Michael E. Bauer

http://www.cs.stanford.edu/~mebauer
mebauer@cs.stanford.edu
443-465-3699

Stanford University: Stanford, CA, September 2008 – Present

4th year Ph.D. Candidate in the Department of Computer Science
Master of Science in Computer Science conferred June 2011
Advisor: Alex Aiken
Research Topic: Locality-aware parallel programming models for deep memory hierarchies
Research Interests:

- Design and implementation of parallel programming languages
- Architectural support for parallel languages and programming models

Publications:

Michael E. Bauer, Henry Cook, Brucek Khailany. "CudaDMA: Optimizing GPU Memory Bandwidth via Warp Specialization" Appeared at Supercomputing (SC), November 2011.

Michael E. Bauer, John Clark, Eric Schkufza, Alex Aiken. "Programming the Memory Hierarchy Revisited: Supporting Irregular Parallelism in Sequoia" Appeared in Principles and Practices of Parallel Programming (PPoPP), February 2011.

Honors:

NVIDIA Graduate Fellow 2010, 2011

Internships:

NVIDIA Research, Summer 2010 – Design and implemntation of software cache coherence protocols for GPUs under Steve Keckler and James Balfour.

Duke University: Durham, NC, August 2004- May 2008

Major: Electrical Computer Engineering, Mathematics, and Computer Science (triple major)
Academic Honors:

Magna Cum Laude
Honors in Electrical Engineering, Thesis: *Proving the Completeness of Error Detection Mechanisms in Simple Core Chip Multiprocessors* Advisor: Dan Sorin
High Honors in Mathematics, Thesis: *Faraday Waves Arising from Square Wave Forcing of the Damped Mathieu Equation* Advisor: Anne Catllá
GPA 3.865/4.000, Dean's List with Distinction, Fall 2004, Spring 2005, Spring 2006, Spring 2008 Dean's List Fall 2005, Spring 2007, Fall 2007
Honor Societies: Tau Beta Pi, Eta Kappa Nu
Pratt Fellow, Pratt School of Engineering, Spring 2007-Spring 2008
PRUV Fellow, Duke University Math Department, Spring 2005-Spring 2008

Publications:

Albert Meixner, Michael E. Bauer, and Daniel J. Sorin. "Argus: Low-Cost Comprehensive Detection of Errors in Simple Cores." Appeared in IEEE Micro's "Top Picks" in computer architecture, January 2008.

Albert Meixner, Michael E. Bauer, and Daniel J. Sorin. "Argus: Low-Cost, Comprehensive Detection of Errors in Simple Cores." Appeared in *40th Annual IEEE/ACM International Symposium on Microarchitecture*, December 2007.

Science and Mathematics Competitions:

Mathematical Competition in Modeling: Outstanding Ranking (top <1%), Spring 2007

Technical Skills:

Fluent Languages: C, C++, Java, Python, CUDA, P-Threads, OpenMP, MPI, VHDL
Competent Languages: Verilog, OpenGL, GLSL, Perl, Scala, Haskell, Shell Script, PHP

Other Accolades:

Eagle Scout: Boy Scouts of America, November 11, 2003
Finisher: 2007 Boston Marathon 2:52:43 (446th out of 20,388)