JAKE SILVERMAN

Seeking research internships for 2020

Jakers@princeton.edu

Last Update: October 5, 2019

EDUCATION

Princeton University, School of Engineering, Princeton, NJ Expected May, 2022
Ph.D, Computer Science; Programming Languages Group
Advisor: Zak Kincaid
Topic: Invariant Generation; Static Analysis

Cornell University, College of Engineering, Ithaca, NY May, 2017
B.S., Computer Science
Cum Laude and Departmental Honors

RESEARCH EXPERIENCE

Ph.D Student, *Princeton University* Fall 2017 - Present
· Creating monotone and compositional static analysis tools to automate invariant generation (OCaml)

Visiting Researcher, *Prosecco, Inria*, Paris, France Summer 2017
· Started development for graph data-type library in F* language

Undergraduate Researcher, *NetKAT Group*, Cornell University Fall 2015 - Summer 2016
· Programmed network query-language and measurement system (OCaml)

SOFTWARE ENGINEERING EXPERIENCE

Software Development Engineer Intern, *Amazon*, Seattle, WA Summer 2016
· Fixed issues surrounding customer access to temporary database for AWS SQL Server team

Proof Engineer Intern, *BAE Systems*, Burlington, MA Summer 2015
· Automated proofs over state machines (LISP and ACL2s)

Full Stack Developer Intern, *Alnylam Pharmaceuticals*, Cambridge, MA Summer 2014
· Created new lab information management system (Python)

HONORS AND AWARDS

Travel Grant for 2018 Oregon Programming Languages Summer School	*2018*
ACM-ICPC World Finalist (Hosted in Phuket, Thailand)	*2016*
Silver Medal at North American Invitational Programming Contest	*2016*
SIGPLAN Travel Grant for PLMW at POPL 2016	*2016*
First Place in Greater New York ACM-ICPC	*2015*

LEADERSHIP AND TEACHING

Founder of Cornell Fencing Association	*Fall 2014 - Present*
Assistantship in Instruction; COS 516; Automated Reasoning about Software	*Fall 2018*
Teaching Assistant; CS 4820, CS 3110; Algorithms, Functional Programming	*Spring 2016, 2017*
Captain of Cornell Fencing	*Fall 2016 - 2017*
President of Cornell ACM Competitive Programming Team	*Fall 2016 - 2017*

PUBLICATIONS

J. Silverman, Z. Kincaid. Loop Summarization with Rational Vector Addition Systems. *CAV 2019*

H. Chen, N. Foster, **J. Silverman**, M. Whittaker, B. Zhang, and R. Zhang. Felix: Implementing Traffic Measurement on End Hosts Using Program Analysis. *(SOSR) 2016*