

shrutarshi basu

programming languages and programmable systems

contact

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programming

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

tools

Linux, OS X, L^AT_EX,

research interests

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

education

2011 - now	PhD in Computer Science Applied Programming Languages and Programmable Networks	Cornell University
2007 - 2011	Dual Bachelors degree, <i>Magna Cum Laude</i> B.S. in Electrical and Computer Engineering with Honors B.A. in Computer Science with Honors	Lafayette College

honors and awards

2011	J.J. Ebers Memorial Award Awarded for “high academic achievement and noteworthy professional interest in the field of electrical engineering.”	Lafayette College, ECE Dept.
2010	Outstanding Research Award <i>Honorable mention</i> for research in static analysis and computer generated art	Computer Research Association
2010	James P. Schwar Prize Awarded to a computer science student on faculty nomination	Lafayette College, CS Dept.
2009	McClean Tau Beta Pi Engineering Prize Awarded to “an engineering student who has excelled in academics and extracurricular activities”	Lafayette College
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 Graduate TA for courses in data structures and functional programming	Cornell University
05-08 2011	Software Engineering Intern Performance improvements to the CodeSonar static analysis tool	GrammaTech Inc
06-12 2009	Computer Science Undergraduate Researcher Researched dynamic program representations for use in blended analysis	Virginia Tech
2008 - 2009 2010 - 2011	EXCEL Research Scholar Researched the application of formal grammars to the generation of fractal patterns	Lafayette College
2009 - 2011	Foreign Language Resource Center Technical Assistant Evaluated educational software and design web templates for foreign language students.	Lafayette College
2009 - 2011	IEEE Student Chapter President Organized activities and meetings with the help of professors, administrators and industry contacts	Lafayette College
2008 - 2010	Residence Advisor Organized activities for college residents and helped students access college resources.	Lafayette College

projects

2011	Freon: A novel network architecture 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.	Cornell University
2011	Proctor: An Actor library for Ruby Threaded, concurrent Actors in Ruby using a prototype-based programming style. Makes extensive use of Ruby's metaprogramming abilities	Lafayette College
2010	WimpFi: Wireless Peer-to-peer Communications Network Allows personal 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.	Lafayette College
2008-2010	Metaphor: A declarative approach to computational art Software for visual artists to leverage computational tools. A declarative programming language used as an interface to graphical libraries.	Lafayette College

publications

peer-reviewed conferences and proceedings

Exploring the impact of context sensitivity on blended analysis
Marc Fisher II, Bruno Dufour, Shrutarshi Basu, Barbara G. Ryder
26th IEEE International Conference on Software Maintenance, 2010

other publications and presentations

A Language Based Approach to Computational Art
Shrutarshi Basu, Chun Wai Liew
Off the Beaten Track Workshop, 2012, Philadelphia
Application of formal grammars to complex patterns and evolving systems
Shrutarshi Basu, Rhodes Baker, Khine Lin
Proceedings of the National Conference on Undergraduate Research, 2009