2010 NSF EAPSI Biographical Sketch
Paul T. Pham

Required Information

Yes, I am a **U.S. Citizen**
Last high school attended: Oklahoma School of Science and Mathematics
Oklahoma City, Oklahoma
Previous EAPSI Fellow: No
Heard about EAPSI from: Faculty advisor

Open Source Projects

Pulse Programmer January 2005—Present
`http://pulse-programmer.org`
Project Founder, Lead Developer
An open platform for general-purpose, programmable radiofrequency systems.

Quantum Compiler August 2010—Present
`http://quantum-compiler.org`
Project Founder
An open implementation of compiling algorithms to approximate arbitrary quantum logic gates.

Education

University of Washington September 2005—Present
Degree in progress: Doctor of Philosophy in Computer Science.
Expected graduation date: June 2015
Advisor: Dave Bacon

Massachusetts Institute of Technology
Master of Engineering in Electrical Engineering & Computer Science, February 2005.
Graduate GPA: 4.7/5.0
Thesis: A general-purpose pulse sequencer for quantum computing.
Advisor: Isaac Chuang

Bachelor of Science in Electrical Engineering and Computer Science, June 2004.
Undergraduate GPA: 4.2/5.0

Research Experience

University of Washington Dept. of Physics and Astronomy Seattle, WA
Graduate Research Assistant January—July 2007
Trapped Ion Quantum Computing Group
Supervisor: Prof. Boris Blinov
Built a programmable radio-frequency system for ion trap control including photomultiplier tube input counting.

Max Planck Institute for Quantum Optics Garching, Germany
Visiting Ph.D. Student July 2005—August 2005
Quantum Analog Simulation Group
Advisor: Dr. Tobias Schätz
Built a programmable radio-frequency system for ion trap control with phase-coherent frequency-switching.

University of Innsbruck Innsbruck, Austria
Visiting Ph.D. Student February 2005—June 2005
Quantum Optics and Spectroscopy Group
Advisor: Univ. Prof. Rainer Blatt
Built a programmable radio-frequency system for ion trap control with shaped amplitudes.

MIT Center for Bits and Atoms Cambridge, Massachusetts
quanta Research Group
Graduate Research Assistant September 2003—January 2005
Advisor: Prof. Isaac Chuang
Designed and built instrumentation for quantum computing experiments.

Publication
"Component-based Invisible Computing."
A. Forin, J. Helander, **P. Pham**, J. Rajendiran.
IEEE Realtime Embedded Systems Workshop Paper, December 2001.

Patent
"Method and system for managing the execution of threads and data processing."
A. Forin, J. Helander, **P. Pham**.
U.S. Patent Application No. 20030233392.
Filed on June 12, 2002.

Awards
University of Washington Max E. Gellert Fellowship (2005)
MIT Jerome B. Wiesner Scholarship (1999-2000)
Robert C. Byrd Scholar (1999-2001)
National Merit Scholar (1999)
Oklahoma All-State Scholar (1999)
Microsoft Computer Science Scholarship (1999)

Teaching Experience

University of Washington Seattle, Washington
Teaching Assistant, Computer Science & Engineering Department

The Hardware/Software Interface (CSE 351) Spring 2010
Professor Gaetano Borriello

Data Structures (CSE 326) Autumn 2006
Professor Larry Snyder

Software Development Tools (CSE 303) Spring 2006
Professor Magda Balazinska

Algorithms (CSE 417) Winter 2006
Professor Larry Ruzzo

Discrete Structures Class (CSE 321) Autumn 2005
Professors Dieter Fox & Anna Karlin

MIT Elec. Eng. & Computer Science Dept. Cambridge, Massachusetts

Teaching Assistant
Software Engineering Laboratory Class (6.170) January 2004—May 2004
Professor Rob Miller

Lab Assistant
Software Engineering Laboratory Class (6.170) September 2002—May 2003
Professors Michael Ernst & Daniel Jackson