Dong Zhou

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nosarthur.github.io   US green card holder

SUMMARY

A scientist and programmer. Interested in personal growth and social good. Familiar with magnetic resonance imaging, quantum computing, and biophysics.

SKILLS

Python, Go, C/C++, Matlab, Shell scripts, AWS, SQL
Computational physics/mathematics, Image processing, Machine learning
Mathematical modeling, Optimization with regularization, Stochastic processes

EXPERIENCE

- **Senior scientist, Schrödinger Inc.** 2016-2018

  Implement analysis toolkit for molecular dynamics trajectories using Python. Maintain scientific computing services using AWS, Go, Python, PostgreSQL, and Polymer.js. Maintain atom mapping module (subgraph isomorphism) for free energy perturbation.

- **Postdoc in radiology, Weill Medical College of Cornell University** 2012–2016

  Solved ill-posed inverse problems in medical imaging using Matlab, C and C++. Developed probes for transcranial magnetic stimulation, both in simulation using COMSOL multiphysics, and with hardware.

- **Postdoc in physics, Yale University** 2011–2012

  Simulated solid state quantum optics (circuit QED) systems using Python. Developed schemes for quantum control and quantum gate.

- **Research assistant, University of Wisconsin-Madison** 2007–2011

  Studied quantum systems in the presence of classical noises (stochastic processes) using Matlab and C++. Developed scheme for quantum gate and quantum control. Developed algorithm for graph isomorphism problem. Performed X-ray diffraction and synchrotron radiation (X-ray absorption near edge spectroscopy and microscopy) experiments on nacre (mother of pearl) and other samples.

EDUCATION

- Ph.D in physics, University of Wisconsin-Madison (GPA 4.0)   2006–2011
- Graduate study in physics, University of Georgia-Athens (GPA 4.0)   2004–2006
- B.S. in physics, Honored Mixed Class, Zhejiang University, China (GPA 3.8)   2000–2004

HONORS AND AWARDS

- International Society for Magnetic Resonance in Medicine (ISMRM) Merit Award, Magna Cum Laude, 2014
- International Student Academic Achievement Award, UW-Madison, 2011

- Ray and Anne Herb Award for Wisconsin Distinguished Graduate Fellowship, 2008
- Emanuel R. Piore Award for Highest Scorer on the Qualifier Exam, UW-Madison, 2007
- University Housing's Favorite Instructor Award for Fall 2006, UW-Madison, 2006
- Van Vleck Fellowship for Graduate Students in Physics, UW-Madison, 2006
- Honored Graduate of Zhejiang University, China, 2004
- Honorary Enrollment, Zhejiang University, China, 2000
- Tan Jiazhen (C. C. Tan) Scholarship for Outstanding High School Student in Biology, 1999
- Kang Hui Scholarship for Highest Scorer in High School Entrance Exam, Hangzhou, China, 1996

PATENTS

1. *Magnetic resonance imaging systems and methods for optimized parallel receive, excite, and shim (oPRES)*
   Hui Han, Yi Wang, John Stager, Junghun Cho, and **Dong Zhou**, pending

PUBLICATIONS AND SERVICES

Author of over 30 journal articles and reviewer for 11 journals.