BIOGRAPHICAL SKETCH OF NICHOLAS JOSEPH GIORDANO

Education	Ph.D., Yale University	May 1977
	B.S., Purdue University	May 1973
Professional Experience	Dean, College of Sciences and Mathematics, Auburn University	2013-present
	Professor of Physics, Auburn University	2013-present
	Head, Department of Physics, Purdue University	2007-2013
	Hubert James Distinguished Professor of Physics, Purdue University	2004-2013
	Associate Dean of Science, Purdue University	2002-03
	Assistant Dean of Science, Purdue University	2000-02
	Professor of Physics, Purdue University	1985-2013
	Associate Professor of Physics, Purdue University	1982-85
	Assistant Professor of Physics, Purdue University	1979-82
	Assistant Professor of Engineering and Applied Science, Yale University	June 1977-June 1979
	Visiting Scientist, Hahn-Meitner Institute, Berlin, Germany	June-August 1977
	Acting Instructor, Yale University	January-June 1977
Honors and Awards	Speaker of the Year of the Indiana Academy of Science	2006-07
	Indiana Professor of the Year, Carnegie Foundation for the Advancement of Teaching	2004
	Fellow of the Teaching Academy, Purdue University	2003-present
	Murphy Award for Excellence in Teaching, Purdue University	2003
	DOE Computational Science Education Award	1997
	Herbert Newby McCoy Award, Purdue University	1992
	Alfred P. Sloan Foundation Research Fellow	1979-83
	Becton Prize for accomplishments in research, Yale University	1977
	National Science Foundation Fellowship	1974-76
	Yale University Sheffield Fellowship	1973-74
	Phi Beta Kappa; Phi Kappa Phi; Sigma Pi Sigma	
	Richard W. King Award as the outstanding undergraduate physics major, Purdue University	1972 & 1973
Professional Societies & Activities	Fellow, American Physical Society	
	Member, Biophysical Society	
	Member, Acoustical Society of America (ASA)	
	Member, Technical Committee on Musical Acoustics of the ASA	
	Advisory Board of J. Phys. Condensed Matter	1995-99
	Editorial Board, Purdue University Press	1991-94

Current & Past Research Interests	Computational biophysics, musical acoustics, physics of the piano, science education, nanofluidics, mesoscopic systems, low frequency noise, superconductivity in one dimension, fabrication of nanostructures, transport properties of disordered systems.

Books

1. *Computational Physics,* N. Giordano, Prentice-Hall (1997).
2. *Computational Physics,* 2nd Edition, N. Giordano and H. Nakanashi, Prentice-Hall (2006).
3. *College Physics, Reasoning and Relationships,* N. Giordano, Cengage Learning (2009).
4. *Physics of the Piano,* N. Giordano, Oxford University Press (2010).
5. *College Physics, Reasoning and Relationships,* 2nd Edition, N. Giordano, Cengage Learning (2011).

Ph.D. Students

1. Joseph T. Masden, *Low Temperature Conductance of Thin Metal Wires and Films*, 1983.
2. Wallace D. Williams, *Nonmetalic Conduction of Ultrathin Gold Wires at Low Temperatures*, 1983.
3. Daniel M. Fleetwood, *Experimental Study of Low-Frequency Excess ($1/f$) Noise in Metal Films*, 1984.
4. David E. Beutler, *Localization, Electron-Electron Interaction, and Universal Conductance Fluctuation Phenomena in Thin Bismuth Films and Wires*, 1986.
5. Juhn-Jong Lin, *Localization and Electron-Electron Interaction Effects in Thin Gold-Palladium Films and Wires*, 1986.
6. Timothy L. Meisenheimer, *Quantum Interference Effects and Electrical Conduction in Disordered Metals*, 1989.
7. Jin Liu, *The Study of Electron Coherence Effects in Metallic Systems with High-Frequency AC Electric Fields: Weak Localization and Mesoscopic Photovoltaic Effects*, 1991.
8. Guoxi Jin, *Experimental Study of the Interfact Between Normal and Superfluid Helium-4*, 1992.
9. Mark A. Blachly, *Kondo Effect in Systems of Reduced Dimensionality*, 1994.
10. Kimin Hong, *Magnetoresistance and Domain Wall Tunneling in Mesocopic Ferromagnets*, 1995.
11. Robert E. Bartolo, *The Mesoscopic Photovoltaic Effect*, 1996.

12. Miles D. Lawrence, *Conductance of Superconductor-Ferromagnet-Superconductor Structures*, 1999.

13. Todd M. Jacobs, *Kondo Effect in Mesoscopic Systems*, 2000.

14. Jiangtao Cheng, *Fluid Flow in Ultrasmall Structures*, 2002.

15. Baris Çetin, *Magnetoresistance of Ferromagnetic Nanostructures*, 2005.

16. Jacob Millspaw, *Sources of* $1/f$ *Noise in Electrolytes*, 2009.

17. Kristofor D. Carlson, *Modeling Spike Timing-Dependent Plasticity*, 2011.

18. Matyas Matolcsi, *A Simplified Model of CamKII Activation in Cytosol of Dendritic Spines*, 2014.

INVITED TALKS

1. *Magnetic tricritical phenomena,* presented at the March Meeting of the American Physical Society, Atlanta, GA, 1976, Bull. Am. Phys. Soc. **21**, 332 (1976).

2. *Localization in thin wires,* presented at the March Meeting of the American Physical Society, New York, NY, 1980, Bull. Am. Phys. Soc. **25**, 355 (1980).

3. *Localization in thin wires,* presented at the International Conference on Physics in One Dimension, Fribourg, Switzerland, August, 1980,

4. *Localization in thin wires,* presented at the Midwest Solid State Conference, East Lansing, MI, October, 1980,

5. *Localization and interaction effects in thin wires,* presented at the Workshop on Topics in the Physics of Disorder, Institute for Theoretical Physics, Santa Barbara, CA, August, 1983,

6. *Links between defect motion and 1/f noise in metal films,* presented at the March Meeting of the American Physical Society, Detroit, MI, 1984, (with D. M. Fleetwood), Bull. Am. Phys. Soc. **29**, 330 (1984).

7. *Resistance fluctuations in thin Bi wires and films.* presented at the Midwest Solid State Conference, St. Louis , MO, October, 1986.

8. *Time dependent resistance fluctuations in thin metal wires and films,* presented at the March Meeting of the American Physical Society, New York, NY, 1987, Bull. Am. Phys. Soc. **32**, 543 (1987).

9. *Conductance fluctuations in disordered metals,* presented at the Ninth International Conference on Noise in Physical Systems, Montreal, May, 1987.

10. *Conductance fluctuations in thin metal films and wires,* presented at the Gordon Conference on Quantum Fluids and Solids, July 1987, (with T. L. Meisenheimer).

11. *Conductance changes in the quantum limit caused by atom mobility at low temperatures,* presented at the March Meeting of the American Physical Society, Anaheim, CA, 1990, Bull. Am. Phys. Soc. **35**, 563 (1990).

12. *Superconductivity in one dimension,* presented at the Midwest Solid State Theory Conference, Northwestern University, October, 1990.

13. *Kondo effect in one and two dimensions,* presented at the Midwest Solid State Conference, Urbana, IL, September, 1992.

14. *New mesoscopic effects in systems containing magnetic impurities,* presented at the International Symposium on New Phenomena in Mesoscopic Structures, Maui, December, 1992.

15. *Kondo effect in one and two dimensions,* presented at the Workshop on Electronic Properties of Disordered Systems, Argonne National laboratory, August, 1993.

16. *Superconducting fluctuations in one dimension,* presented at the NATO Advanced Research Workshop on "Mesoscopic Superconductivity", Karlsruhe, Germany, May 1994.

17. *Tunneling of domain walls in one dimensional ferromagnets,* presented at the NATO Advanced Research Workshop on "Quantum Tunneling of Magnetization", Grenoble, France, July 1994.

18. *New effects in ferromagnetic nanostructures,* presented at the International Workshop on "Spin Polarized Electronic Transport", Miami, FL, February 1995.

19. *Domain wall tunneling in thin Ni wires,* presented at the March Meeting of the American Physical Society, San Jose, CA, 1995, Bull. Am. Phys. Soc. **40**, 436 (1995).

20. *Superconducting fluctuations in one dimension,*
presented at the March Meeting of the American Physical Society, Kansas City, MO, 1997, Bull. Am. Phys. Soc. **42**, 802 (1997).

21. *Using computational methods to bring new topics to the curriculum,* presented at the Workshop on Curriculum Development, sponsored by Project Kaleidoscope, Lincoln, NE, October, 1997.

22. *Using computational methods to bring new topics to the curriculum,* presented at the Conference on High Performance Computing SC'97, San Jose, CA, November, 1997.

23. *Piano bridge and soundboard motion,* presented at the 134th meeting of the Acoustical Society of America, J. Acoust. Soc. Am. **102**, 3108 (1997).

24. *Introduction to diffusive transport,* presented at the Workshop on Semiconductor Nanostructures, Scuola Normale Superiore, Pisa, Italy, June, 1998.

25. *Transport in mesoscopic systems: Some open questions and unresolved issues,* presented at the Workshop on Semiconductor Nanostructures, Scuola Normale Superiore, Pisa, Italy, June, 1998.

26. *Kondo effect in small metal systems,* presented at the Workshop on Semiconductor Nanostructures, Scuola Normale Superiore, Pisa, Italy, June, 1998.

27. *Magnetism and superconductivity in mesoscopic systems,* three talks presented at the International Workshop on Nanoelectronics and Mesoscopic Systems, Center for Theoretical Science, Hsinchu, Taiwan, January 1999.

28. *Kondo effect in small metal systems*, presented at the 22nd International Conference on Low Temperature Physics, Helsinki, August 1999.

29. *Kondo and local moment physics in thin metal films*, presented at the Conference on Magnetism and Magnetic Materials (with T. M. Jacobs), San Jose, CA, November, 1999.

30. *Kondo effect in small metal systems,* presented at the NATO Advanced Research Workshop on Size Dependent Magnetic Scattering, Pecs, Hungary, May 2000.

31. *Domain wall resistance and magnetoresistance of narrow ferromagnetic wires,* presented at the 8th NEC Symposium on Fundamental Approaches to New Material Phases: Spin-related Quantum Transport in Mesoscopic Systems, Nasu, Japan, October 2000.

32. *Musical acoustics and computational science,* presented at the International Conference on Computational Science, San Francisco, May, 2001.

33. *Experimental and computational studies of the piano,* presented at the 17th International Congress on Acoustics, Rome, September, 2001.

34. *Measurement of equilibrium values of interfacial area per volume on micro-models and sandstone,* Laura J. Pyrak-Nolte, Jiangtao Cheng, Daiquan Chen and Nicholas Giordano, presented at the European Science Foundation (ESF) workshop on 'Recent Advances in Multiphase Flow and Transport in Porous Media', Delft University of Technology, the Netherlands, June, 2003.

35. *Physics based modeling of musical instruments,* presented at the Central States Universities Meeting, Argonne National Laboratory, October, 2003.

36. *Physical modeling of the piano,* presented at the meeting of the Acoustical Society of America, Austin, Texas, November, 2003.

37. *Electron transport and magnetoresistance in ferromagnetic nanostructures,* presented at the XI Latin American Congress on Surface Sciences and its Applications, Pucon, Chile, December, 2003.

38. *Force-compression behavior of fortepiano hammers,* presented at the International Symposium on Musical Acoustics, Nara, Japan, March, 2004.

39. *Using physical modeling to learn about the piano,* presented at the International Congress on Acoustics, Kyoto, Japan April, 2004.

40. *Physics based modeling of the piano,* presented at the meeting of the American Association of Physics Teachers, Sacramento, CA, August, 2004.

41. *Piano soundboard vibrations: Experiments and modeling studies,* presented at the May meeting of the Acoustical Society of America, Vancouver, Canada, 2005.

42. *Finite-difference modeling of the piano,* presented at the May meeting of the Acoustical Society of America, Providence, RI, 2006.

43. *Physical modeling of the piano,* presented at the November meeting of the Acoustical Society of America, Honolulu, HA, 2006.

44. *National center for learning and teaching in nanoscale science and engineering,* presented at the January meeting of the American Association of Physics Teachers (joint with the American Astronomical Society), Seattle, WA, 2007.

45. *Coupling universities and industries,* N. Giordano, presented at the AIP Corporate Associates Meeting, College Park, MD, May, 2010.

46. *The first piano made in America: The grand pianoforte of Johann Behrent,* presented at the International Colloquium of the German Federal Cultural Foundation *Analysis and Description of Music Instruments using Engineering Methods,* Halle/Saale, Germany, May 2011.

47. *Evolution of music wire and its impact on the development of the piano*, presented at the May 2011 meeting of the Acoustical Society of America, Seattle, WA.

48. *Direct numerical simulation of the recorder in two and three dimensions*, International Congress on Acoustics, Montreal, Canada, June 2013.

49. *Numerical modeling of a recorder in three dimensions*, presented at the Stockholm Music Acoustics Conference, Stockholm, Sweden, August 2013.

50. *Nonlinear effects at woodwind toneholes*, presented at the International Symposium on Musical Acoustics, Le Mans, France, July 2014.

UNPUBLISHED PAPERS PRESENTED AT PROFESSIONAL MEETINGS

1. *DAG: an example of an unusual kind of Ising model,* Conference on Critical Phenomena in Multicomponent Systems, Athens, GA, April, 1974, N. Giordano, W. P. Wolf, J. F. Dillon, Jr., and E. Y. Chen.

2. *Light scattering study of wing critical points,* March Meeting of the American Physical Society, San Diego, CA, 1977, N. Giordano and W. P. Wolf, Bull Am. Phys. Soc. **22**, 299 (1977).

3. *Localization effects in thin Pt wires,* March Meeting of the American Physical Society, Phoenix, AZ, 1981, J. T. Masden and N. Giordano, Bull. Am. Phys. Soc. **26**, 411 (1981).

4. *Experimental study of 1/f noise in tin,* March Meeting of the American Physical Society, Dallas, TX, 1982, D. M. Fleetwood and N. Giordano, Bull. Am. Phys. Soc. **27**, 217 (1982).

5. *1/f noise in thin platinum wires and films,* March Meeting of the American Physical Society, Los Angeles, CA, 1983, D. M. Fleetwood and N. Giordano, Bull. Am. Phys. Soc. **28**, 460 (1983).

6. *Non-metallic conductance in thin Au wires,* March Meeting of the American Physical Society, Los Angeles, CA, 1983, W. D. Williams and N. Giordano, Bull. Am. Phys. Soc. **28**, 486, (1983).

7. *Length dependence of localization/electron-electron interaction effects in thin wires and thin films,* March Meeting of the American Physical Society, Los Angeles, CA, 1983, J. T. Masden and N. Giordano, Bull. Am. Phys. Soc. **28**, 487 (1983).

8. *Localization and electron-electron interaction effects in Bi wires and films,* March Meeting of the American Physical Society, Detroit, MI, 1984, D. E. Beutler and N. Giordano, Bull. Am. Phys. Soc. **29**, 386, (1984).

9. *Magnetoresistance of thin AuPd and Mg wires,* March Meeting of the American Physical Society, Baltimore, MD, 1985, J. J. Lin and N. Giordano, Bull. Am. Phys. Soc. **30**, 550 (1985).

10. *Electric field effects in thin Bi wires,* March Meeting of the American Physical Society, Baltimore, MD, 1985, D. E. Beutler and N. Giordano, post-deadline contribution.

11. *Electron scattering times in Au-Pd films,* March Meeting of the American Physical Society, Las Vegas, NV, 1986, J. J. Lin and N. Giordano, post-deadline contribution.

12. *Measurement of inelastic scattering times in thin Bi wires,* March Meeting of the American Physical Society, Las Vegas, NV, 1986, D. E. Beutler and N. Giordano, post-deadline contribution.

13. *Dimensionality of electron-electron scattering and interactions in Bi wires and films,* March Meeting of the American Physical Society, New York, NY, 1987, D. E. Beutler and N. Giordano, Bull. Am. Soc. **32**, 853 (1987).

14. *Conductance fluctuations in thin silver films,* March Meeting of the American Physical Society, New Orleans, LA, 1988, T. L. Meisenheimer and N. Giordano, Bull. Am. Phys. Soc. **33**, 630 (1988).

15. *Effect of an AC electric field on weak localization,* March Meeting of the American Physical Society, New Orleans, LA, 1988, J. Liu and N. Giordano, Bull. Am. Phys. Soc. **33**, 382 (1988).

16. *Superconducting transition in thin In wires,* March Meeting of the American Physical Society, New Orleans, LA, 1988, N. Giordano and E. Sweetland, Bull. Am. Phys. Soc. **33**, 568 (1988).

17. *Conductance fluctuations in thin Ag films,* Midwest Solid State Conference, Purdue University, October, 1988, T. L. Meisenheimer and N. Giordano.

18. *Effect of an AC electric field on phase coherence in thin metal films,* Midwest Solid State Conference, Purdue University, October, 1988, L. Liu and N. Giordano.

19. *Nature of the superconducting transition in thin wires,* March Meeting of the American Physical Society, St. Louis, MO, 1989, N. Giordano, Bull. Am. Phys. Soc. **34**, 426 (1989).

20. *Conductance fluctuations in thin Ag films,* March Meeting of the American Physical Society, St. Louis, MO, 1989, T. L. Meisenheimer and N. Giordano, Bull. Am. Phys. Soc. **34**, 414 (1989).

21. *Electron heating effects in thin Sb films,* March Meeting of the American Physical Society, St. Louis, MO, 1989, J. Liu and N. Giordano, Bull. Am. Phys. Soc. **34**, 620 (1989).

22. *Superfluid-normal interface in liquid ^4He,* March Meeting of the American Physical Society, St. Louis, MO, 1989, G. Jin and N. Giordano, Bull. Am. Phys. Soc. **34**, 679 (1989).

23. *Superconductivity in one dimension,* presented at the Undergraduate Research Conference, Butler University, Indianapolis, IN, April, 1989, E. Schuler and N. Giordano.

24. *Study of the interface between HeI and HeII,* March Meeting of the American Physical Society, Anaheim, CA, 1990, G. Jin and N. Giordano, Bull. Am. Phys. Soc. **35**, 555 (1990).

25. *Phase coherence and the effect of an ac electric field on the conductance in a one dimensional system,* March Meeting of the American Physical Society, Anaheim, CA, 1990, J. Liu and N. Giordano, Bull. Am. Phys. Soc. **35**, 644 (1990).

26. *Study of the Kondo effect in thin AuFe films,* March Meeting of the American Physical Society, Anaheim, CA, 1990, G. Chen and N. Giordano, Bull. Am. Phys. Soc. **35**, 827 (1990).

27. *Superconductivity in thin PbIn wires,* March Meeting of the American Physical Society, Anaheim, CA, 1990, N. Giordano, Bull. Am. Phys. Soc. **35**, 251 (1990).

28. *Nonlinear behavior of mesoscopic films in microwave fields,* March Meeting of the American Physical Society, Cincinnati, OH, 1991, J. Liu and N. Giordano, Bull. Am. Phys. Soc. **36**, 659 (1991).

29. *Size effects in weak localization,* March Meeting of the American Physical Society, Cincinnati, OH, 1991, N. Giordano and M. A. Pennington, Bull. Am. Phys. Soc. **36**, 719 (1991).

30. *Magnetoresistance of two dimensional disordered systems in perpendicular and parallel fields,* March Meeting of the American Physical Society, Indianapolis, IN, 1992, N. Giordano, M. A. Blachly, and M. A. Pennington, Bull. Am. Phys. Soc. **37**, 393 (1992).

31. *Photovoltaic effect in Au and Au-Fe microjunctions,* March Meeting of the American Physical Society, Indianapolis, IN, 1992, J. J. Lin, R. E. Bartolo, and N. Giordano, Bull. Am. Phys. Soc. **37**, 396 (1992).

32. *Kondo effect in one and two dimensions,* March Meeting of the American Physical Society, Indianapolis, IN, 1992, M. A. Blachly and N. Giordano, Bull. Am. Phys. Soc. **37**, 584 (1992).

33. *Electron–electron interaction effects in metal–insulator–metal sandwiches,* March Meeting of the American Physical Society, Seattle, WA, 1993, N. Giordano and N. R. Dilley, Bull. Am. Phys. Soc. **38**, 129 (1993).

34. *Kondo effect in Cu(Fe): 3D→2D crossover,* March Meeting of the American Physical Society, Seattle, WA, 1993, M. A. Blachly and N. Giordano, Bull. Am. Phys. Soc. **38**, 649 (1993).

35. *Kondo effect in one and two dimensions,* presented at the Conference on Weak Localization, Metal–Insulator Transitions, and Mesoscopic Systems, Eugene, OR, August, 1993, M. A. Blachly and N. Giordano.

36. *Possible observation of tunneling of domain walls in thin Ni wires,* March Meeting of the American Physical Society, Pittsburgh, PA, 1994, K. Hong and N. Giordano, Bull. Am. Phys. Soc. **39**, 74 (1994).

37. *Effect of disorder on the kondo effect,* March Meeting of the American Physical Society, Pittsburgh, PA, 1994, M. A. Blachly and N. Giordano, Bull. Am. Phys. Soc. **39**, 732 (1994).

38. *New "crosstalk" effect in metal-insulator-metal trilayers,* March Meeting of the American Physical Society, Pittsburgh, PA, 1994, N. Giordano and J. D. Monnier, Bull. Am. Phys. Soc. **39**, 749 (1994).

39. *Observation of Aharonov-Bohm oscillations in the mesoscopic photovoltaic effect,* March Meeting of the American Physical Society, Pittsburgh, PA, 1994, R. E. Bartolo and N. Giordano, Bull. Am. Phys. Soc. **39**, 849 (1994).

40. *Photovoltaic effect in small superconducting normal-metal systems,* March Meeting of the American Physical Society, San Jose, CA, 1995, R. E. Bartolo and N. Giordano, Bull. Am. Phys. Soc. **40**, 206 (1995).

41. *Domain wall tunneling in one dimensional Ni wires,* March Meeting of the American Physical Society, San Jose, CA, 1995, K. Hong and N. Giordano, Bull. Am. Phys. Soc. **40**, 514 (1995).

42. *Studies of Aharonov-Bohm oscillations in the mesoscopic photovoltaic effect,* March Meeting of the American Physical Society, San Jose, CA, 1995, R. E. Bartolo and N. Giordano, Bull. Am. Phys. Soc. **40**, 851 (1995).

43. *Weak localization-like effects in superconductor-normal-superconductor structures,* March Meeting of the American Physical Society, St. Louis, MO, March, 1996, M. D. Lawrence and N. Giordano, Bull. Am. Phys. Soc. **41**, 737 (1996).

44. *Effect of microwaves on domain wall motion in thin Ni wires,* March Meeting of the American Physical Society, St. Louis, MO, March, 1996, K. Hong and N. Giordano, Bull. Am. Phys. Soc. **41**, 85 (1996).

45. *Proximity-like effects in mesoscopic superconducting-ferromagnetic structures,* March Meeting of the American Physical Society, Kansas City, MO, March, 1997, M. D. Lawrence and N. Giordano, Bull. Am. Phys. Soc. **42**, 767 (1997).

46. *Studies of liquid flow in ultra-small structures,* March Meeting of the American Physical Society, Kansas City, MO, March, 1997, G. A. Fiete and N. Giordano, Bull. Am. Phys. Soc. **42**, 381 (1997).

47. *Mesoscopic transport in inhomogeneous magnetic fields,* March Meeting of the American Physical Society, Kansas City, MO, March, 1997, T. M. Jacobs and N. Giordano, Bull. Am. Phys. Soc. **42**, 812 (1997).

48. *Fabrication and properties of ultra-small fluid-flow structures,* March Meeting of the American Physical Society, Los Angeles, CA, March, 1998, J. Cheng and N. Giordano, Bull. Am. Phys. Soc. **43**, 685 (1998).

49. *Non-Aharonov-Bohm coupling and weak localization,* March Meeting of the American Physical Society, Los Angeles, CA, March, 1998, T. M. Jacobs and N. Giordano, Bull. Am. Phys. Soc. **43**, 795 (1998).

50. *Conductance of superconductor-ferromagnet-superconductor structures,* March Meeting of the American Physical Society, Los Angeles, CA, March, 1998, M. D. Lawrence and N. Giordano, Bull. Am. Phys. Soc. **43**, 881 (1998).

51. *Motion of piano hammers,* presented at the Undergraduate Research Conference, Butler University, Indianapolis, IN, April, 1998, J. P. Winans, Jr., and N. Giordano.

52. *Flow of classical fluids in small structures,* presented at the March Meeting of the American Physical Society, Atlanta, GA, March, 1999, J-T. Cheng and N. Giordano.

53. *Kondo effect in disordered Cu(Mn) thin films,* presented at the March Meeting of the American Physical Society, Atlanta, GA, March, 1999, T. M. Jacobs and N. Giordano.

54. *Flow of classical fluids in small structures,* presented at the March Meeting of the American Physical Society, Seattle, WA, March, 2000, J-T. Cheng and N. Giordano.

55. *Domain wall resistance in narrow ferromagnetic wires,* presented at the March Meeting of the American Physical Society, Seattle, WA, March, 2000, B. Çetin and N. Giordano.

56. *Hysteretic behavior of piano hammers,* presented at the International Symposium on Musical Acoustics, Perguia, Italy, September, 2001.

57. *Observation of slip at the liquid-solid interface in nanoscale liquids,* presented at the March Meeting of the American Physical Society, Indianapolis, IN, March, 2002, J-T. Cheng and N. Giordano.

58. *Domain wall resistance in narrow ferromagnetic wires,* presented at the March Meeting of the American Physical Society, Indianapolis, IN, March, 2002, B. Çetin and N. Giordano.

59. *Resistance fluctuations in Ga near melting,* presented at the March Meeting of the American Physical Society, Indianapolis, IN, March, 2002, J. Millspaw and N. Giordano.

60. *Measurement of interfacial area per volume on spatially correlated and uncorrelated micro-models,* J. Cheng, N. Giordano, and L. J. Pyrak-Nolte, presented at the Fall Meeting of the Americal Geophysical Union, San Francisco, CA, 2002.

61. *Micro-model studies of multiphase flow in porous media,* Jiangtao Cheng, Laura J. Pyrak-Nolte and N. Giordano, Proceedings of the North American Rock Mechanics Symposium - Tunneling Association of Canada, July 7-10, 2002, Toronto, Canada.

62. *Time and frequency dependence of ion channel fluctuations,* J. Wang, Z. Liang, B. Moss, B. Burrell, and N. Giordano, presented at the 47th Annual Meeting of the Biophysical Society, San Antonio, March, 2003.

63. *Membrane noise due to thermal fluctuations,* J. Wang and N. Giordano, presented at the 47th Annual Meeting of the Biophysical Society, San Antonio, March, 2003.

64. L. J. Pyrak-Nolte, J-T. Cheng, D. Nolte and N. Giordano, *Measurement of equilibrium values of interfacial area per volume on micro-models,* presented at the Workshop on Pore Scale Study of Porous Media Processes, Statistical and Applied Mathematical Sciences Institute, Research Triangle Park, North Carolina, May, 2003.

65. L. J. Pyrak-Nolte, J-T. Cheng and N. Giordano, *Recent advances in multiphase flow and transport in porous media,* presented at the European Science Foundation (ESF) workshop, Delft University of Technology, the Netherlands, June, 2003.

66. *Domain wall resistance of narrow Co and permalloy wires,* B. Çetin and N. Giordano, presented at the XI Latin American Congress on Surface Sciences and its Applications, Pucon, Chile, December, 2003.

67. D. Chen, J. Cheng, D. D. Nolte, N. Giordano, and L. J. Pyrak-Nolte, *Interfacial area per volume: The link between capillary pressure and saturation,* presented at the Fall Meeting of the Americal Geophysical Union, San Francisco, CA, 2004.

68. L. J. Pyrak-Nolte, D. Chen, D. D. Nolte,and N. J. Giordano, *Linking capillary pressure and saturation through interfacial area in porous media,* presented at Euro-Conference 2004: Geomechanics related to Scaling, Potsdam, Germany, September, 2004.

69. *Domain wall resistance in narrow ferromagnetic wires,* B. Çetin and N. Giordano, presented at the March Meeting of the American Physical Society, Montreal, March, 2004.

70. *Local versus global interfacial energy density of porous micro-models,* L. J. Pyrak-Nolte, D. Chen, N. J. Giordano, and D. D. Nolte, presented at the Fall Meeting of the Americal Geophysical Union, San Francisco, CA, 2006.

71. *A Model of Spike-Timing-Dependent Plasticity,* K. D. Carlson and N. Giordano, presented at the Biophysical Society meeting, San Francisco, CA, February 2010.

72. *Model for the Induction of Spike Timing-Dependent Plasticity by Pre- and Postsynaptic Spike Trains,* K. D. Carlson and N. Giordano, presented at the Nineteenth Annual Computational Neuroscience Meeting CNS2010, San Antonio, TX, July 2010.

73. *Modeling of Spike Timing-Dependent Plasticity in the Presence of Complex Spike Protocols*, K. D. Carlson and N. Giordano, to be presented at the Biophysical Society meeting, Baltimore, MD, March 2011.

PUBLICATIONS

1. *Time-reversed antiferromagnetic states in dysprosium aluminum garnet,* J. F. Dillon, Jr., E. Y. Chen, N. Giordano, and W. P. Wolf, Phys. Rev. Lett. **33**, 98 (1974).

2. *Multiple spin correlation effects,* N. Giordano and W. P. Wolf, Magnetism and Magnetic Materials - 1974, AIP Conf. Proc. **24**, 333 (1975).

3. *New method for investigating magnetic tricritical points,* N. Giordano and W. P. Wolf, Phys. Rev. Lett. **35**, 799 (1975).

4. *Tricritical behavior of dysprosium aluminum garnet,* N. Giordano and W. P. Wolf, Magnetism and Magnetic Materials - 1975, AIP Conf. Proc. **29**, 459 (1976).

5. *Experimental determination of the tricritical crossover exponent,* N. Giordano, Phys. Rev. B **14**, 2927 (1976).

6. *Light scattering from metamagnetic domains in dysprosium aluminum garnet,* N. Giordano and W. P. Wolf, Physica **86-88B**, 593 (1977).

7. *Experimental study of the tricritical 'wings' in dysprosium aluminum garnet,* N. Giordano and W. P. Wolf, Phys. Rev. Lett. **39**, 342 (1977).

8. *Metamagnetism,* E. Stryjewski and N. Giordano, Adv. in Phys. **26**, 487 (1977).

9. *Experimental study of critical, tricritical, and crossover phenomena in dysprosium aluminum garnet,* N. Giordano and W. P. Wolf, J. Appl. Phys. **49**, 1359 (1978).

10. *Neutron diffraction study of DAG at very low temperatures and in an external magnetic field,* M. Steiner and N. Giordano, J. Phys.(Paris) C **6**, T39, p. C6-816 (1978).

11. *Experimental study of Anderson localization in thin wires,* N. Giordano, W. Gilson, and D. E. Prober, Phys. Rev. Lett. **43**, 725 (1979).

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