

Robert Dockins

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Education

Present Ph.D. Student, Computer Science. Princeton University.
2007 M.S., Computer Science. Tufts University.
2003 B.S., Computer Science. Summa Cum Laude. Baylor University.

Awards

2011 Siebel Scholar, Class of 2012.
2007 First-year fellowship, Princeton University.
2003 Outstanding Computer Science Scholar, Baylor University.
1999 National Merit Scholarship Finalist.

Teaching Experience

- Spring 2011. Teaching assistant, COS333: Advanced Programming Techniques.
- Spring 2009. Preceptor for 2 sections of COS126: General Computer Science.
- Fall 2008. Teaching assistant, COS441: Programming Languages.

Research Interests

- Programming Languages: functional programming, type systems, semantics, compiler correctness.
- Formal Logic: type theory, constructive mathematics, PL metatheory.
- Concurrency: concurrent separation logic, verification of concurrent programs.

Academic Service

- Workshop on Syntax and Semantics of Low-Level Languages (LOLA) 2012: Program committee member

Papers and Presentations

- “Time Bounds for General Function Pointers.” Robert Dockins and Aquinas Hobor. *The 28th Conference on the Mathematical Foundations of Programming Semantics (MFPS XXVIII)*. June 2012. To Appear.
- “A List-machine Benchmark for Mechanized Metatheory.” Andrew W. Appel, Robert Dockins and Xavier Leroy. *Journal of Automated Reasoning*. Accepted for publication.
- “A Logical Mix of Approximation and Separation.” Aquinas Hobor and Robert Dockins. In Proc. *8th Asian Symposium on Programming Languages and Systems (APLAS)*. LNCS 6461. Pages 439–454. November 2010. Invited tutorial with paper.
- “A Theory of Indirection via Approximation.” Aquinas Hobor, Robert Dockins and Andrew W. Appel. In Proc. *37th Annual ACM SIGACT-SIGPLAN Symposium on Principles in Programming Languages (POPL)*. ACM SIGPLAN Notices, Volume 45, Issue 1. Pages 171–184. January 2010.
- “A Fresh Look at Separation Algebras and Share Accounting.” Robert Dockins, Aquinas Hobor and Andrew W. Appel. In Proc. *7th Asian Symposium on Programming Languages and Systems (APLAS)*. LNCS 5904. Pages 161–177. December 2009.
- “Comparing Semantic and Syntactic Methods in Mechanized Proof Frameworks.” C.J. Bell, Robert Dockins, Aquinas Hobor, Andrew W. Appel and David Walker. Workshop paper. In the *2nd International Workshop on Proof-Carrying Code (PCC)*. June 2008.
- “Multimodal Separation Logic for Reasoning about Operational Semantics.” Robert Dockins, Andrew Appel, and Aquinas Hobor. In Proc. *Mathematical Foundations of Programming Semantics (MFPS) XXIV*. ENTCS, Volume 218. Pages 5–20. October 2008. Elsevier.
- “Bytecode Verification for Haskell.” Robert Dockins and Samuel Z. Guyer. Workshop Paper. *The Symposium on Trends in Functional Programming (TFP)* 2007.

- “Bytecode Verification for Haskell.” Robert Dockins and Samuel Z. Guyer. Technical Report, Tufts University Dept. of Computer Science. TR-2007-2. 2007.
- “The Ingest and Maintenance of Electronic Records: Moving from Theory to Practice.” Kevin L. Glick, Eliot Wilczek, Robert Dockins. Poster Presentation. *Joint Conference on Digital Libraries (JCDL)* 2006.