Barry L Winn

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Education

PhD in Physics, Dec 2000, SUNY at Stony Brook
Dissertation: *Tomography using a cryogenic scanning transmission x-ray microscope*
MS in Physics, May 1995, SUNY at Stony Brook, GPA: 3.67
BS in Physics, May 1993, Tennessee Technological University, GPA: 3.776
Minors: English, Math and Computer Science

Research

2000-present: Postdoctoral appointment, Center for Neutron Science, Brookhaven National Lab (under Jerry Hastings and Steve Shapiro)
1998-2000: Cryogenic Scanning Transmission X-Ray Microscope development and use (under Chris Jacobsen, at SUNY at Stony Brook)
1994-97: Scanning Photoemission Microscope development (under Janos Kirz and Harald Ade, at SUNY at Stony Brook)
1994-96: NSLS X1A beamline design, construction and testing (under Janos Kirz and with Tom Oversluzien, SUNY at Stony Brook)
1989-92: Development of graphics interface for Brownian dynamics simulation studies (under Paul Northrup at Tennessee Technological University)
1992: 'Studies of Ultrasonic Contact Scanning of Aircraft Doubler Joints for Detecting Disbonds.' Misc. data analysis, including back propogation neural networks (REU at College of William and Mary, under Dev Prabhu at NASA Langley)
1991: Determination of feasability of neutron cluster detection experiment (under Ray Kozub at Tennessee Technological University)
1989-90: Data analysis programming and misc. work in nuclear structure studies at the 3MeV Lab (under John Shriner of Tennessee Technological University at Duke University)

Teaching

1993-94: student lab for first year general physics class for biology majors
1990-92: student lab for second year general physics class
1990-92: math tutor for classes up to differential equations level

Honors

1994: GAANN Fellowship
1991: Member, Sigma Pi Sigma
1992: Member, Phi Kappa Phi and Kappa Mu Epsilon
1991-92: Who's Who in America Colleges and Universities
1988: National Merit Scholarship, N.M.S. Co.
1988-91: Tennessee Technological University Work Scholarship

Presentations

2001: '*Anomalous Phonon Damping in the High Temperature Shape Memory Alloy* $Ti_{50}Pd_{42}Cr_8$' (talk), ICNS 2001, Munich, DE
1999: '*Progress in Soft X-Ray Microtomography on the X1A CryoSTXM*' (poster), X-Ray Microscopy 1999, Berkley, CA
1996: '*Considerations for a soft x-ray spectromicroscopy beamline*' (talk), Society of Photo-Optical Instrumentation Engineers 1996, Denver, CO
1995: '*X1A: Second generation undulator beamlines serving soft x-ray spectromicroscopy experiments at the NSLS*' (poster), Syncrhotron Radiation Instrumentation 1995, Chicago, IL

Refereed Publications

B. Winn, H. Ade, C. Buckley, M. Feser, M. Howells, S. Hulbert, C. Jacobsen, K. Kaznacheyev, J. Kirz, A. Osanna, J. Maser, I. McNulty, J. Miao, T. Oversluizen, S. Spector, B. Sullivan, S. Wang, S. Wirick, and H. Zhang, '*Illumination for coherent soft x-ray applications: the new X1A beamline at the NSLS*,' Journal of Synchrotron Radiation, vol. 7, pp. 395-404 (2000)

Other Publications

B.L. Winn, S.M. Shapiro, R. Erwin, D.L. Schlagel, T. Lograsso, '*Anomalous Phonon Damping in the High Temperature Shape Memory Alloy* $Ti_{50}Pd_{42}Cr_8$,' to be published in App. Phys. A (2002)

B. Winn, *Tomography using a cryogenic scanning transmission x-ray microscope*, dissertation, SUNY Stony Brook (2000)

A. R. Kalukin, B. Winn, Y. Wang, C. Jacobsen, Z. H. Levine, and J. Fu, '*Calibration of High-Resolution X-Ray Tomography with Atomic Force Microscopy*,' J. Res. NIST, **105**, 867-874 (2000)

B. Winn, K. Kaznacheyev, G. Mitchell, M. Olken, E. Rightor, '*Soft x-ray microtomography of a macroporous silica particle using the X1A Cryo STXM,'* to be published as internal Dow report

J. Maser, A. Osanna, Y. Wang, C. Jacobsen, J. Kirz, S. Spector, B. Winn, and D. Tennant., '*Soft x-ray microscopy with a cryo STXM: I. Instrumentation, imaging, and spectroscopy*,' J. Mic. **197**, 68-79 (2000)

C. Jacobsen, S. Abend, T. Beetz, M. Carlucci-Dayton, M. Feser, K. Kaznacheyev, J. Kirz, J. Maser, U. Neuhäusler, A. Osanna, A. Stein, C. Vaa, Y. Wang, B. Winn, and S. Wirick, '*Recent developments in scanning microscopy at Stony Brook*,' W. Meyer-Ilse, A. Warwick, and D. T. Attwood, eds. X-ray Microscopy: Proceedings of the 6th International Conference on X-ray Microscopy, (New York), AIP (2000)

H. N. Chapman, S. Vogt, C. Jacobsen, J. Kirz, J. Miao, Y. Wang, B. Winn, and T. Oversluizen, *'A shutter-photodiode combination for UV and soft x-ray beamlines*,' Journal of Synchrotron Radiation, **6**:50 (1999)

H. Zhang, G. R. Zhuang, H. Ade, C-H. Ko, B. Winn, J. Kirz, D. Leta, R. Polizotti, S. Cameron, S. Hulbert, and E. Johnson, *'Recent progress with the scanning photoemission microscope at the national synchrotron light source*,' J. Thieme, G. Schmahl, E. Umbach, and D. Rudolph, eds., X-ray Microscopy and Spectromicroscopy, (Berlin), Springer-Verlag, II-143-156 (1998)

B. Winn, X. Hao, C. Jacobsen, J. Kirz, J. Miao, S. Wirick, H. Ade, C. Buckley, M. Howells, S. Hulbert, I. McNulty, and T. Oversluizen, '*Considerations for a soft x-ray spectromicroscopy beamline*,' Proc. SPIE vol **2856**, 100-109

B. Winn et. al. '*X1A: Second generation undulator beamlines serving soft x-ray spectromicroscopy experiments at the NSLS*,' Rev. Sci. Instrum. **67**(9), SRI '95 paper A31 (1996)

C.-H. Ko, J. Kirz, K. Maier, B. Winn, H. Ade, S. Hulbert, E. Johnson, and E. Anderson, *'Chemical state mapping on materials surfaces with the X1A second generation scanning photoemission microscope (X1A SPEM-II)*,' W. Yun, ed., X-ray microbeam technology and applications, vol. 2516, (Bellingham, Washington), SPIE, 150-159 (1995)

J. M. Maser, H. N. Chapman, C. J. Jacobsen, A. Kalinovsky, J. Kirz, A. Osanna, S. Spector, S. Wang, B. Winn, S. Wirick, and X. Zhang, *'Scanning transmission x-ray microscope at the NSLS: from XANES to cryo*,' W. Yun, ed., X-ray microbeam technology and applications, vol. 2516, (Bellingham, Washington), SPIE, 78-89 (1995)

Organizational activities

1996, 2000-02: Christ Church Episcopal Port Jefferson, Youth Group volunteer staff, Jr. High Sunday School teacher, Bible Study facilitator
1988-2000: InterVarsity Christian Fellowship, Leader and Co-Leader, Small Groups, All Sing Team Coordinator, International Dance Party instigator
1988-93: Society of Physics Students (Tennessee Tech), President, Vice President

Computer skills	Fortran, C++, Lisp, and IDL; AutoCAD, Windows Office, LaTEX
References	**Janos Kirz**, Dept. of Physics and Astronomy, SUNY at Stony Brook, Stony Brook, NY 11794-3800, janos.kirz@sunysb.edu **Chris Jacobsen**, Dept. of Physics and Astronomy, SUNY at Stony Brook, Stony Brook, NY 11794-3800, chris.jacobsen@sunysb.edu **Jorg Maser**, Advanced Photon Source, Argonne National Laboratory, Argonne, IL, 60439, maser@aps.anl.gov **Harald Ade**, Dept. of Physics, North Carolina State University, Raleigh, NC 27599, harald_ade@ncsu.edu **Tom Oversluizen**, 412 S. Country Rd., E. Patchogue, NY 11772 **Jerry Hastings**, SSRL, mail stop 69, SLAC, 2575 Sand Hill Rd, Menlo Park, CA 94025 jbh@slac.stanford.edu **Steve Shapiro,** Dept. of Physics, Brookhaven National Laboratory, Upton, NY 11973, Shapiro@bnl.gov