 2010 - June 2011.

## Service

### Carnegie Mellon University.

- Computer Science Department Admissions Committee, 2018.
- Computer Science Department Ombudsperson, 2017 - present.
- Computer Science Department Representative to the Graduate Student Assembly, 2017 - present.
- Computer Science Department Doctoral Review Committee, 2016 - present.
- Women@SCS PhD group cofounder and graduate/undergraduate mentor, 2014 - present.
- Opportunities for Undergraduate Research in Computer Science (OurCS) Graduate Organizer, 2015 & 2017
- Computer Science Department Admitted Student Open House Coordinator, 2016 & 2015.

### Harvard University.

- Executive Committee Member, Harvard Club of Western Pennsylvania, 2017 - present.
- Alumni Interviewer, 2013 - present, Seattle, WA & Pittsburgh, PA. Goldsmith Order of Merit Service Award.

Memberships: ACM, IEEE, ACM Special Interest Group on Programming Languages (ACM-SIGPLAN), Special Interest Group on Computer Science Education (ACM-SIGSCE)

## Skills

### Languages

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

### Programming

C, Java/C#, HTML/CSS, L<sup>A</sup>T<sub>E</sub>X, OCaml, Prolog, Python