Glenn L. Strycker

Graduate Student – Physics PhD Candidate,
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I am currently looking for a challenging career that uses my computer abilities together with my social and leadership skills to tackle interdisciplinary problems in areas such as physics, business, finance, politics, and infrastructure. Working with a team to model social interactions, buying habits, stock prices, physical processes, or other complex systems to solve difficult problems would highly interest me. I am especially attracted to problems involving large datasets and distributed computing.

Education:

- **PhD (Physics) University of Michigan**, expected Spring 2010, candidacy achieved Sept 2006
- **M.S. (Physics) University of Michigan**, Aug 2005, GPA = 6.583 / 8.0
- **B.S. Summa cum Laude, University of Notre Dame**, May 2003, Physics and Honors Mathematics, GPA = 3.846 / 4.0

Computing Experience:

- Extensive knowledge of C/C++, ROOT (C++ for physics analysis), general OOP, and low-level programming
- Have worked with many languages, including IDL, Matlab, Mathematica, FORTRAN, PASCAL, PERL, Assembly, HTML
- Familiar with Linux/UNIX, Windows, Cygwin, and other operating systems and tools
- Experience using lab software packages, large datasets, and distributed grid/farm computing (CAF, ROCKS)
- Learning new programming languages and computer systems is easy and enjoyable for me – a good challenge

Current Research Work Experience:

- PhD thesis research "Measurement of ttbar Front-Back Production Asymmetry in ppbar events at sqrt(s)=1.96 TeV" currently conducted at Fermi National Accelerator Laboratory (FNAL), advisor Prof. Dante Amidei (U. Mich)
- Research work involves knowledge of high energy particle physics, experimental research methods, statistics, computer programming, farm computing, data analysis, and regular presentations
- Collider Detector at Fermilab (CDF) Data Validation Expert July 2007 – Present
- Data Acquisition Operations Specialist for the collider detector at Fermilab (CDF) Sept-Nov 2007, Jun-Sept 2009
- Learned extensive analysis and programming skills, self-motivation, teamwork, and presentation skills

Other research experience:

- Mathematical / Theoretical Condensed Matter Physics – studied percolation on social networks and various models involving stochastic processes with Prof. Len Sander (U. Mich)
- Experimental Condensed Matter Physics – studied Co/CoO nanoparticles with an emphasis on neutron scattering with Prof. Meigan Aronson (U. Mich), used neutron scattering beam facilities at Oak Ridge National Lab (ORNL) and National Institute of Standards and Technology (NIST)
- Econophysics – studied the "Voter Model" with variations on differing topologies, economic models, and other economics-inspired simulations with Prof. Robert Savit (U. Mich)
- Nuclear / Atomic, Molecular, and Optical (AMO) – summer project designing a table-top proton accelerator for Prof. Timothy Chupp (U. Mich)
- As an undergraduate, I had research experiences through writing a senior thesis (theoretical astrophysics), 3 summer Research Experience for Undergraduates (REU) internships (nuclear physics at ND, Mathematics at ND, and nuclear physics at Los Alamos Summer School REU program), worked in Notre Dame's nuclear accelerator lab, and built hardware for Fermilab's D-zero detector (high energy physics)

Presentations, Talks, and Teaching Experience:

- Nov 2009 – Invited speaker for Notre Dame HEP Seminar
- Nov 2009, Nov 2008 – Guest lecture at Wheaton College regarding physics at the Tevatron
- April 2009 – American Physical Society (APS) April Meeting
- Regular research update presentations given at Fermilab
- June 2006 – Invited speaker at the American Conference on Neutron Scattering (ACNS), St. Charles, IL
- March 2006 – APS March Meeting, Baltimore, MD
- Spring 2005 – Substitute taught various intro physics recitation sessions (U. Mich)
- Fall 2003 - Spring 2005 – Instructor (GSI/TA) for Michigan introductory physics labs 127/128, 141/241

Selected Publications (coauthor):

- Thesis "Measurement of ttbar Front-Back Production Asymmetry in ppbar events at sqrt(s)=1.96 TeV" in progress
- Search for High-Mass e+e- Resonances in $p\bar{p}$ Collisions at sqrt[s] = 1.96 TeV, Phys. Rev. Lett. 102, 031801 (2009)
- Search for a Higgs Boson Decaying to Two W Bosons at CDF, Phys. Rev. Lett. 102, 021802 (2009)
- Global search for new physics with 2.0 fb-1 at CDF, Phys. Rev. D 79, 011101 (2009)
- Elastic neutron scattering in quantum critical antiferromagnet Cr0.963V0.037, Physica B, v403, n 5-9, 1 Apr. 2008, p1276-8
- Manipulating the Magnetic Structure of Co Core/CoO Shell Nanoparticles: Implications for Controlling the Exchange Bias, Phys. Rev. Lett. 101, 117202 (2008)
- LASS 2002 Reports (Los Alamos National Lab Internal Paper) LA-UR-02-5599

Awards, Honors, and Recognition:

- 2003 Phi Beta Kappa
- 2003 Outstanding Undergraduate Research Award (Notre Dame Physics departmental award)
- 2003 Completed the Notre Dame Arts, Letters, and Science (ND AL/SC) Honors Program
- 1999 National Merit Finalist
- 1999 RadioShack/Tandy Scholar
- 1998 Notre Dame Scholar

Professional Memberships:

- 2003 - Present – Member of the American Physical Society (APS)

References:

Prof. Dante Amidei (thesis advisor)
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other references available upon request

Outside Interests:

- Spending time with friends; gourmet cooking; discussing current events; reading
- playing guitar; composing music; photography
- physical fitness; running; camping; hiking