

Robert J. Simmons

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Education

Ph.D. Candidate (expect to graduate in August 2012), Computer Science Department, Carnegie Mellon University. Advisor: Frank Pfenning

Master of Science, Computer Science Department, Carnegie Mellon University, 2010

Bachelor of Science and Engineering (cum laude), Computer Science, Princeton University, 2005

Work

Intern, Microsoft Research, Bangalore, India, Summer 2007, Summer 2011

Neighborhood Technology Resource Center, Chicago, IL, 2005-2006

Research Assistant to Andrew Appel, Princeton, NJ, Summer 2004

Research Interests

Programming languages, declarative and logic programming, specification languages and logical frameworks, static analysis, using computers to check (and write) proofs.

Awards and Fellowships

Siebel Scholar, Class of 2012, awarded annually for academic excellence and demonstrated leadership to 85 top students from the world's leading graduate schools

Alan J. Perlis Graduate Student Teaching Award, 2008

National Science Foundation Graduate Research Fellowship, 2007-2010

Princeton Computer Science Department Senior Thesis Award, 2005

Publications

2011

Constructive Provability Logic. Robert J. Simmons and Bernardo Toninho. Intuitionistic Modal Logic and Applications Workshop. July 2011. (No formal proceedings.)

Distributed deductive databases, declaratively: The L10 logic programming language. Robert J. Simmons, Frank Pfenning, and Bernardo Toninho. X10 Workshop. June 2011.

Logical approximation for program analysis. Robert J. Simmons and Frank Pfenning. Higher Order and Symbolic Computation (To appear: Online June 2011).

Products of Weighted Logic Programs. Shay B. Cohen, Robert J. Simmons, and Noah A. Smith. Theory and Practice of Logic Programming, 11(2-3):263-296. 2011.

2010

Proofs from Tests. Nels E. Beckman, Aditya V. Nori, Sriram K. Rajamani, Robert J. Simmons, Sai Deep Tetali, and Aditya V. Thakur. *IEEE Transactions on Software Engineering*, 36(4):495-508. July/August 2010.

2009

Substructural Operational Semantics as Ordered Logic Programming. Frank Pfenning and Robert J. Simmons. *IEEE Symposium on Logic in Computer Science*. August 2009.

Linear logical approximations. Robert J. Simmons and Frank Pfenning. *ACM SIGPLAN Workshop on Partial Evaluation and Program Manipulation*. January 2009. *See 2011 journal paper.*

2008

Dynamic Programming Algorithms as Products of Weighted Logic Programs. Shay B. Cohen, Robert J. Simmons, and Noah A. Smith. *International Conference on Logic Programming*. In *Logic Programming, LNCS 5366*. December 2008. (Given the Best Student Paper Award.) *See 2011 journal paper.*

SASyLF: An Educational Proof Assistant for Language Theory Jonathan Aldrich, Robert J. Simmons, and Key Shin. *ACM SIGPLAN Workshop on Functional and Declarative Programming Education*. September 2008.

Proofs from Tests. Nels Beckman, Aditya Nori, Sriram Rajamani, and Rob Simmons. *ACM SIGSOFT International Symposium on Software Testing and Analysis*. July 2008. *See 2010 journal paper.*

Linear Logical Algorithms. Robert J. Simmons and Frank Pfenning. *International Colloquium on Automata, Languages and Programming (Track B)*. In *Automata, Languages and Programming, LNCS 5126*. July 2008.

2006

Mechanized Metatheory for User-Defined Type Extensions. Daniel Marino, Brian Chin, Todd Millstein, Gang Tan, Robert J. Simmons and David Walker. *ACM SIGPLAN Workshop on Mechanizing Metatheory*. September 2006.

Invited Talks and Lectures

Logical Algorithms in Propositional, Linear, and Timed Logic. West Virginia University, Lane Department of Computer Science and Electrical Engineering. October 15, 2009.

Departmental & Professional Activities

Graduate Admissions Committee, 2011-2012

Contributing editor, *ACM Crossroads*, 2009-Present

Head Espresso Machine Maintainer ("Head Elf"), 2008-2011

SIGBOVIK Organizing Committee, 2007-2008

Open House Student Co-Organizer, 2007-2008

Espresso Machine Maintainer ("Espresso Elf") 2005-2008

Head of Dec/5 Social Organization 2005-2006