

# Hannah Gommerstadt

## Education

- 2019 **Ph.D.**, *Computer Science*, Carnegie Mellon University, Pittsburgh, PA.  
(expected) Advisors: Frank Pfenning & Limin Jia  
Research Interests: Using formal methods (logic-based and language-based) to solve security problems
- 2016 **M.S.**, *Computer Science*, Carnegie Mellon University, Pittsburgh, PA.
- 2013 **B.A.**, *Computer Science & Mathematics*, Harvard University, Cambridge, MA.  
Thesis: Securing Public-key Cryptography on the Android Platform.  
Advisors: Stephen Chong & Aslan Askarov.  
Minor: Near Eastern Languages and Civilizations.

## Awards & Honors

- 2018 Alan J. Perlis Graduate Student Teaching Award, Carnegie Mellon School of Computer Science
- 2017 - 2018 Carnegie Mellon University Presidential Fellowship
- 2015 - 2016 Microsoft Research Graduate Women's Scholarship
- 2014 - 2017 Achievement Rewards for College Scientists (ARCS) Scholarship
- 2014 National Science Foundation Graduate Research Fellowship (NSF-GRFP) Honorable Mention
- 2013 Certificate of Distinction in Teaching, Harvard University
- 2013 Blumberg Creative Science Prize (undergraduate thesis award), Harvard University
- Travel Awards:
- Rising Stars Workshop, 2018.
  - New Educators Workshop Scholarship, 2017.
  - Carnegie Mellon Graduate Student Association/Provost Conference Funding, 2017.
  - Computer Research Association (CRA-W) Grad Cohort Workshop, 2016 & 2015.
  - GREPSEC: Underrepresented Groups in Security Research Workshop, 2015.
  - Programming Languages Mentoring Workshop (PLMW) Scholarship, 2015 & 2013.

## Publications

### Journal Articles

Hannah Gommerstadt, Limin Jia, Frank Pfenning. Session-Typed Concurrent Contracts. *Transactions on Programming Languages and Systems (TOPLAS)*, Invited Submission, under review.

### Refereed Conference Proceedings

- 2018 Hannah Gommerstadt, Limin Jia, Frank Pfenning. Session-Typed Concurrent Contracts. *European Symposium on Programming Languages (ESOP)*, April 2018.
- 2018 Limin Jia, Hannah Gommerstadt, Frank Pfenning. Monitors and Blame Assignment for Higher-Order Session Types. *Principles of Programming Languages (POPL)*, January 2016

### Posters

- 2015 Hannah Gommerstadt, Frank Pfenning, Limin Jia. Contract Verification for Mobile Security. *IEEE Symposium on Security and Privacy (S & P)*, May 2015.
- 2013 Hannah Gommerstadt. Securing Public-key Cryptography on the Android Platform. *Programming Languages Design and Implementation (PLDI)*, Student Research Competition, June 2013.

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## Invited Talks

- 2018 Session-Typed Concurrent Contracts. Harvard University Programming Languages Seminar, April.  
2016 Monitors and Blame Assignment for Higher-Order Session Types. University of Maryland College Park Programming Languages Seminar, November.

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## Teaching Experience

### Carnegie Mellon University

- Instructor **Introduction to Imperative Programming (15-122)**, *Summer 2018, Summer 2017*.  
Undergraduate course on code correctness, imperative programming and data structures. 60 students.  
Rating: 4.6/5.0 (2018); 4.5/5.0 (2017)
- Head TA **Introduction to Imperative Programming (15-122)**, *Fall 2016*.  
Undergraduate course on code correctness, imperative programming and data structures. 400 students.
- TA **Constructive Logic (15-317)**, *Fall 2015*.  
Undergraduate and masters level logic course. 65 students.

### Harvard University

- Assistant **Introduction to Computer Science II (CS51)**, *Spring 2013, Spring 2012, Spring 2011*.  
Head TA Undergraduate course on functional and object-oriented programming. 200 students.
- Head TA **Discrete Math**, *Winter 2013, Winter 2012*.  
Undergraduate short course on discrete mathematics. 40 students.

### Pedagogical Volunteering

- Technology Education & Literacy in Schools (TEALS), Pittsburgh, PA. 2017 - 2018.  
Creative Technology Nights for Girls, Pittsburgh, PA, 2014 - 2016.  
Technology Education & Literacy in Schools (TEALS), Lower Yukon, AK. 2013 - 2014.

### Mentoring

- Miguel Silva, Internship at Carnegie Mellon University, University of Porto (M.S), Summer 2015.

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## Industry Positions

- 2013 - 2014 Software Development Engineer, Microsoft Inc., Redmond, WA.  
2012 Software Development Engineer Intern, Microsoft Inc., Redmond, WA.  
2010 - 2011 Software Developer, Harvard Student Agencies, Cambridge, MA.

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## Service

### Carnegie Mellon University, Computer Science Department.

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

Memberships: ACM, 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,  $\LaTeX$ , OCaml, Prolog, Python