Craig Bonnoit
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Objective

Full-time position in analysis of securities and development of trading strategies

Education

Massachusetts Institute of Technology Cambridge, MA 2007 – Present

- Doctor of Philosophy in Physics, expected June 2013
- PhD thesis topic: *Inelastic X-ray Scattering Studies of Broken Symmetry in the Pseudogap Phase of BSCCO*
- Cumulative GPA: 4.9/5.0
- Præcis Presidential Fellow

Carnegie Mellon University Pittsburgh, PA 2003 – 2007

- Bachelor of Science in Physics
- Cumulative QPA: 3.8/4.0
- University Honors, College Honors, Phi Kappa Phi honor society

Employment

Graduate Research Assistant Massachusetts Institute of Technology 2007 – Present

- Performed first principles and numerical calculations of excitations under coupling degrees of freedom and presence of incommensurate structural distortions to support data modeling analysis
- Designed and implemented self-consistent fitting scheme to account for resolution effects
- Developed C++ code to simulate Monte Carlo process and calculate correlation functions

Teaching Assistant Massachusetts Institute of Technology 2010 – Present

- Led a section team of several technical instructors and undergraduates
- Ran weekly problem-solving sessions for the class and held weekly office hours

Undergraduate Research Assistant Carnegie Mellon University 2005 – 2007

- Analyzed scaling form of the spin-spin correlation function and its implications for special ordering
- Built models of correlation function from neutron beam data and performed sensitivity analysis
- Wrote grant proposals for and was awarded two grants for undergraduate research

Programming Languages

C, C++, Mathematica, Java

Coursework

Linear Algebra, Differential Equations, Probability Theory, Stochastic Processes, Linear Programming, Network Flow, Group Theory, Differential Geometry, Quantum Computation, Introductory Programming, Microeconomics

Selected Refereed Publications

- "Probing Electronic Order via Coupling to Low Energy Phonons in Superconducting $Bi_2Sr_2CuO_6$", **C. Bonnoit**, *et al.*, *Phys. Rev. Lett. (submitted), cond-mat/1202.4994* (2012)
- "Spin Correlations in the Geometrically Frustrated Pyrochlore $Tb_2Mo_2O_7$", D. Singh, J. Helton, S. Chu, T. Han, **C. Bonnoit**, *et al*., *Phys. Rev. B* 78, 220405 (2008)
- "Field Evolution of Magnetic Correlation Lengths in e-Co Nanoparticle Assemblies", M. Sachan, **C. Bonnoit**, *et al.*, *Appl. Phys. Lett.* 92, 152503 (2008)
- "Self-Assembled Nanoparticle Arrays as Nanomasks for Pattern Transfer", M. Sachan, **C. Bonnoit**, *et al.*, *J. Phys. D* 41, 134001 (2008)

Leadership

Captain of MIT Men's ultimate frisbee team (2011 – Present), Dorm athletics chair (2007 – 2009)