

Shu-yu Guo

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Education

B.S. Computer Science, UNIVERSITY OF CHICAGO, 2008
B.A. Linguistics, UNIVERSITY OF CHICAGO, 2008
M.S. Computer Science, UCLA, 2011
Ph.D. Computer Science, UCLA, (on hold)

Technical Skills

Compilers and optimizations, JITs in particular
Programming language semantics
Web technologies

Industry

Research Engineer 2012–
Mozilla
Research crazy stuff, probably in JavaScript.

Research Intern 2010, 2011
Mozilla
Designed and implemented a one-pass parse-time SSA construction algorithm for JavaScript.
Worked on the tracing JIT compiler and hybrid type inference for JavaScript.

Systems Administrator 2006–2008
NSIT UNIVERSITY OF CHICAGO
Administration of various systems, including Linux (RHEL) systems and Cyclades console servers. Designed and implemented a suite of automation scripts for RHEL systems in the bash shell.

Research

Ph.D. Student 2008–2011
Jens Palsberg UCLA
Programming language semantics. Investigating proof techniques for correctness of dynamic compilation techniques, specifically, proving correctness for trace compilation.

Research Assistant 2006–2008
Robby Findler UNIVERSITY OF CHICAGO
Modeling of software contracts on immutable data structures. Analysis of complexity and optimization of software contract implementation in PLT Scheme.

Papers

Fast and Precise Hybrid Type Inference for JavaScript.
Brian Hackett and Shu-yu Guo. PLDI 2012.

The Essence of Compiling with Traces.
Shu-yu Guo and Jens Palsberg. POPL 2011.

Lazy Contract Checking for Immutable Data Structures.
Robby Findler, Shu-yu Guo, and Anne Rogers. IFL 2007.