

# VASIL S. DENCHEV

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## EDUCATION

### PhD Student in Computer Science

*August 2006 to present*

Purdue University

- Completed qualifying process
- Research interests: quantum computing, machine learning, distributed algorithms

### Master of Science

*May 2009*

Purdue University

- Computer Science
- GPA: 3.80/4.00

### Bachelor of Science

*May 2006*

State University of New York, College at Brockport

- Triple major in Computer Science, Computational Science, and Mathematics
  - GPA: 3.97/4.00
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## PUBLICATIONS

- H. Neven, V. S. Denchev, G. Rose, and W. G. Macready, "Training a Binary Classifier with the Quantum Adiabatic Algorithm," in Optimization for Machine Learning Workshop (OPT'08) at the Neural Information Processing Systems Conference (NIPS'08), Dec 2008.
  - V. S. Denchev and G. Pandurangan, "Distributed Quantum Computing: A New Frontier in Distributed Systems or Science Fiction?" in ACM SIGACT News, Vol. 39, No. 3, Sept 2008.
  - A. Zavriyev, A. Leverrier, V. S. Denchev, and A. Trifonov, "Improving the Performance of Quantum Key Distribution Apparatus," in Special Issue (Single Photon) of the Journal of Modern Optics, Vol. 54, Nos. 2-3, Jan. 2007, pp. 305-314.
  - V. S. Denchev, A. Trifonov, A. Zavriyev, and A. Leverrier, "Stabilization of a Single-Photon Interferometer for One-Way Quantum Key Distribution Systems," in Proceedings of the National Conference on Undergraduate Research, University of North Carolina at Asheville, Sept. 2006, pp 2366-2373.
  - V. S. Denchev and M. Z. Tahar, "Measurement and Control System with an Embedded Microcontroller," in Advancing Computing and Information Sciences, Rochester Institute of Technology, Oct. 2005, pp. 103-108.
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## EXPERIENCE

### Google, Inc.

*Summer 2008 and 2009*

#### Software Engineer Intern

- Training a binary classifier with the quantum adiabatic algorithm

### Purdue University

*August 2006 to present*

#### Teaching Assistant

- Graduate TA: PSO/lab sessions, grading homework and projects, proctoring exams
- Help Desk manager: organizing and managing a team of assistants to provide supplemental project help for students enrolled in selected undergraduate CS courses
- Recitation instructor: in-class teaching, designing/grading labs, projects, and exams

### MagiQ Technologies, Inc.

*June to September 2005 and December 2005 to January 2006*

#### Research Intern in Quantum Cryptography

- Single-photon interferometer stabilization with active phase tracking
- Implementation of the BB84 QKD protocol on a one-way system using stabilization

- LabView implementation of FPGA I/O interface for BB84 QKD protocol
- Characterization system for single-photon detectors with GPIB interfacing

**State University of New York College at Brockport**

*August 2002 to May 2006*

**Research Assistant**

- Embedded system for experimental measurement and control in cryogenic physics

**Teaching Assistant/Tutor**

- Tutoring students, facilitating study groups, grading homework, and assisting in labs in various Computer Science and Mathematics courses

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**HONORS AND AWARDS**

- Top graduate teaching assistant, Spring 09
- Upsilon Pi Epsilon International Computer Science Honor Society, Spring 08
- Graduate Student Award for Outstanding Teaching, Spring 08
- SUNY Chancellor's Award for Student Excellence, Spring 06
- Edward L. Davis Award, Spring 06
- Sigma Pi Sigma National Physics Honor Society, Spring 06
- Sigma Xi Undergraduate Research Award in Physics, Spring 06
- President's list, Fall 05-Spring 06
- Departmental Scholar in Computer Science, Spring 06
- Departmental Scholar in Mathematics, Spring 06
- Departmental Scholar in Computational Science, Spring 05
- Delta College Commendation Award, Spring 05
- Sigma Xi Undergraduate Research Award in Computer Science, Spring 05
- Alpha Chi National College Honor Society, Fall 04-Spring 06
- Office of Campus Life Student Leadership Award, Spring 04
- Computational Science Departmental Award, Spring 04-Spring 06
- Computer Science and Mathematics Departmental Award, Spring 04
- Brockport Alumni Association Current Student Award, Fall 03-Spring 04
- Interdisciplinary Award in Mathematics, Fall 03-Spring 04
- Dean's list, Fall 02-Spring 05
- Distinguished Scholar in Residence, Fall 02-Spring 06
- Scholar Recognition Award, Fall 02-Spring 06

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**ACTIVITIES**

- President of Upsilon Pi Epsilon, Purdue University Chapter, 08-09
- President of Alpha Chi, NY Omicron chapter, 05-06
- Student speaker at SUNY Brockport's Convocation Ceremony, Fall 05.  
Video: <http://www.cs.purdue.edu/homes/vdenchev/convocation.mpg>
- Model for SUNY Brockport 2005-2006 Undergraduate Recruitment Campaign.  
Advertisement published in regional issues of Time, Newsweek, US News, People, and Sports Illustrated. <http://www.cs.purdue.edu/homes/vdenchev/brockport.pdf>
- ACM International Collegiate Programming Contest, SUNY Oswego, Fall 05
- Computational Science Club, Computer Science Club, Programming Team, 03-06
- Volunteer work for open houses and recruitment, 03-06

**References Available Upon Request**