SHANE AVERY

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Education

California State University Northridge, Northridge
Master of Science in **Electrical Engineering** (current)

San Jose State University, San Jose
Master of Science in **Computer Engineering** (did not graduate)

California Polytechnic State University, San Luis Obispo
Bachelor of Science in **Computer Engineering**, June 2001
Minor: Math Major GPA: 3.2

Experience

Navair, China Lake, CA 6/03 to current
Computer Engineer
- Designed test hardware for the Spike image guided missile. Required the use of schematic and layout software to create PCBs (Eagle). Once PCBs created then the code was written for the Programmable Logic Devices (Altera FPGAs or CPLDs) and microcontrollers (PICs). The boards have included Compact Flash interfaces, Fiber Optic links, Digital Camera interfaces, Memory interfaces (flash, FIFOs, Dual Port SRAMs), LCDs, and serial interfaces to PC.

Logic-Plus, San Luis Obispo, CA 1/02 to 6/02
FPGA designer
- Designed an FPGA for a digital camera in Verilog. FPGA was a Spartan II (150,000 gate part) and was developed using Webpack (synthesis tool was XST).

Intel (formerly Ziatech), San Luis Obispo, CA 6/00 to 12/01
Hardware Engineer
- Wrote C++ code to verify the functionality of hardware on CompactPCI single board computers.
- Designed a rear panel I/O card (Fibre Channel) for a CompactPCI system.

Electronic Warfare Association, Ridgecrest, CA 6/99 to 9/99
Engineering Assistant Internship
- Assisted head engineer in developing a new technology in the realm of countermeasures by modeling EM waves using computer software (MathCAD).

Personal Projects

Computer Design Project (Arbadell), 2001-2002 - Arbadell is a single board computer designed entirely from scratch. Designed the CPU and plan to implement it on a Xilinx FPGA using Xilinx Webpack. The chipset will be a PIC microcontroller written in assembly. Arbadell will support a keyboard, VGA monitor, and serial in/out. Once hardware is complete (expected around August 2002) a small OS will be written. Assembler for Arbadell was written in C. Simulator was written in Java using swing. Schematic was done using DesignWorks Lite 4. PCB design was done using ExpressPCB.

Roborodentia 2000, 2001 - Robot competition held by Cal Poly every spring. Robot must traverse a maze and pick up racquetballs. Design includes the sensing of environment using IR emitter detector pairs, pulsing of DC motors, and the control of servo motors. Used a 68HC11 in 2000 and a PIC in 2001. All programs were written in assembly.

Burroughs Class of 1996 Web Page – Designed web page to inform graduates of the five-year class reunion. Graduates can log on and give their personal information so that other grads can view it and keep in touch. Webpage was written in HTML and PERL.