

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 simulated a method of communicating over a brain-computer-interface (BCI) constrained by noise and bandwidth; Master's report.
- Fast MAPs BCI-controlled Smart Wheelchair Interface
 - Extended an approach to shared, BCI-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
 - Assembled and integrated requisite components of an EEG-based brain computer interface to control a virtual keyboard; research project.
- A Components-Off-The-Shelf Single Op-Amp Gyrator Implementation of Chua's Circuit
 - Constructed an electronic circuit exhibiting classic chaotic behavior using off-the-shelf components, and demonstrated the use of a sound card to sample chaotic waveforms; research project (in process of submission).
- Catching Phish: Detecting Phishing Attacks from Rendered Website Images
 - Developed a method of thwarting phishing attacks using machine learning techniques on rendered images of websites; class project.
- Extra-Cortical Self-Repositioning MEMs-Based ECoG
 - Proposed a system for recording electrical activity from the surface of the cerebral cortex using a wireless electrode array with RF power scavenging ability and a self-repositioning mechanism; class project.

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

- Laboratory Options for the Computer Science Major
 - Designed and implemented lab modules to expose Computer Science undergraduates to the latest trends in digital circuit design and computer architecture.
 - In 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
 - Authored an emulator to allow Esterel language routines to run on LEGO Mindstorms robots; class project.

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

Experience

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

- Assisted the group which developed the front-end system of the Spallation Neutron Source (SNS), which provides pulse neutron beams used to determine the atomic make-up of materials.
- Developed modules which enabled additional functionality to the FPGA controller of the RF-based acceleration system, and allowed greater flexibility and control to SNS users.

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

- Enabled the web presence of such large companies as, Bertelsmann AG, The Princeton Review, and ScreamingMedia.
- Developed large-scale portal sites such as GirlsOn.com, Lids.com, Bolt.com, and Homeroom.com.
- Ensured unerring code performance with all browser engines.
- Created a centralized system, which improved site development efficiency and enhanced developer collaboration.
- Stimulated the interest of new clients by producing presentations of cutting edge client-side technologies, to be delivered by the marketing team.
- Was responsible for ensuring the quality, capabilities, and culture-fitness of prospective developers.

Sensenet, Inc., Intern, 11/1998 - 6/1999

- Helped actualize the web footprint of such large companies as Pfizer and Sprint.
- Designed and implemented rigorous usability tests for significant clients such as Metamucil, Showtime, and Captain Morgan.
- Resolved, tracked, and documented technical issues with client sites in a timely fashion.

Programming Experience

High Level Languages:

Python *
C
C++ *
Objective C *
Java
Matlab *
Verilog *
VHDL

Assembly Languages:

X86
ARM

Client Side Web Languages:

HTML
JavaScript
ActionScript

Server Side Web Languages:

SQL
ASP

Systems Proficiency

Windows *
Mac OSX *
Linux Variants:
Ubuntu *
Red Hat *
Mandrake
Knoppix
Gnoppix

Version Control Software Proficiency

Git *
SVN
CVS

* Indicates current strengths

Honors

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