

Matt Elder

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Education

University of Wisconsin-Madison *May 07 - Feb 11*
Program Analysis Research

University of Wisconsin-Madison *Sept 06 - May 07*
Master of Science in Computer Science

University of South Carolina, Honors College *Aug 02 - May 06*
Bachelor of Science in Computer Science and Mathematics

Honors

- Department of Defense NDSEG Fellow.
- National Science Foundation Graduate Research Fellow.
- Goldwater Scholar.
- Phi Beta Kappa Member.
- 2006 ACM International Collegiate Programming Competition world finalist.

Papers and Presentations

- Matt Elder, Denis Gopan, and Thomas Reps. *View-Augmented Abstractions*. Workshop on Numerical and Symbolic Abstract Domains (NSAD) 2010.
- A. Thakur, J. Lim, A. Lal, A. Burton, E. Driscoll, M. Elder, T. Andersen and T. Reps. *Directed Proof Generation for Machine Code*. Computer Aided Verification (CAV) 2010.
- Matt Elder. *Path Bundles on n -Cubes*. In *Discrete Mathematics* volume 308. 2008.
- Matt Elder, Steve Jackson, Ben Liblit. *Code Sandwiches*. U.W. technical report. 2008
- Matt Elder, Ben Liblit. *Heap Typability is NP-Complete*. U.W. technical report. 2007
- Matt Elder. *Complement-Regular Gray Codes*. 2005 MAA / AMS Joint Meetings.
- Stuart Anderson, Matt Elder. *Runtime Testing of LSB Applications*. 2004 Ottawa Linux Symposium.

Skills

- Fluent in Python, C, C++, and Java.
- Significant experience with OCaml, L^AT_EX, Scheme, SQL, PHP, Perl, MATLAB, and MPI.
- Mathematical focuses in discrete mathematics, modern algebra, and computational theory.

Work Experience

NetSweng, LLC *Aug 05 - Dec 05*
Programmer

- Tested, debugged, and extended an application in PHP and Flash which provides webmail, server space, a website editor, and administration tools.

Free Standards Group *Jan 03 - June 05*
Programmer, Designer

- Designed and implemented a C code generator for a very large dynamic library, as a test suite for applications seeking compliance with the Linux Standard Base (LSB).
- Designed and implemented a tool to read dynamic libraries, check their syntactic information against the LSB database, and optionally update that database.

Industrial Mathematics Institute at U. of South Carolina *May 02 - Jan 03*
Programmer, Designer

- Implemented visualisation systems for mathematical research.
- Designed and implemented a tool for editing molecular models in the CAVE environment.