

# Benno Stein

+1 (914) 255 - 8010  
benno.stein@colorado.edu  
bennosteин.org

Department of Computer Science  
University of Colorado Boulder  
Boulder, CO, 80309

---

EDUCATION	<b>University of Colorado</b> , Boulder, CO <i>Doctor of Philosophy</i> , Computer Science Advisor: Bor-Yuh Evan Chang	2015 to Present
	<b>University of Colorado</b> , Boulder, CO <i>Master of Science</i> , Computer Science	2015 to 2017
	<b>Williams College</b> , Williamstown, MA <i>Bachelor of Arts</i> , Computer Science and Mathematics	2011-2015
	<b>Rye High School</b> , Rye, NY National Merit Scholar, National AP Scholar, National Honor Society	2007-2011
EXPERIENCE (ACADEMIA)	<b>Research Assistant</b> Summer 2015 - Present 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.	University of Colorado, Boulder Boulder, CO
	<b>Course Assistant/Teaching Assistant</b> Fall 2017, Summer 2019, Spring 2020 Ran office hours, helped design problem sets and exams, and offered one-on-one tutoring sessions in both graduate and undergraduate level Compiler Design and Programming Languages courses. As a course assistant, additionally designed and taught approximately 10 lectures per semester, in both remote and in-person formats.	University of Colorado, Boulder Boulder, CO
	<b>Research Assistant</b> Summer 2014 Performed research under Prof. Michael Wellman in the Strategic Reasoning Group, studying machine learning-based high-frequency trading algorithms using empirical game-theoretic models.	University of Michigan Ann Arbor, MI
EXPERIENCE (INDUSTRY)	<b>Software Engineer Intern</b> Fall 2019 Worked in the static analysis tools (Infer) team on the Sledge analyzer, adding new abstract domains and formalizing its correctness guarantees.	Facebook London, UK
	<b>Software Engineer Intern</b> Summer 2018 Worked on the open-source Error Prone static analyzer, improving the Java nullability analysis and implementing a novel nullness type inference algorithm.	Google Sunnyvale, CA
	<b>Program Analysis Intern</b> Summer 2017 Built static analysis tooling to detect threading defects in functional-reactive Android applications.	Uber Palo Alto, CA
PUBLICATIONS	<b>Demand-Driven Abstract Interpretation</b> <b>Benno Stein</b> , Bor-Yuh Evan Chang, and Manu Sridharan. 2021. In <i>Proceedings of the ACM SIGPLAN International Conference on Programming Language Design and Implementation (PLDI)</i> .	
	<b>Static Analysis with Demand-Driven Value Refinement</b> <b>Benno Stein</b> , Benjamin Barslev Nielsen, Bor-Yuh Evan Chang, and Anders Møller. 2019. In <i>Proceedings of the ACM SIGPLAN International Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA)</i> .	

## 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	Outstanding Service Award, CU Boulder CS Department	2017-2018
	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 <i>Goal-Directed Backwards Static Analysis for JavaScript</i> .	
SPEAKING	Paper and Poster Presentation, PLDI '21 (virtual)	Summer 2021
	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:	
	- International Conference on Computer-Aided Verification (CAV)	2021
	- 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