Benno Stein

+1 (914) 255 - 8010   Department of Computer Science
benno.stein@colorado.edu   University of Colorado Boulder
bennostein.org   Boulder, CO, 80309

EDUCATION

University of Colorado, Boulder, CO
Doctor of Philosophy, Computer Science   2015 to Present
Advisor: Bor-Yuh Evan Chang

University of Colorado, Boulder, CO
Master of Science, Computer Science   2015 to 2017

Williams College, Williamstown, MA
Bachelor of Arts, Computer Science and Mathematics   2011-2015

Rye High School, Rye, NY
National Merit Scholar, National AP Scholar, National Honor Society   2007-2011

EXPERIENCE (ACADEMIA)

Research Assistant   University of Colorado, Boulder
Summer 2015 - Present   Boulder, CO
Perform research under Prof. Bor-Yuh Evan Chang in the Programming Languages and Verification Group, studying program analysis and verification, focusing on analysis techniques for modern dynamic languages.

Course Assistant   University of Colorado, Boulder
Fall 2017   Boulder, CO
Taught approximately 10 lectures while the primary instructor travelled, ran office hours and one-on-one tutoring sessions, and helped design problem sets and exams for a joint undergraduate/graduate Compilers course.

Research Assistant   University of Michigan
Summer 2014   Ann Arbor, MI
Performed research under Prof. Michael Wellman in the Strategic Reasoning Group, studying machine learning-based high-frequency trading algorithms using empirical game-theoretic models.

EXPERIENCE (INDUSTRY)

Software Engineer Intern   Facebook
Fall 2019   London, UK
Worked in the static analysis tools (Infer) team on the Sledge analyzer, adding new abstract domains and formalizing its correctness guarantees.

Software Engineer Intern   Google
Summer 2018   Sunnyvale, CA
Worked on the open-source Error Prone static analyzer, improving the Java nullability analysis and implementing a novel nullness type inference algorithm.

Program Analysis Intern   Uber
Summer 2017   Palo Alto, CA
Built static analysis tooling to detect threading defects in functional-reactive Android applications.

PUBLICATIONS

Static Analysis with Demand-Driven Value Refinement
Benno Stein, Benjamin Barslev Nielsen, Bor-Yuh Evan Chang, and Anders Møller. 2019. In *Proceedings of the ACM SIGPLAN International Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA).*

Safe Stream-based Programming with Refinement Types
Benno Stein, Lazaro Clapp, Manu Sridharan, and Bor-Yuh Evan Chang. 2018. In *Proceedings of the IEEE/ACM International Conference on Automated Software Engineering (ASE).*

AWARDS AND HONORS

Dean's Graduate Assistantship, University of Colorado Boulder   2015-2016
University-wide merit-based award providing one year of tuition and stipend.
ACM Student Research Competition, PLDI, 2nd Place   2016
Submitted an extended abstract, presented a research poster, and gave a talk on *Goal-Directed Backwards Static Analysis for JavaScript.*

SPEAKING

Paper and Poster Presentation, OOPSLA '19	Fall 2019
Paper Presentation, ASE '18	Summer 2018
Graduate Research Forum, CU Boulder	Fall 2017
PL & Verification Seminar, CU Boulder	Fall 2017
Student Research Presentation, Oregon PL Summer School	Spring 2016
ACM Student Research Competition, PLDI	Spring 2016
Math Department Colloquium, Williams College	Fall 2014
REU Research Forum, University of Michigan	Summer 2014
Hudson River Undergraduate Math Conference	Spring 2013

SERVICE

Chair, PhD Student Faculty Search Committee   2016-2017
Organized and participated in student interviews for visiting faculty candidates, compiled PhD student feedback, and served as liaison to faculty search committee.
Member, Computer Science Student Advisory Committee   2013-2014
Met with visiting speakers and job candidates to the Williams computer science department and provided feedback on job candidates. Organized department meetings and social events. Elected by peers as one of two student representatives.
Reviewing
Reviewed papers and participated in peer-review discussion/debate for the following venues:

- Static Analysis Symposium (**SAS**) (Artifact Evaluation Committee)	2019
- Symposium on Principles of Programming Languages (**POPL**)	2019
- Asian Symposium on Programming Languages and Systems (**APLAS**)	2017
- International Conference on Computer-Aided Verification (**CAV**)	2017
- Static Analysis Symposium (**SAS**)	2016