

DANA SCHAA

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– EDUCATION –

Northeastern University—Boston, MA
M.S. in Computer Engineering, June 2008
Predoctoral Candidate, Advisor Dr. David Kaeli
Research Assistant, 3.9 GPA

California Polytechnic State University—San Luis Obispo, CA
B.S. in Computer Engineering, June 2006
CE honor society, Eta Kappa Nu, 3.68 GPA with honors

– RESEARCH –

GPGPU—Programming CUDA for medical imaging applications on NVIDIA GPUs. Conducted a study of issues involved in using parallel GPGPUs for solving large HPC problems.

x86 Virtualization—Knowledge of x86 architecture and memory management, including Linux implementation. Creation of a minimal VM hypervisor for academic testing is in progress.

Parallel Computing—Analyzed a parallel MATLAB utility for performance, scalability, and development effort. Gained experience with MPI, ScaLAPACK, and PBLAS.

– SKILLS –

Programming and Scripting Languages: (strongly prefer) C, JAVA, C++, \LaTeX , CUDA (GPU), HTML, Fortran, MATLAB, Various assembly (Motorola, MIPS, Atmel)

Processors: x86 (VT-x and SMV extensions), M68 series, G80 series (GPU)

Operating Systems: *NIX, Mac OS X, Windows ALL

– TECHNICAL PROJECTS –

Cal Poly, Senior Project—Modified fetch/decode/emulate functions of SMTSIM simulator to aid in soft-error protection experiments. Developed, parallelized, and optimized a sensory benchmark to be used in soft-error testing.

Programming Projects

- *Unix Shell development*—IPC, IO redirection, process fork/exec
- *File Transfer*—UTP and TCP FTP, using stop/wait, sliding windows, sequencing, and error detection
- *Hardware Blackjack*—Implemented Blackjack using M68HC12 as a CPU only. Interfaced memory, UART, and LCD as memory-mapped IO using wire-wrapping
- *Datapath Design*—Designed single cycle datapath with Xilinx ISE software

– WORK EXPERIENCE –

International Business Machines (IBM)—San Jose, CA Jun-Sep 2004
• *Pre-Professional Programmer (Co-op)*—Scripted an automated test plan for SW development team. Parsed program output to determine success rate. Created test suite for automation assistance.

International Business Machines (IBM)—San Jose, CA Jun-Dec 2003
• *Pre-Professional Programmer (Co-op)*—Evaluated remote access SW, created a scope document and project report, and chaired meetings with development teams. Created automated log parser for HDD failure analysis.

– PUBLICATIONS –

Diego Rivera, Dana Schaa, Micha Moffie and David Kaeli. *Exploring Novel Parallelization Technologies for 3-D Imaging Applications*. Computer Architecture Research Laboratory, Northeastern University. In 19th International Symposium on Computer Architecture and High Performance Computing, Oct. 2007