

Tharpe Stephen Strickland IV

15 Seagrave Rd
Cambridge, MA 02140
(770) 843-1986

sstrickl@ccs.neu.edu
<http://www.ccs.neu.edu/home/sstrickl>

Education

- **Northeastern University** Boston, MA
Ph.D., Computer Science, ongoing
Specialization: Programming languages
- **Georgia Institute of Technology** Atlanta, GA
M.S., Computer Science, May 2004
Specialization: Programming languages and compilers
- **Georgia Institute of Technology** Atlanta, GA
B.S., Computer Science, May 2002
Specializations: Systems, Networking, Graphics
Graduated with highest honors (GPA 3.77)

Work History

- **Graduate Research Assistant** Sep. 2007 - current
Northeastern University Boston, MA
 - Worked for Matthias Felleisen on extending contracts in PLT Scheme to units.
 - Proposed an extension to common base object-oriented and functional type systems to handle variable-arity generics.
 - Designed models to incorporate these extensions and proved these models sound.
 - Implemented the models in PLT Redex to provide usable prototypes.
 - Made major contributions to paper submissions for ESOP 2009, POPL 2008, and ECOOP 2008.
- **Software Engineer** Nov. 2005 - Feb. 2008
Reflex Security, Inc. Atlanta, GA
 - Programmed and maintained software in C and Python for a network security sensor.
 - Investigated and implemented algorithms for detecting malicious network traffic.
 - Ported the existing software base to a platform provided by Bivio Systems and to the IBM BladeCenter platform.
 - Implemented changes to the development workflow to streamline the process for adding new features and bugfixes while increasing peer review.
- **Graduate Research Assistant** Nov. 2004 - Aug. 2005
Northeastern University Boston, MA

- Worked for Matthias Felleisen on the Honu programming language, an object-oriented language that stresses programming to interfaces
 - Implemented a compiler from Honu to Scheme in Scheme for inclusion in PLT Scheme
 - Found, read and discussed past and current papers in the fields of object-oriented language design and implementation
 - Formulated operational semantics for Honu and developed a proof of type soundness
- **Graduate Research Assistant** May 2002 - Aug. 2004
Georgia Institute of Technology Atlanta, GA
 - Worked for Olin Shivers on the Bottom Up Beta Substitution lambda calculus engine
 - Implemented the BUBS system in both Standard ML and C
 - Found, read and discussed past and current papers in the lambda calculus field
 - Formulated an alpha-equivalence algorithm for BUBS terms
 - Implemented opposing LC systems and ran tests to benchmark them against BUBS
 - Helped formulate and implemented hashing algorithms for BUBS terms
- **Linux Distribution Developer (Volunteer)** Jan. 2000 - July 2007
Debian GNU/Linux
 - Packaged software for inclusion in the Debian GNU/Linux distribution
 - Discussed and voted on issues concerning the Debian Project and the distribution
 - Provided help for users of the distribution via IRC, via mailing list, and in person

Publications

- Variable-Arity Polymorphism. T. Stephen Strickland, Sam Tobin-Hochstadt, and Matthias Felleisen. ESOP 2009.

Skills

Programming Languages: C, SML, Perl, Objective C, C++, Java, Lisp, Scheme, Python, Smalltalk, Haskell, Bourne and Bash shell scripting, SQL

Markup Languages: \LaTeX , HTML, CSS, XHTML

Operating Systems: Mac OS X, Linux, Windows 95/98/NT/2000/XP, Solaris

Natural Languages: Fluent spoken/written English, advanced spoken/written German, intermediate spoken Japanese, basic written Japanese

Miscellaneous: strong research and implementation skills, system administration of Linux and Mac OS X systems

Research Interests

- Efficient implementation of functional programming languages
- Type theory in programming languages

References available on request.