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programming
C, C++, Java, Python
OCaml, Haskell
CSS3 & HTML5

tools
Linux, OS X, LaTeX,

research interests

Programming languages, programmable systems and networks.
Hardware and software systems for concurrent and distributed computation

education

2011 - now **PhD in Computer Science** — Cornell University
Applied Programming Languages and Programmable Networks

2007 - 2011 **Dual Bachelors degree, *Magna Cum Laude*** — Lafayette College
B.S. in Electrical and Computer Engineering with Honors
B.A. in Computer Science with Honors

honors and awards

2011 **J.J. Ebers Memorial Award** — Lafayette College, ECE Dept.
Awarded for "high academic achievement and noteworthy professional interest in the field of electrical engineering."

2010 **Outstanding Research Award** — Computer Research Association
Honorable mention for research in static analysis and computer generated art

2010 **James P. Schwar Prize** — Lafayette College, CS Dept.
Awarded to a computer science student on faculty nomination

2009 **McClean Tau Beta Pi Engineering Prize** — Lafayette College
Awarded to "an engineering student who has excelled in academics and extracurricular activities"

2009 - 2011 **Honor Society Memberships**
Member of **Tau Beta Pi** (Engineering), **Eta Kappa Nu** (Electrical and Computer Engineering) and **Upsilon Pi Epsilon** (Computer Science) Honor Societies

experience

2011 - 2012 **Teaching Assistant** — Cornell University
Graduate TA for courses in data structures and functional programming

05-08 2011 **Software Engineering Intern** — GrammaTech Inc
Performance improvements to the CodeSonar static analysis tool

06-12 2009 **Computer Science Undergraduate Researcher** — Virginia Tech
Researched dynamic program representations for use in blended analysis

2008 - 2009
2010 - 2011 **EXCEL Research Scholar** — Lafayette College
Researched the application of formal grammars to the generation of fractal patterns

2009 - 2011 **Foreign Language Resource Center Technical Assistant** — Lafayette College
Evaluated educational software and design web templates for foreign language students.

2009 - 2011 **IEEE Student Chapter President** — Lafayette College
Organized activities and meetings with the help of professors, administrators and industry contacts

2008 - 2010 **Residence Advisor** — Lafayette College
Organized activities for college residents and helped students access college resources.

projects

2011 **Freon: A novel network architecture** Cornell University
A novel architecture for datacenter network management using end hosts to perform the majority of the packet processing work. A component of the Frenetic project.

2011 **Proctor: An Actor library for Ruby** Lafayette College
Threaded, concurrent Actors in Ruby using a prototype-based programming style. Makes extensive use of Ruby's metaprogramming abilities

2010 **WimpFi: Wireless Peer-to-peer Communications Network** Lafayette College
Allows personals computer to communicate via RF-transceivers implemented on FPGAs. Implements a reduced version of the WiFi standard (IEEE 802.11g) with collision avoidance and exponential backoff.

2008-2010 **Metaphor: A declarative approach to computational art** Lafayette College
Software for visual artists to leverage computational tools. A declarative programming language used as an interface to graphical libraries.

publications