

Julie Borchers

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Education

- Ph.D. in Physics, University of Illinois at Urbana-Champaign, 1990
- M.S. in Physics, University of Illinois at Urbana-Champaign, 1985
- B.S. in Physics, University of Dayton, 1984

Professional Experience

- Research Physicist, NIST Center for Neutron Research (1992-present)
- Physicist, Post-doctoral Fellow, NIST Center for Neutron Research (1989-1991)

Awards

- Fellow, American Physical Society
- Exceptional Service for the Neutron Scattering Society of America, 2004
- Department of Commerce Bronze Medal, 1999
- Laura Eisenstein Award, University of Illinois, 1988
- IBM Research Fellow (1985 – 1986)

Research Interests

Focused on neutron scattering analysis of complex magnetic structures in thin films, layered materials and nanoparticles that are of technological interest for magnetic recording and other applications. Author of more than 130 articles and two book chapters on topics including exchange-spring magnets, exchange biasing, magnetic-oxide nanoparticles, magnetic semiconductor films, multiferroic films and patterned magnetic devices. Expertise in neutron polarization and analysis including application of ^3He polarization analyzers in SANS (small angle neutron scattering) and polarized neutron reflectivity.

Professional Activities (partial list)

Treasurer, 53rd, 55th and 56th Magnetism and Magnetic Materials Conference (2008, 2010 and 2011)
U.S. representative, C9 Commission on Magnetism, International Union of Pure and Applied Physics (2008 – 2010)
Chair, NSSA Clifford G. Shull Prize Selection Committee (2010)
International Advisory Committee, International Conference on Neutron Scattering (2009)
Science Review Committee, Oakridge National Laboratory Neutron Sciences program (2009 to present)
Member-At-Large, Division of Materials Physics, American Physical Society (2008 – 2010)
Advisory Editorial Board, Journal of Magnetism and Magnetic Materials (2008 – 2010)
Committee of Visitors, Division of Materials Research, National Science Foundation (2008)
Programming Committee, 10th Conference on Surface X-ray and Neutron Scattering (2008)
Chair, Advisory Committee, 52nd Magnetism Magnetic Materials Conference (2007)
Chair, 51st Magnetism and Magnetic Material/Intermag Conference (2007)
Chair, Selection Committee for David Adler Lectureship Award, American Physical Society (2007)
Co-Organizer, Warren Award Symposium, American Crystallographic Society meeting (2006)
Local Chair, 2nd American Conference on Neutron Scattering (2004)
Member-At-Large, GMAG, American Physical Society (2002-2005)
Program Co-Chair, 1st American Conference on Neutron Scattering (2002)
Program Co-Chair, 46th Magnetism and Magnetic Materials Conference (2001)
Secretary, Neutron Scattering Society of America (1999-2002)
Advisory Committee, Magnetism and Magnetic Materials Conference (1998 - present)
Magnetism Advisory Committee, Spallation Neutron Source (1998)
Programming Committee, Magnetism and Magnetic Materials Conference (1994,1998,1999,2004)