

Benno Stein

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EDUCATION	University of Colorado , Boulder, CO <i>Doctor of Philosophy</i> , Computer Science Advisor: Bor-Yuh Evan Chang	2017 – 2021
	University of Colorado , Boulder, CO <i>Master of Science</i> , Computer Science	2015 – 2017
	Williams College , Williamstown, MA <i>Bachelor of Arts</i> , Computer Science and Mathematics	2011 – 2015
EXPERIENCE (ACADEMIA)	Research Assistant 2015 – 2021 Performed research under Prof. Bor-Yuh Evan Chang in the Programming Languages and Verification Group, studying program analysis and verification with a focus on incremental and demand-driven abstract interpretation.	University of Colorado, Boulder Boulder, CO
	Course Assistant/Teaching Assistant 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
	Research Assistant 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)	Software Engineer Feb. 2022 – present Working in the Continuous Verification Lab on incremental algorithms and infrastructure for the Infer static analyzer. Previously worked on goal-directed symbolic execution of LLVM bitcode.	Meta London, UK
	Software Engineer Intern Fall 2019 Implemented new abstract domains and formalized correctness guarantees of the SLEdge symbolic executor.	Facebook London, UK
	Software Engineer Intern 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
	Software Engineer Intern Summer 2017 Designed and built a refinement type-based static analysis to detect threading defects in functional-reactive Android applications.	Uber Palo Alto, CA
CONFERENCE PUBLICATIONS	Interactive Abstract Interpretation with Demanded Summarization Benno Stein , David Flores, Bor-Yuh Evan Chang, and Manu Sridharan. <i>Under Submission.</i>	
	Demanded Abstract Interpretation Benno Stein , Bor-Yuh Evan Chang, and Manu Sridharan. 2021. In <i>Proceedings of the ACM SIGPLAN International Conference on Programming Language Design and</i>	

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	Ralph J. Slutz Student Excellence Award, CUB CS Dept.	2021 – 2022
	Outstanding Research Award, CUB CS Dept.	2020 – 2021
	Distinguished Student Speaker Award, CUB CS Dept.	2018
	Outstanding Service Award, CUB CS Dept.	2017 – 2018
	Dean’s Graduate Assistantship, CU Boulder	2015 – 2016
	ACM Student Research Competition, PLDI, 2nd Place	2016
SPEAKING	ConVeY Seminar, TU Munich	July 2022
	Dissertation Defense, CU Boulder	March 2022
	Thesis Proposal, CU Boulder	Spring 2021
	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
SERVICE	Hudson River Undergraduate Math Conference	Spring 2013
	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
Peer Review	Reviewed papers and participated in committee discussions for the following venues:	
	- OOPSLA 2023	Artifact Evaluation Committee
	- OOPSLA 2023	External Review Committee
	- SAS 2022	Program Committee
	- OOPSLA 2022	Artifact Evaluation Committee
	- OOPSLA 2022	External Review Committee
	- CAV 2021	Sub-reviewer
	- SAS 2019	Artifact Evaluation Committee
	- POPL 2019	Sub-reviewer
	- APLAS 2017	Sub-reviewer
	- CAV 2017	Sub-reviewer
	- SAS 2016	Sub-reviewer