

Randolph Kang Huang

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EDUCATION

University of California at Berkeley
Electrical Engineering Computer Science, B.S. Degree

Graduated: December 2001
Technical GPA: 3.4/Overall GPA: 3.3

RELATED COURSEWORK

- Structure and Interpretation of Computer Programs
- Data Structures and Advanced Programming
- Machine Structures and Computer Architecture
- Operating Systems and System Programming
- Signal and Systems
- Microelectronic Devices and Circuits
- Components and Design Techniques for Digital Systems
- Digital Integrated Circuits
- Computer Architecture and Engineering

WORK EXPERIENCE

- Digital Design Engineer, Raytheon Company, Global Positioning System/Navigation Department (June 2002-Present)**
 - Designed digital processor and test boards for GPS Avionics and Anti-Jam solutions
 - Production/Manufacturing Test Analysis and Debug of digital processor and GPS engine boards
 - Digital architecture designs developed in VHDL with Xilinx Spartan-IIIE, Spartan-3, and Virtex-IIIE Pro FPGAs
 - Current Project – Development of Multi-FPGA platform for Next Generation Global Positioning System (M-code) Direct Signal Acquisition Engine with internal correlators, accumulators, and FFTs.
- Java Card Intern, SchlumbergerSEMA, Schlumberger Austin Technology Center (June-August 2001)**
 - Benchmarking performance of and reverse engineering JAVA Smart Cards through hardware timing
 - Developed and programmed JAVA-based performance tests used for analysis on the Java Card
 - Analysis and performance testing of Smart Card microprocessor and memory units
- IT Intern, Levi Strauss & Co., Information Technology Release Service Department (June-August 2000)**
 - Team creation of an IT web portal for the intranet system to allow IT employees to access internal information efficiently
- Photojournalist, The Fairbanks Daily News-Miner (June-August 1998)**
 - Professional photographer, handling photo assignments and management duty of assigning photo.
- Teaching Assistant, University of California Berkeley, Electrical Engineering Computer Science (2001)**
 - For EECS 43 – Introductory Circuits Lab (Spring 2001); for CS150 – Design of Digital Systems (Fall 2001).

TECHNICAL SKILLS

- Programming Languages:** HTML, VHDL, XILINX Schematic Design Tool, JAVA, C, MIPS, Scheme
- CAD Design/Simulation Tools:** HSPICE, MicroMagic, IRSim, SUE, XILINX ISE Series, MATLAB, ViewLogic, ModelSim
- Operating Systems:** Windows 9x/NT/2000/XP, DOS, Mac OS, UNIX, Solaris platforms.
- Applications:** Microsoft Visual Studio, Macromedia Dreamweaver studio, Adobe Photoshop, all MS Office Publications.

SCHOOL PROJECTS

- EECS 152 Computer Architecture and Engineering (Fall 2001)**
 - Team based project implementing a MIPS Lite Architecture Processor using ViewLogic Tools for creation and simulation.
 - Created a single-cycle MIPS Processor, 5-stage pipelined processor with cache system, and a Tomasulo processor.
 - Used schematic and VHDL design to create the processor components – controllers, memory units, logical units.
- EECS 141 Digital Integrated Circuits (Spring 2001)**
 - Partner based design of SRAM memory including decoders and cell storage.
 - Use of sub-micron technology, models, and knowledge to implement a static-CMOS memory system.
 - Used CAD/Simulation programs as HSPICE, SUE, MicroMagic, and IRSim to implement the memory design.
- EECS 162 Operating Systems (Spring 2001)**
 - Team based project of implementing operating system features: multithreading, multiprogramming, memory management.
 - Use of JAVA programming language to implement the operating system features.
- EECS 150 Logic Design: Streaming Audio Internet Telephone (Fall 2000)**
 - Partner based creation of a streaming internet telephone using XILINX software and FPGA proto-board.
 - Used logic design programming, hardware tools, analog-digital technology in creating user-usable internet telephone.
 - Designed and implemented packet protocol system for communication and data transfer.
 - Designed analog-to-digital sampling rate logic, interpolation logic, multi-broadcasting, and volume control logic.

EXTRACURRICULAR ACTIVITIES

- Intramural Ultimate Frisbee, for Tau Beta Pi Engineers' Honor Society, UCB Fall 2000
- Photographer, Public Relations committee member, Webmaster for the Asian American Association of UCB Fall 99, Spring 00

INTERESTS/HOBBIES

- Violin, digital and black and white photography, computers and electronics, bicycling, fishing, model building, snowboarding