

# Jason Gross

[github.com/JasonGross](https://github.com/JasonGross)  
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## CONTACT

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(631) 790-8962

## RESEARCH INTERESTS

Programming Languages, Formal Verification, Cryptography, Performance of Automation in Interactive Proof Assistants, Homotopy Type Theory, Category Theory, Program Synthesis

## EDUCATION

**Massachusetts Institute of Technology** 2013–2021  
PhD in Computer Science Cambridge, MA  
Advisor: Adam Chlipala  
*Thesis: Performance Engineering of Proof-Based Software Systems at Scale*  
*SM Thesis: An Extensible Framework for Synthesizing Efficient, Verified Parsers*

**Massachusetts Institute of Technology** 2009–2013  
BS in Mathematics and Physics Cambridge, MA  
GPA: 4.6/5  
Relevant Coursework: Security, Program Analysis, Performance Engineering of Software, Statistical Physics, Quantum, Topology, Analysis, Waves & Vibrations, Special Relativity, Algebra

## EXPERIENCE

### INTERNSHIPS

**Google** June 2018–August 2018  
*Software Engineering Intern* Cambridge, MA  
• Worked with BoringSSL on integration of proven-correct low-level ECC primitives into Chrome

**MIT** Fall 2009–Present  
*Teacher* Cambridge, MA  
• Taught classes on L<sup>A</sup>T<sub>E</sub>X, philosophy, linear algebra, and quantum mechanics for MIT Educational Studies Program’s Splash, Spark, and Summer HSSP (High School Studies Program)  
• Teaching Assistant for 8.012 (Physics I) and 8.022 (Physics II) in Experimental Study Group

**Microsoft Research** June 2014–August 2014  
*Intern* Cambridge, United Kingdom  
• Collaboratively created a language for specifying input/output behavior of x86 assembly programs; Verified the I/O behavior of a number of simple programs

## COMPUTER SKILLS

- Proficient: Coq, Mathematica, git, Python, JavaScript, BASIC
- Working knowledge: C, C++, Agda, OCaml, Haskell, Scheme, HTML, CSS, Perl, Java
- Basic knowledge: Matlab, Lean, Idris, Ruby, Go, Ur/Web, x86 Assembly

## TEACHING

- Instructor at Monsoon Math Camp: category theory, linear logic, Löb’s theorem

- TA for 6.172 (Performance Engineering): Led recitations, analyzed and explained assembly output of `gcc -O3` to teach vectorization
- TA for 8.012 (Physics I) and 8.022 (Physics II) in Experimental Study Group
- Teacher at MIT ESP Programs:  $\text{\LaTeX}$ , philosophy, linear algebra, quantum mechanics

#### **OTHER ACTIVITIES**

- Canada/USA Mathcamp (Summers 2006–2009)