

## Anton Xue

### Address

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### Contact

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antonxue.github.io

**Interests**      Dynamical systems, programming languages, formal methods  
Mathematical analysis, linear algebra, combinatorics

**Education**      *Ph.D. Computer and Information Science*      08/2019 – Present  
University of Pennsylvania

*B.S. Mathematics (Intensive) and Computer Science*      08/2015 – 05/2019  
Yale University

**Work Experience**      *Research Intern*      06/2019 – 08/2019  
Nokia Bell Labs

*Research Assistant*      09/2015 – 05/2019  
Yale University Department of Computer Science

*Research Intern*      05/2018 – 08/2018  
Harvard John A. Paulson School of Engineering and Applied Sciences

*Research Intern*      05/2017 – 08/2017  
Max Planck Institute for Software Systems

*Software Engineering Intern*      05/2014 – 08/2015  
Harvard Medical School

**Awards and Honors**      University of Pennsylvania ENIAC Fellowship      08/2019

Yale Computer Science Award      05/2019

National Science Foundation Graduate Research Fellowship      04/2019

Yale College Freshman Summer Research Fellowship      04/2016

**Conference Publications**      *Data-Driven System Level Synthesis*      12/2020  
L4DC 2021

*A Self-Certifying Compilation Framework for WebAssembly*      01/2021  
VMCAI 2021

*Lazy Counterfactual Symbolic Execution*      06/2019  
PLDI 2019

**Workshop Publications**      *G2Q: Haskell Constraint Solving*      08/2019  
Haskell Symposium 2019

**Presentations**      *Towards a Self-Certifying Compiler for WebAssembly*      12/2019  
IBM Programming Language Day 2019

	<i>Towards a Self-Certifying Compiler for WebAssembly</i> FMCAD 2019 Student Forum	10/2019
	<i>Towards the Formalization and Analysis of R</i> FMCAD 2018 Student Forum	11/2018
	<i>Building a Symbolic Execution Engine for Haskell</i> FMCAD 2017 Student Forum	11/2017
	<i>Building a Symbolic Execution Engine for Haskell</i> TAPAS 2017	08/2017
	<i>A Symbolic Execution Framework for Haskell</i> POPL 2017 Student Research Competition	01/2017
<b>Teaching</b>	<i>Teaching Assistant</i> CIS 515 Fundamentals of Linear Algebra and Optimization, Fall/2020 CIS 160 Mathematical Foundations of Computer Science, Summer/2020 University of Pennsylvania	05/2020 – 12/2020
	<i>Teaching Assistant</i> MATH 305 Real Analysis (Course Grader), Spring/2019 CPSC 202 Mathematical Tools for Computer Science, Fall/2016, Fall/2017, Fall/2018 CPSC 366 Intensive Algorithms, Spring/2018 CPSC 365 Design and Analysis of Algorithms, Spring/2017 Yale University	09/2016 – 05/2019
<b>Community</b>	<i>Reviewer</i> IEEE LCSS	03/2021
	<i>Artifact Evaluation Committee</i> PLDI 2021	03/2021
	<i>Artifact Evaluation Committee</i> PLDI 2020	03/2020
	<i>Head Student Volunteer</i> CAV 2019	07/2019
	<i>Student Volunteer</i> PLDI 2019	06/2019
	<i>Department Student Advisory Committee</i> Yale University Computer Science Department	08/2017 – 05/2018
	<i>Student Volunteer</i> CAV 2017	07/2017
<b>Software</b>	<i>Self-Certified Optimizer for WebAssembly</i> <a href="https://github.com/nokia/web-assembly-self-certifying-compilation-framework">https://github.com/nokia/web-assembly-self-certifying-compilation-framework</a>	
	<i>G2 Symbolic Execution Engine for Haskell</i> <a href="https://github.com/BillHallahan/G2">https://github.com/BillHallahan/G2</a>	

*Simple-R Symbolic Execution Engine for R*  
<https://github.com/AntonXue/simple-r>

*Multi-Terminal Interval Decision Diagrams*  
<https://github.com/dzufferey/mtidd>

## **Technical**

*Programming Languages*  
Haskell, C, Python, Java, R, Scala, C++, SMTLIB, L<sup>A</sup>T<sub>E</sub>X