

DR. CHRISTIAN SEBERINO

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Objective

To bless homeschool families by providing affordable, rigorous, interactive online mathematics, physics and computer science classes.

Introduction

I am an experienced mathematics, physics and computer science instructor. I have worked for the government, industry and academia. I have a Ph.D. in physics.

Teaching Experience

Online Instructor (2008-present): Started own online homeschool teaching business. Developed own course materials.

Software Programming Instructor (2003-2007): Taught programming classes for various professors, graduate students and engineers in the San Diego area. Developed own course materials.

Computer Security Instructor (2001): Taught computer security classes for the military. Developed own course materials.

Physics Teaching Assistant (1995-1997): Was a teaching assistant for physics classes at the University of California, San Diego.

Mathematics & Physics Tutor (1988-1992): Tutored mathematics and physics students at the University of California, San Diego.

Church Instructor (1993-2009): Led Bible studies, men's groups and financial classes at San Diego churches.

Non-Teaching Experience

Freelance Consulting (2003-present): Developed magnetics, signal processing, stochastic processing, supercomputing and networking software for the Scripps Institute of Oceanography, the University of California, San Diego, General Dynamics and Cognitive Vision.

Qualcomm (2006-2009): Developed software in support of signal processing, Linux and Google Android applications.

SPAWAR Systems Center San Diego (2000-2006): Developed magnetics, mechanics, signal processing, stochastic processing, cryptography and networking software. Participated in research and development of novel magnetic sensors. Worked with the National Security Agency.

University of California, San Diego (1994-2000): Participated in research and development of new magnetic media. Developed a parallel 3D Fast Multipole Method magnetic simulation application. Developed a magnetoresistant sensor simulation application. Built a supercomputer to run research and development software.

Education

Degrees: B.S. (1992), M.S. (1997) and Ph.D. (2000) in Physics from the University of California, San Diego

GPA: A

Publications

Tauxe, L., H.N. Bertram, and C. Seberino, Physical Interpretation Of Hysteresis Loops: Micromagnetic Modeling Of Fine Particle Magnetite, *Geochem., Geophys., Geosyst.*, DOI 10.1029/2001GC000280, 2002.

A. R. Bulsara, C. Seberino, L. Gammaitoni, M. F. Karlsson, B. Lundqvist, J. W. C. Robinson, Signal Detection Via Residence Times Asymmetry in Noisy Bistable Devices, *Physical Review E*, 88 (23):230601, 2002.

C. Seberino and H. N. Bertram, Concise Efficient 3D Fast Multipole Method For Micromagnetics, *IEEE Trans. Magn.*, 37(3):1078-1086, 2001.

C. Seberino and H. N. Bertram, Numerical Study of Hysteresis and Morphology in Elongated Tape Particles, *J. Appl. Phys.*, 85(8):5543-5545, 1999.

H. N. Bertram and C. Seberino, Numerical Simulations of Hysteresis in Longitudinal Magnetic Tape, *J. Mag. Mag. Mat.*, 193:388-394, 1999.

H. N. Bertram and C. Seberino, Tiny Grains and Giant Magnetoresistance: Numerical Micromagnetics, *Gather/Scatter - A San Diego Supercomputer Center Publication*, 13(2):4-5, 1997.

C. Seberino and H. N. Bertram, Micromagnetics of Long Ferromagnetic Particles, *IEEE Trans. Magn.*, 33(5):3055-3057, 1997.

C. Seberino, Python: Faster And Easier Software Development, <http://seberino.org/pythonpaper.pdf>, 2006.

Honors

SPAWAR Systems Center Award for Exemplary Achievement, 2005

San Diego Fellowship, 1995-1999

Regents Fellowship, 1994-1995

Faculty Mentor Research Program Fellowship, 1990, 1991, 1993

San Diego Supercomputer Center Research Experience for Undergraduates Award, 1991

Magna Cum Laude, 1992

Academic Honor Roll, 1988-1992