Tamara Blain

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Education

UC Berkeley - Masters, Electrical Engineering - December 2009

- A BCI-Controlled Virtual Keyboard Design for Noisy Input and Limited Bandwidth
  - Designed and built virtual keyboards for use with the brain computer interface as assistive communication devices for people with disabilities; Master's report.
- Fast MAPs BCI-controlled Smart Wheelchair Interface
  - Extension of an approach to shared control of a robotic wheelchair, centered around the SLAM algorithm and a maps-based interface; class project.
- EEG-based Brain Computer Interface (BCI) Controlled Communication Devices
  - Built an EEG-based brain computer interface for the purpose of controlling a virtual keyboard; research project.
- A Components-Off-The-Shelf Single Op-Amp Gyrator Implementation of Chua's Circuit
  - A simple implementation of a Chua's Circuit using off-the-shelf components; in process of submission.
- Catching Phish: Detecting Phishing Attacks from Rendered Website Images
  - Class project.
- Extra-Cortical Self Repositioning MEMs Based ECoG
  - Investigated possibility of using the brain to power a wireless, neuro-prosthetic device; class project.

Queens College, CUNY - Bachelor of Science, Computer Science - May 2003

- Laboratory Options for the Computer Science Major
  - Proceedings of the 2003 Workshop on Computer Architecture Education, held in conjunction with the 30th International Symposium on Computer Architecture.
- Esterel Virtual Machine for LEGO Mindstorms
  - A virtual machine in C allowing Esterel code to run on LEGO Mindstorms robots; class project.

SUNY at StonyBrook - Bachelor of Science, Biochemistry - May 1995

Experience

Lawrence Berkeley National Labs, Research Assistant/Hardware Programmer, 7/2003 – 12/2006

- Wrote a client/server interface in C, to an LLRF (Low Level Radio Frequency) control system of a particle accelerator, which allowed users to modify field properties of the RF cavity.
- Added functionality to FPGA logic and driver software in Verilog for the RF cavity control system.
- Implemented test benches in Verilog for each new routine or module.

Concrete Media Inc., Web Developer, 6/1999 – 9/2002

- Used Javascript, Flash, DHTML, and ASP to build web pages for large scale projects including GirlsOn.com, Lids.com, Bolt.com, Homeroom.com and such companies as

Bertelsmann AG, The Princeton Review, ScreamingMedia and Verde Media.
- Wrote rigorous test benches ensuring code performance with all browser engines.
- Aggregated and organized source code snippets, routines, and methods into a browsable code library available on the company intranet. Wrote an interface to the library allowing company developers to describe and upload, or download code.
- Created a presentation of client side technologies, to be delivered by the marketing team to new clients.
- Responsible for the ensuring the quality, capabilities, and culture-fitness of prospective developers.

Sensenet, Inc., Intern, 11/1998 - 6/1999
- Wrote front-end code in HTML and Javascript for websites such as Pfizer and Sprint.
- Designed and performed rigorous usability tests for clients such as Metamucil, Showtime, and Captain Morgan.
- Performed technical trouble-shooting of websites including crashes and slowdowns. Tracked, documented, and resolved issues in a timely fashion.

Technical Skills

Systems: Linux, Windows, Mac OSX, ARM
Languages: Python, Verilog, C, C++, Java, R, Matlab, x86 assembly, ARM IS, HTML, Javascript

Honors

U.C. Berkeley Fellowship recipient
AMP Research Scholar
Renate Chasman Scholarship recipient
Dean's List, Lehman College
Dean's List, Queens College

Organizations

IEEE, member
ACM, member

Interests

Brain computer interfaces
Neuro-prosthetics
Machine learning
Cell Phone programming
Chaos Theory
Robotics
Embedded systems
Digital design
Computer architecture
Astronomy
Entomology