ALAN T. DORSEY

Dean, Franklin College of Arts and Sciences
University of Georgia
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Administrative Appointments

7/1/2012–present	Dean, Franklin College of Arts and Sciences, University of Georgia
8/16/2009–6/30/2012	Associate Dean, College of Liberal Arts & Sciences, Univ. of Florida
12/1/2002–6/30/2009	Chair, Department of Physics, University of Florida

Academic Appointments

2012–present	Professor of Physics (tenured)	University of Georgia
1998–2012	Professor of Physics (tenured)	University of Florida
1997–1998	Associate Professor of Physics (tenured)	University of Florida
1995–1996	Associate Professor of Physics (tenured)	University of Virginia
1989–1995	Assistant Professor of Physics (tenure-track)	University of Virginia
1987–1989	IBM Postdoctoral Fellow	Cornell University

Education

1987	Ph.D.	Physics	University of Illinois at Urbana-Champaign Advisor: A. J. Leggett (2003 Nobel Laureate, physics)
1984	M.S.	Physics	University of Illinois at Urbana-Champaign
1982	B.S.	Engineering Physics	Cornell University

Brief Description of Job Duties

Alan Dorsey serves as Dean of the Franklin College of Arts and Sciences and as a Professor of Physics at the University of Georgia. The University of Georgia, a land- and sea-grant university, is the nation's first state-chartered university. Founded in 1801, the Franklin College is UGA's oldest, largest and most academically diverse college. With 840 full-time faculty in 30 academic departments, the Franklin College consists of five broad divisions: the fine and performing arts, the humanities, the social and behavioral sciences, the biological sciences, and the physical and mathematical sciences. The Franklin College teaches 45% of UGA's student credit hours, and is home to 13,000 undergraduate and 1800 graduate students. Several of UGA's interdisciplinary research institutes are part of the Franklin College, and the faculty of the College carry out forefront research in a broad spectrum of disciplines, with $75M in extramural research expenditures in FY17. As Dean, Dorsey has overall responsibility for the Franklin College's instructional, research, and outreach missions.

A theoretical physicist, Dorsey's research focuses on the physics of novel phases of matter produced under extreme conditions, such as low temperatures or high magnetic fields. Active in national professional service, he has served as the Secretary-Treasurer of the American Physical Society's Division of Condensed Matter Physics, as a member or Chair of several national award and prize committees, and as an organizer of scientific meetings and conferences.

Fellowships, Awards, and Honors

2014	Elected Fellow, American Association for the Advancement of Science.
2011	Fellow, SEC Academic Leadership Development Program.
2002	Elected Fellow, American Physical Society.
2000	*Lucent Lecturer*, Boulder Summer School for Condensed Matter Physics.
1996	University of Virginia Department of Physics Outstanding Teaching Award.
1991–1995	Alfred P. Sloan Research Fellow.
1987–1989	IBM Postdoctoral Fellowship, Cornell University.
1986–1987	University of Illinois Fellowship in Physics.
1982	Tau Beta Pi National Engineering Honor Society.

Professional Activities: American Physical Society (APS)

Fellow and Member, American Physical Society.

Chair (2011), Selection Committee for the APS Lars Onsager Prize in Statistical Physics.

Secretary-Treasurer, Division of Condensed Matter Physics (DCMP), APS (October 2006–March 2011).

Program Committee, 2009 Southeastern Section of the APS (SESAPS) annual meeting (Atlanta, GA).

Chair (2008), Vice-Chair (2007), Selection Committee for the SESAPS Jesse W. Beams Award.

Chair (2004), Vice-Chair (2003), Selection Committee for the APS Oliver E. Buckley Prize in Condensed Matter Physics.

Congressional Lobbying Visits, Washington, DC (June 2004, June 2006, February 2007, February 2008, June 2008, April 2010).

Invited participant, "Gender Equity: Strengthening the Physics Enterprise in Universities and National Laboratories," workshop sponsored by the APS and NSF (College Park, MD, May 2007).

Program committee, 2006 APS Department Chairs Conference, "Responding to the *Gathering Storm*."

Chair, 2005 Local Organizing Committee for the SESAPS annual meeting (Gainesville, FL).

Program Committee, 2003 SESAPS annual meeting (Wilmington, North Carolina).

Other Professional Activities

Fellow and Member, American Association for the Advancement of Science.

External Review Committee, Georgetown University Department of Physics (April 2011).

Committee of Visitors, Division of Materials Research, National Science Foundation (February 2011).

National Research Council Research Associateship Program panelist, Physical Sciences (2009–2012).

Advisory Board, International Conference on Ultra-Low Temperature Physics (ULT2011), Daejeon, Republic of Korea.

International Advisory Committee, International Symposium on Quantum Fluids and Solids (QFS 2010), Grenoble, France.

Organizing Committee, *Supersolids 2010* conference, Paris, France.

Organizing Committee, *Supersolids Banff 2009* conference, Alberta, Canada.

Physics and Astronomy Classification Scheme advisory panel, American Institute of Physics (2009).

Validation Committee, Florida Teacher Certification Examinations for Physics 6–12 (2008).

Invited participant, *Rising Above The Gathering Storm Two Years Later: Accelerating Progress Toward A Brighter Future*, convocation sponsored by the National Academies and the National Math and Science Initiative, Washington DC (April 2008).

Review panelist, National Science Foundation Graduate Research Fellowships program (February 2005).

State University System Department Chairs' Workshop, Institute for Academic Leadership (June 2003, October 2003, October 2004). Served as a facilitator for the October 2004 workshop.

Co-organizer, International Workshop on the Latest Developments in Low-Density, Low-Dimensional Electronic Systems, Gainesville, FL (March 4–7 2000).

Peer Review Panel for projects in the High Temperature Superconductivity and Ceramics Program of the Department of Energy (June 1992).

Ad hoc reviewer for Physical Review B, E, and Letters; Journal of Physics; Annals of Physics; Journal de Physique; Journal of Low Temperature Physics; Nature; Science; Journal of Mathematical Physics; European Journal of Applied Mathematics; National Science Foundation; Department of Energy; Research Corporation; Petroleum Research Fund; FOM (Dutch Science Foundation); Israeli Science Foundation; Natural Sciences and Engineering Research Council of Canada; Smithsonian Institution.

University of Georgia Governance and Service

Chair, Dean of the Terry College of Business Search Committee (2013).

Member, Reinventing Space Management Task Force (2013).

Member, University Council (2012-present).

University of Florida Governance and Service

Chair, Director of the Whitney Laboratory for Marine Biosciences Search Committee (2011-2012).

Chair, Associate Dean for Student Affairs Search Committee (2011).

Member, Assistant Director of Sponsored Research Search Committee (2011).

Member, College of Education Dean Search Committee (2011).

Mentorship trainer, Alliance for the Advancement of Florida's Academic Women in Chemistry and Engineering, NSF ADVANCE-PAID program (2010).

Member, Director of the UF Career Resource Center Search Committee (2010).

Member, College of Education STEM education faculty search committee (2009-2011).

Member, College of Engineering Undergraduate Education Task Force (2009).

Member, Department of Astronomy Chair Search Committee (2009).

Member, College of Liberal Arts and Sciences Dean Search Committee (2007-2008).

Chair, College of Liberal Arts and Sciences Faculty Finance Committee (2006-2008).

Member, Department of Chemistry Chair Search Committee (2006).

Organizer, "Astrophysics in the New Millenium: the Legacy of Newton and Einstein," inauguration symposium for UF President J. Bernard Machen (2004).

Member, UF Research Foundation Professorship Committee (Spring 1999).

Member, College of Liberal Arts and Sciences Professorial Excellence Program Committee (Fall 1998).

University of Florida Departmental Service

Chair, Department of Physics, (2002–2009).

Co-Director, UF Research Experiences for Undergraduates program (1999–2005).

Member, Faculty search committee, experimental condensed matter physics (2000–2001).

Chair, Hershfield Tenure and Promotion Committee (Fall 2002).

Chair, Maslov Tenure and Promotion Committee (Fall 2000).

Member, Ph.D. Comprehensive Exam Committee (Fall 1998–2000).

Member, Condensed Matter Physics Seminar Committee (Fall 1997–2000).

Member, Teaching Advisory Committee (Spring 1998).

Chair, Graduate Recruiting and Admissions Committee (Fall 1997–2000).

Member, Institute for Fundamental Theory Executive Board (1997–2001).

Member, Graduate Student Advisory Committee (Spring 1997, Fall 2000–2003).

University of Virginia Departmental Service

Member of the following committees: Teaching Committee; Graduate Admissions Committee; Ph.D. Qualifying Exam Committee; Physics Department Planning Committee; Undergraduate Program Committee; Condensed Matter Physics Seminar Committee; Faculty Search Committee.

Teaching

University of Virginia: Introductory Physics I; Classical and Modern Physics; Widely Applied Physics I & II; Quantum Physics I; Statistical Mechanics I & II. *University of Florida*: Physics with Calculus 2; Mechanics 2; UFTeach Research Methods; Electromagnetic Theory 1 & 2.

Grants and Research Funding

Frances C. & William P. Smallwood Foundation, in support of *UFTeach*, $50,000 (2009), $25,000 (2010), $50,000 (2011), A. T. Dorsey and T. Dana (co-PIs).

National Mathematics and Science Initiative, "*FloridaTeach*: Increasing the Quantity and Quality of Mathematics and Science Teachers in Florida," $2,400,000 (2007-2012), T. Dana (PI), A. T. Dorsey (co-PI).

Helios Education Foundation, $1,000,000 endowment gift for *UFTeach*, T. Dana and A. T. Dorsey.

National Science Foundation, "Theoretical Condensed Matter Physics," $258,000 (2007-2012), A. T. Dorsey (PI).

National High Magnetic Field Laboratory In-House Science Program, "Microwave spectroscopy of 2D electron systems in tilted field: charge density waves in higher Landau levels," $204,775 (2003–2005), L. Engel (PI), K. Yang and A. T. Dorsey (co-PIs).

National Science Foundation, "An REU Site in Physics at the University of Florida," $270,000 (2002–2005), K. Ingersent (PI), A. T. Dorsey (co-PI).

National Science Foundation, "Dynamics of Vortices and Interfaces in Condensed Matter Systems," $276,000 (1999–2002), A. T. Dorsey (PI).

National Science Foundation, "An REU Site in Physics at the University of Florida," $207,000 (1999–2001), K. Ingersent (PI), A. T. Dorsey (co-PI).

National Science Foundation, "Research Experiences for Teachers," supplement to the REU award, $66,000 (1999–2001), K. Ingersent (PI), A. T. Dorsey (co-PI).

Department of Education, "Graduate Assistance in Areas of National Need Fellowships at the University of Florida Department of Physics," $380,485 (1998–2001), A. T. Dorsey (PI), J. Yelton and H. Van Rinsvelt (co-PIs).

University of Florida Research Initiation Projects grant, $14,000 (1997), A. T. Dorsey (PI).

National Science Foundation, "Theoretical Studies of Vortex Dynamics in Superconductors," $216,000 (1996–1999), A. T. Dorsey (PI).

Jeffress Memorial Trust, "Theoretical Studies in Surface Superconductivity," $19,676 (1993–1994), A. T. Dorsey (PI).

National Science Foundation, "Topics in Nonequilibrium Superconductivity," $169,000 (1993–1996), A. T. Dorsey (PI).

Alfred P. Sloan Foundation, Research Fellowship, $30,000 (1991–1995).

National Science Foundation, "Properties of the Mixed State in High Temperature Superconductors," $129,200 (1989–1992), A. T. Dorsey (PI).

Doctoral Students Supervised

R. J. Troy, "Surface Superconductivity and Flux Flow in Type-II Superconductors," Ph.D., University of Virginia, October 1994. Current position: Science Department Chair, St. Anne's Belfield School, Charlottesville, VA.

S. J. Di Bartolo "Superheating Fields and Interface Motion in One-dimensional Models of Superconductors," Ph.D., University of Virginia, August 1997. Current position: Senior Lecturer, NYU Tandon School of Engineering.

A. J. Dolgert, "Superheated and dissipative Landau-Ginzburg Systems," Ph.D., University of Virginia, May 1999. Current position: Computational Scientist at Integrated Health and Metrics Evaluation, University of Washington.

A. D. Klironomos, "Structural Transitions of the Vortex Lattice in Anisotropic Superconductors and Fingering Instability of Electron Droplets in an Inhomogeneous Magnetic Field," Ph.D., University of Florida, May 2003. Current position: Program Director, Condensed Matter and Materials Theory, National Science Foundation.

F. D. Klironomos, "Tunneling between two-dimensional electron systems in a high magnetic field and crystalline phases of a two-dimensional electron system in a magnetic field," Ph.D., University of Florida, May 2005. Current position: Postdoctoral Associate, Max Delbrück Center for Molecular Medicine, Berlin, Germany.

C.-D. Yoo, "Phenomenology of Supersolids," Ph.D., University of Florida, May 2009. Current position: Research Associate, University of Minnesota.

D. Goswami, "Role of Defects in the Supersolid Phenomena," Ph.D., University of Florida, August 2011. Current position: Postdoctoral Associate, Universität des Saarlandes, Germany.

K. Dasbiswas, "Defects in Novel Superfluids: Supersolid Helium and Cold Gases," Ph.D., University of Florida, August 2012. Current position: Postdoctoral Research Associate, James Franck Institute, University of Chicago.

Postdoctoral Associates

S. Ullah (Ph.D. Stanford University 1989), postdoc at UVa from 1989–1991. Current position: Founder and Managing Director, Merus Capital, Palo Alto CA.

C.-Y. Mou (Ph.D. Caltech 1993), postdoc at UVa from 1993–1995. Current position: Professor of Physics, National Tsing-Hua University, Taiwan.

H.-J. Kwon (Ph.D. Brown University 1995), postdoc at UF 1997–1999. Current position: Associate Professor of Business Administration, University of Illinois at Urbana-Champaign.

C. Wexler (Ph.D. University of Washington 1997), postdoc at UF 1997–1999. Current position: Professor of Physics, University of Missouri at Columbia.

R. A. Wickham (Ph.D. University of Chicago 1997), postdoc at UF 1997–1999. Current position: Associate Professor of Physics, University of Guelph, Ontario, Canada.

M. Ettouhami (Ph.D. University of Colorado at Boulder 2001), postdoc at UF 2003–2005. Current position: Senior Scientist at the University of Toronto.

José Miranda (Ph.D. Carnegie-Mellon 1998), postdoc at UF 2005–2006. Current position: Professor of Physics, University Universidade Federal de Pernambuco, Brazil.

Publications

Google Scholar Citations (accessed 1 January 2018) reports 7473 total citations.

50. D. Goswami, K. Dasbiswas, C.-D. Yoo, and A. T. Dorsey, "Dislocation-induced superfluidity in a model supersolid," Phys. Rev. B **84**, 054523 (2011).

49. J. A. Miranda, H. Gadêlha, and A. T. Dorsey, "Coriolis effects on rotating Hele-Shaw flows: A conformal mapping approach," Phys. Rev. E **82**, 066306 (2010).

48. C.-D. Yoo and A. T. Dorsey, "Hydrodynamic theory of supersolids: Variational principle, effective Lagrangian, and density-density correlation function," Phys. Rev. B **81**, 134518 (2010).

47. K. Dasbiswas, D. Goswami, C.-D. Yoo, and A. T. Dorsey, "Bound states of edge dislocations: The quantum dipole problem in two dimensions," Phys. Rev. B **81**, 064516 (2010).

46. C.-D. Yoo and A. T. Dorsey, "Theory of viscoelastic behavior of solid ^{4}He," Phys. Rev. B **79**, 100504(R) (2009).

45. A. T. Dorsey and D. A. Huse, "Shear Madness," Nature **450**, 800 (2007).

44. A. M. Ettouhami, C. B. Doiron, F. D. Klironomos, R. Côté, and A. T. Dorsey, "Anisotropic states of two-dimensional electrons in high magnetic fields," Phys. Rev. Lett. **96**, 196802 (2006).

43. A. M. Ettouhami, F. D. Klironomos, and A. T. Dorsey, "Static and dynamic properties of crystalline phases of two-dimensional electrons in a strong magnetic field," Phys. Rev. B **73**, 165324 (2006).

42. A. T. Dorsey, P. M. Goldbart, and J. Toner, "Squeezing superfluid from a stone: Coupling superfluidity and elasticity in a supersolid," Phys. Rev. Lett **96**, 055301 (2006).

41. F. D. Klironomos and A. T. Dorsey, "Tunneling between two-dimensional electron systems in a high magnetic field: role of interlayer interactions," Phys. Rev. B **71**, 155331 (2005).

40. A. M. Ettouhami, F. D. Klironomos and A. T. Dorsey, "Possible new bubble phases of two-dimensional electrons in higher Landau levels," Int. J. Mod. Phys. **18**, 3645 (2004).

39. F. D. Klironomos and A. T. Dorsey, "Tunneling between bilayer quantum Hall structures in a strong magnetic field," Int. J. Mod. Phys. **18**, 3723 (2004).

38. A. D. Klironomos, and A. T. Dorsey, "Vortex Lattice Structural Transitions: A Ginzburg-Landau Model Approach," Phys. Rev. Lett. **91**, 097002 (2003).

37. T. L. Hughes, A. D. Klironomos, and A. T. Dorsey, " 'Fingered' Patterns in Electron Droplets in Nonuniform Magnetic Fields," Phys. Rev. Lett. **90**, 196802 (2003).

36. L. Radzihovsky and A. T. Dorsey, "Theory of Quantum Hall Nematics," Phys. Rev. Lett. **88**, 216802 (2002).

35. C. Wexler and A. T. Dorsey, "Disclination unbinding transition in quantum Hall liquid crystals," Phys. Rev. B **64**, 115312-1–115312-5 (2001).

34. H.-J. Kwon, A. T. Dorsey, and P. J. Hirschfeld, "Observability of quantum phase fluctuations in cuprate superconductors," Phys. Rev. Lett. **86**, 3875–3878 (2001).

33. A. T. Dorsey, "Geometry spawns vortices," Nature **408**, 783–784 (2000).

32. R. A. Wickham and A. T. Dorsey, "Critical scaling of the a.c. conductivity for a superconductor above T_c," Phys. Rev. B **61**, 6945–6957 (2000).

31. C. Wexler and A. T. Dorsey, "Physics on the edge: contour dynamics, waves, and solitons in the quantum Hall effect," Phys. Rev. B **60**, 10 971–10 983 (1999).

30. C. Wexler and A. T. Dorsey, "Solitons on the edge of a two-dimensional electron system," Phys. Rev. Lett. **82**, 620–623 (1999).

29. H.-J. Kwon and A. T. Dorsey, "The effect of phase fluctuations on the single-particle properties of the underdoped cuprates," Phys. Rev. B **59**, 6438–6448 (1999).

28. A. J. Dolgert, T. E. Blum, A. T. Dorsey, and M. Fowler, "Nucleation and growth of the superconducting phase in the presence of a current," Phys. Rev. B **57**, 5432–5443 (1998).

27. A. T. Dorsey and R. E. Goldstein, "The shapes of flux domains in the intermediate state of type-I superconductors," Phys. Rev. B **57**, 3058–3072 (1998).

26. S. J. Di Bartolo and A. T. Dorsey, "Velocity selection for propagating fronts in superconductors," Phys. Rev. Lett. **77**, 4442–4445 (1996).

25. A. J. Dolgert, S. J. Di Bartolo, and A. T. Dorsey, "Superheating fields of superconductors: Asymptotic analysis and numerical results," Phys. Rev. B **53**, 5650–5660 (1996).

24. R. E. Goldstein, D. P. Jackson, and A. T. Dorsey, "Interacting current loop model for the intermediate state in type-I superconductors," Phys. Rev. Lett. **76**, 3818–3821 (1996).

23. A. T. Dorsey, "Linear response of thin superconductors in perpendicular magnetic fields: An asymptotic analysis," Phys. Rev. B **51**, 15 329–15 343 (1995).

22. R. J. Troy and A. T. Dorsey, "A self-consistent microscopic theory of surface superconductivity," Phys. Rev. B **51**, 11 728–11 732 (1995).

21. C.-Y. Mou, R. Wortis, A. T. Dorsey, and D. A. Huse, "Nonlocal conductivity in type-II superconductors," Phys. Rev. B **51**, 6575–6587 (1995).

20. J. C. Osborn and A. T. Dorsey, "Surface tension and kinetic coefficient for the normal-superconducting interface: Numerical results versus asymptotic analysis," Phys. Rev. B **50**, 15 961–15 966 (1994).

19. A. T. Dorsey, "Dynamics of interfaces in superconductors," Ann. Phys. **233**, 248–269 (1994).

18. R. J. Troy and A. T. Dorsey, "Transport properties and fluctuations in type-II superconductors near H_{c2}," Phys. Rev. B **47**, 2715–2724 (1993).

17. A. T. Dorsey, "Vortex motion and the Hall effect in type-II superconductors: A time-dependent Ginzburg-Landau theory approach," Phys. Rev. B **46**, 8376–8392 (1992).

16. A. T. Dorsey and M. P. A. Fisher, "Hall effect near the vortex-glass transition in high-temperature superconductors," Phys. Rev. Lett. **68**, 694–697 (1992).

15. A. T. Dorsey, M. Huang, and M. P. A. Fisher, "Dynamics of the normal to superconducting vortex-glass transition: Mean-field theory and fluctuations," Phys. Rev. B **45**, 523–526 (1992).

14. S. Ullah and A. T. Dorsey, "The effect of fluctuations on the transport properties of type-II superconductors in a magnetic field," Phys. Rev. B **44**, 262–273 (1991).

13. H. Frahm, S. Ullah, and A. T. Dorsey, "Flux dynamics and the growth of the superconducting phase," Phys. Rev. Lett. **66**, 3067–3070 (1991).

12. A. T. Dorsey, "Linear and nonlinear conductivity of a superconductor near T_c," Phys. Rev. B **43**, 7575–7585 (1991).

11. S. Ullah, A. T. Dorsey, and L. Buchholtz, "Local density of states of an isolated vortex in an extreme type-II superconductor," Phys. Rev. B **42**, 9950–9956 (1990).

10. S. Ullah and A. T. Dorsey, "Critical fluctuations in high temperature superconductors and the Ettingshausen effect," Phys. Rev. Lett. **65**, 2066–2069 (1990).

9. A. T. Dorsey, K. W. Jacobsen, Z. H. Levine, and J. W. Wilkins, "Analytic approach to charge transfer in atom-surface scattering," Phys. Rev. B **40**, 3417–3420 (1989).

8. S. A. Langer, A. T. Dorsey, and J. P. Sethna, "Entropy distribution of a two-level system: An asymptotic analysis," Phys. Rev. B **40**, 345–352 (1989).

7. J. D. Shore, M. Huang, A. T. Dorsey, and J. P. Sethna, "Density of states in a vortex core and the zero-bias tunneling peak," Phys. Rev. Lett. **62**, 3089–3092 (1989).

6. A. T. Dorsey and O. Martin, "Saffman-Taylor fingers with anisotropic surface tension," Phys. Rev. A **35**, 3989–3992 (1987).

5. A. J. Leggett, S. Chakravarty, A. T. Dorsey, M. P. A. Fisher, A. K. Garg, and W. Zwerger, "Dynamics of the dissipative two state system," Rev. Mod. Phys. **59**, 1–85 (1987).

4. W. Zwerger, A. T. Dorsey, and M. P. A. Fisher, "Effects of the phase periodicity on the quantum dynamics of a resistively shunted Josephson junction," Phys. Rev. B **34**, 6518–6521 (1986).

3. A. T. Dorsey, M. P. A. Fisher, and M. S. Wartak, "Truncation scheme for double well systems with Ohmic dissipation," Phys. Rev. A **33**, 1117–1121 (1986).

2. M. P. A. Fisher and A. T. Dorsey, "Dissipative quantum tunneling in a biased double well potential," Phys. Rev. Lett. **54**, 1609–1612 (1985).

1. Ph.D. thesis: "Theory of Voltage Oscillations in Ultra-Small Capacitance Josephson Junctions," University of Illinois (1987). Thesis advisor: A. J. Leggett.

Invited Conference Talks

27. "Dislocation-induced supersolidity," invited talk at the workshop "Supersolidity 2011," Graduate Center of the City University of New York, New York (June 2011).

26. Invited panelist, Physics Teacher Education Coalition (PhysTEC) annual conference, Austin, TX (May 2011).

25. "Low Temperature Properties of Solid ^{4}He: Supersolidity or Quantum Metallurgy?," invited talk at the conference "Frontiers in Quantum Gases, Liquids, and Solids," Nordic Institute for Theoretical Physics, Stockholm, Sweden (August 2010).

24. "*UFTeach*: A Partnership for Training Math and Science Teachers at the University of Florida," invited talk at the 75th Annual Meeting of the Southeastern Section of the APS, Raleigh, NC (October 2008).

23. "Supersolidity or Quantum Metallurgy?", invited talk at the workshop "Supersolid 2008," International Centre for Theoretical Physics, Trieste, Italy (August 2008).

22. "Phenomenology of Supersolids," invited talk at the workshop on the "Supersolid State of Matter," sponsored by the Pacific Institute for Theoretical Physics (July 2007).

21. "Squeezing Superfluid from a Stone: Coupling Elasticity and Superfluidity in a Supersolid," invited talk at the March Meeting of the APS, Denver, CO (March 2007).

20. "Phenomenology of Supersolids," invited talk at the workshop on the "Supersolid State of Matter," Kavli Institute for Theoretical Physics, Santa Barbara, CA (February 2006).

19. "Fingering, Fronts, and Patterns in Superconductors," invited talk at the workshop on "The multiscale nature of spark precursors and high altitude lightning," Lorentz Center, Universiteit Leiden, Leiden, Netherlands (May 2005).

18. "Electronic 'liquid crystals'," invited talk at the Institute for Mathematics and its Applications (IMA) workshop on Singularities in Materials, Minneapolis, MN (October 2004).

17. "Graduate Candidacy Exams," invited talk at the 2004 APS Physics Department Chairs Conference, College Park, MD (June 2004).

16. Invited lectures on nonequilibrium superconductivity, at the Boulder Summer School for Condensed Matter Physics, University of Colorado, Boulder, CO (July 2000). Designated the *Lucent Lecturer* for the School.

15. "Phase Fluctuations in the Cuprate Superconductors," invited talk at the Workshop on Unconventional Order in Metals, Aspen Center for Physics, Aspen, CO (July 1999).

14. "Nucleation and Growth of the Superconducting Phase in the Presence of a Current," invited talk at the SIAM Annual Meeting, University of Toronto (July 1998).

13. "Understanding the Morphology of Magnetic Flux Patterns in Superconductors," invited talk at the 4th International Workshop on Vortex Matter, Ascona, Switzerland (June 1997).

12. "Front Solutions of the One-Dimensional Time-Dependent Ginzburg-Landau Equations," invited talk at the Second SIAM Conference on Mathematical Aspects of Materials Science, Philadelphia, PA (May 1997).

11. "Fluctuations and Transport in High Temperature Superconductors," invited talk at the International Center for Theoretical Physics conference on Fluctuations in High Temperature Superconductors, Trieste, Italy (August 1996).

10. "Asymptotic Analysis of Some Problems in Superconductivity," invited talk at the Workshop on Computational Superconductivity, Argonne National Laboratory, Argonne, IL (March 1996).

9. "Flux Patterns in Type-I Superconductors," invited talk at the March 1996 Meeting of the American Physical Society, St. Louis, MO (March 1996).

8. "Magnetic Flux Dynamics in Superconductors," invited talk at the Superconductivity Workshop, Air Force Office of Scientific Research, Washington, D.C. (September 1995).

7. "Pattern Formation in Superconductors," invited talk at 1995 Condensed Matter Physics Gordon Conference, Wolfeboro NH (July 1995).

6. "Interfacial Pattern Formation in Type-I Superconductors," invited talk at the Workshop on Topological Defects, Isaac Newton Institute for Mathematical Sciences, Cambridge, England (July 1994).

5. "Magnetic Flux Dynamics in Superconductors," invited talk at Society of Industrial and Applied Mathematics conference on Emerging Mathematical Issues from the Materials Sciences, Pittsburgh, PA (April 1994).

4. "Dynamics of Vortices and Interfaces in Superconductors," invited talk at the American Mathematical Society conference on "Mathematics of Superconductivity," Seattle, WA (July 1993).

3. "Dynamics of Interfaces and Vortices in Superconductors," invited talk at the Workshop on Superconductors in Magnetic Fields, Argonne National Laboratory, Argonne, IL (August 1992).

2. "Scanning Tunneling Microscopy of Vortices: Theory," invited talk at the March 1991 Meeting of the American Physical Society, Cincinnati, OH (March 1991).

1. "Macroscopic Quantum Phenomena: Old Results, New Questions," invited talk at the International Workshop on Novel Phenomena in Mesoscopic Systems, Weizmann Institute of Science, Rehovot, Israel (July 1988).

Seminars and Colloquia

44. "Low Temperature Properties of Solid ^{4}He: Supersolidity or Quantum Metallurgy?," Department of Physics colloquium, University of South Florida (February 2011).

43. "The Peculiar Properties of Solid Helium: Supersolidity or Quantum Metallurgy?", Condensed Matter Physics seminar, Washington University, St. Louis (April 2009).

42. "The Peculiar Properties of Solid Helium: Supersolidity or Quantum Metallurgy?", Department of Physics colloquium, University of Florida (February 2009).

41. "Phenomenology of Supersolids," Condensed Matter Sciences Colloquium, Los Alamos National Laboratory (May 2007).

40. "Phenomenology of Supersolids," Condensed Matter Physics seminar, University of Pennsylvania, Philadelphia (December 2005).

39. "Electronic Liquid Crystals: Novel Phases of Electrons in Two Dimensions," Department of Physics colloquium, Vrije Universiteit, Amsterdam, Netherlands (May 2005).

38. "Fingering, Fronts, and Patterns in Superconductors," Condensed Matter Physics seminar, Vrije Universiteit, Amsterdam, Netherlands (May 2005).

37. "Electronic Liquid Crystals: Novel Phases of Electrons in Two Dimensions," Condensed Matter Physics seminar, Universiteit Utrecht, Utrecht, Netherlands (May 2005).

36. "Electronic Liquid Crystals: Novel Phases of Electrons in Two Dimensions," Indiana University Condensed Matter Physics seminar (January 2005).

35. "Electronic Liquid Crystals: Novel Phases of Electrons in Two Dimensions," University of Virginia Department of Physics colloquium (November 2004).

34. "Electronic Liquid Crystals: Novel Phases of Electrons in Two Dimensions," University of Kentucky Condensed Matter Physics seminar (February 2004).

33. "Electronic Liquid Crystals: Novel Phases of Electrons in Two Dimensions," New York University Department of Physics colloquium (December 2003).

32. "Fingering of electron droplets in nonuniform magnetic fields," UF/FSU Condensed Matter Theory Workshop, University of Florida (April 2003).

31. "Electronic 'Liquid Crystals:' Novel Phases of Electrons in Two Dimensions," RG Herb Seminar, University of Wisconsin, Madison, WI (December 2002).

30. "Theory of Quantum Hall Nematics," Caltech Condensed Matter Physics seminar, Pasadena, CA (October 2002).

29. "Fingering of Electron Droplets in Nonuniform Magnetic Fields," Condensed Matter Brown Bag seminar, University of Colorado, Boulder, CO (October 2002).

28. "Liquid Crystal Phases of Quantum Hall Systems," National High Magnetic Field Laboratory, Tallahassee, FL (September 2002).

27. "Electronic 'Liquid Crystals:' Novel Phases of Electrons in Two Dimensions," Department of Physics colloquium, University of Florida (April 2002).

26. "Liquid Crystal Phases of Quantum Hall Systems," Department of Physics, University of Chicago, Chicago IL (January 2002).

25. "Theory of the Quantum Hall Nematic," Department of Physics, University of Illinois at Urbana-Champaign (December 2001).

24. "Stripes, Bubbles, and Solitons in Two Dimensional Electron Systems," IFT Colloquium, Department of Physics, University of Florida (February 2001).

23. "Liquid Crystal Phases in Quantum Hall Systems," Department of Physics, University of Maryland (February 2001).

22. "From Dendrites to Labyrinths: Understanding the Morphology of Magnetic Flux Patterns in Superconductors," Department of Physics, Georgia Tech (May 1998).

21. "From Dendrites to Labyrinths: Understanding the Morphology of Magnetic Flux Patterns in Superconductors," Department of Physics, University of Arizona (February 1998).

20. "From Dendrites to Labyrinths: Understanding the Morphology of Magnetic Flux Patterns in Superconductors," Department of Physics, Northwestern University (January 1998).

19. "From Dendrites to Labyrinths: Understanding the Morphology of Magnetic Flux Patterns in Superconductors," Department of Physics colloquium, University of Chicago, Chicago, IL (January 1998).

18. "From Dendrites to Labyrinths: Understanding the Morphology of Magnetic Flux Patterns in Superconductors," Department of Physics colloquium, University of Florida (September 1997).

17. "Fluctuations and Transport in High Temperature Superconductors," Department of Physics, University of Florida (February 1997).

16. "Magnetic Field Patterns in Superconductors: Stripes, Dendrites, and Labyrinths," Department of Physics, University of Florida, Gainesville, FL (April 1996).

15. "Pattern Formation in Superconductors," Department of Physics, The Johns Hopkins University, Baltimore, MD (October 1995).

14. "New Twists on Vortex Dynamics in Superconductors," Department of Physics colloquium, University of Virginia (September 1994).

13. "Dynamics of Interfaces and Vortices in Superconductors," Theory Group Seminar, AT&T Bell Labs, Murray Hill, NJ (April 1994).

12. "An Introduction to the Physics of Pattern Formation," Physics Department colloquium, Indiana University (April 1993).

11. "Dendrites and Dribbles: An Introduction to the Physics of Pattern Formation," Department of Physics colloquium, University of Virginia (March 1993).

10. "New Twists on Vortex Dynamics in High T_c Superconductors," University of Maryland, College Park, MD (April 1992).

9. "New Twists on Vortex Dynamics in Superconductors," The Johns Hopkins University, Baltimore, MD (October 1990).

8. "Scaling Theories of Linear and Nonlinear Transport in a Superconductor Near T_c," Boston University, Boston, MA (May 1990).

7. "Linear and Nonlinear Transport in a Superconductor Near T_c," Naval Research Lab, Washington, D.C. (April 1990).

6. "Linear and Nonlinear Transport of a Superconductor Near T_c," The Ohio State University, Columbus, OH (April 1990).

5. "Core Excitations in Superconducting Vortices," James Franck Institute colloquium, University of Chicago, Chicago, IL (October 1989).

4. "Core Excitations in Superconducting Vortices," IBM T. J. Watson Research Center, Yorktown Heights, NY (May 1989).

3. "New Results in Charge Exchange at Surfaces," Chalmers University, Gothenburg, Sweden (January 1989).

2. "Theory of Charge Exchange in Low Energy Atom-Surface Scattering," NORDITA, Copenhagen, Denmark (January 1989).

1. "Quantum Dynamics of Simple Dissipative Systems," Technical University of Denmark, Lyngby, Denmark (January 1989).

Contributed Talks and Abstracts

40. "Macroscopic quantum tunneling of a single vortex in a rotating Bose-Einstein condensate," K. Dasbiswas and A. T. Dorsey, contributed talk at the March Meeting of the APS, Boston, MA (February 2012).

39. "Quantum phases of grain boundaries in solid ^{4}He," D. Goswami, K. Dasbiswas, and A. T. Dorsey, contributed talk at the March Meeting of the APS, Dallas, TX (March 2011).

38. "Dynamics of topological defects in supersolids," C.-D. Yoo and A. T. Dorsey, contributed talk at the March Meeting of the APS, Portland, OR (March 2010).

37. "Dislocation-induced superfluidity in a model supersolid," K. Dasbiswas, D. Goswami, C.-D. Yoo, and A. T. Dorsey, contributed talk at the March Meeting of the APS, Portland, OR (March 2010).

36. "Bound states of edge dislocations," D. Goswami, K. Dasbiswas, C.-D. Yoo, and A. T. Dorsey, contributed talk at the March Meeting of the APS, Portland, OR (March 2010).

35. "Binding energy of ^{3}He impurities to dislocations in solid ^{4}He," D. Goswami, K. Dasbiswas, C.-D. Yoo, and A. T. Dorsey, contributed talk at the March Meeting of the APS, Pittsburgh, PA (March 2009).

34. "Specific heat due to the binding of ^{3}He impurities to dislocations in solid ^{4}He," K. Dasbiswas, D. Goswami, C.-D. Yoo, and A. T. Dorsey, contributed talk at the March Meeting of the APS, Pittsburgh, PA (March 2009).

33. "Viscoelastic behavior of solid ^{4}He," C.-D. Yoo and A. T. Dorsey, contributed talk at the March Meeting of the APS, Pittsburgh, PA (March 2009).

32. "Landau theory of the normal solid-supersolid transition," A. T. Dorsey, P. Goldbart, J. Toner, contributed talk at the March Meeting of the APS, Baltimore, MD (March 2006).

31. "Dynamic structure function of a model supersolid," C.-D. Yoo and A. T. Dorsey, contributed talk at the March Meeting of the APS, Baltimore, MD (March 2006).

30. "Hydrodynamic modes and the density-density correlation function of a supersolid," C.-D. Yoo and A. T. Dorsey, contributed talk at SESAPS 2005, Gainesville, FL (November 2005).

29. "Anisotropic Wigner crystal phases of two-dimensional electrons in high magnetic fields," F. D. Klironomos, A. M. Ettouhami and A. T. Dorsey, contributed talk at the March Meeting of the APS, Los Angeles, CA (March 2005).

28. "Elastic properties of electronic solids: the smectic phase," A. M. Ettouhami, F. D. Klironomos, and A. T. Dorsey, contributed talk at the March Meeting of the APS, Los Angeles, CA (March 2005).

27. "Tunneling between bilayer quantum Hall structures in a strong magnetic field," F. D. Klironomos and A. T. Dorsey, contributed talk at the March Meeting of the APS, Austin, TX (March 2003).

26. "Fingering of electron droplets in nonuniform magnetic fields," A. D. Klironomos, T. L. Hughes, and A. T. Dorsey, contributed talk at the March Meeting of the APS, Austin, TX (March 2003).

25. "Structural phase transition and elastic moduli from anisotropic Ginzburg-Landau theory," A. D. Klironomos and A. T. Dorsey, contributed talk at the March Meeting of the APS, Indianapolis, IN (March 2002).

24. "Theory of quantum Hall nematics," L. Radzihovsky and A. T. Dorsey, contributed talk at the March Meeting of the APS, Indianapolis, IN (March 2002).

23. "Disclination unbinding transition in quantum Hall liquid crystals," C. Wexler, O. Ciftja, and A. T. Dorsey, contributed talk at the March Meeting of the APS, Seattle, WA (March 2001).

22. "Order parameter phase fluctuations in underdoped cuprate superconductors," A. T. Dorsey, H.-J. Kwon, and P. J. Hirschfeld, contributed talk at the March Meeting of the APS, Minneapolis, MN (March 2000).

21. "Solitons on the edge of a two-dimensional electron system," C. Wexler and A. T. Dorsey, contributed talk at the Centennial Meeting of the APS, Atlanta, GA (March 1999).

20. "Critical scaling of the a.c. conductivity for a superconductor near T_c," R. A. Wickham and A. T. Dorsey, contributed talk at the Centennial Meeting of the APS, Atlanta, GA (March 1999).

19. "The effect of phase fluctuations on the single-particle properties of the underdoped cuprates," H.-J. Kwon and A. T. Dorsey, contributed talk at the Centennial Meeting of the APS, Atlanta, GA (March 1999).

18. "Nucleation of the superconducting phase in the presence of a current," A. Dolgert, T. Blum, M. Fowler, and A. T. Dorsey, contributed talk at the March Meeting of the APS, Los Angeles, CA (March 1998).

17. "The BCS-BEC crossover and Josephson tunnelling," H.-J. Kwon and A. T. Dorsey, contributed talk at the March Meeting of the APS, Los Angeles, CA (March 1998).

16. "Propagation of a normal-superconducting interface in a current-carrying strip," A. Dolgert, M. Fowler, A. T. Dorsey, and T. Blum, Bull. Am. Phys. Soc. **42** (1997), 14.

15. "Dynamics of current-carrying states in quasi-one-dimensional superconductors," M. Fowler, A. Dolgert, A. T. Dorsey, and T. Blum, Bull. Am. Phys. Soc. **42** (1997), 14.

14. "Interface motion in superconductors," S. J. Di Bartolo and A. T. Dorsey, Bull. Am. Phys. Soc. **41** (1996), 803.

13. "Superheating fields of type-I superconductors," A. Dolgert, S. J. Di Bartolo, and A. T. Dorsey, Bull. Am. Phys. Soc. **41** (1996), 768.

12. "Nonlocal conductivity of type-II superconductors," R. Wortis, D. A. Huse, C.-Y. Mou, and A. T. Dorsey, Bull. Am. Phys. Soc. **40** (1995), 363.

11. "Interfacial Pattern Formation in Superconductors," A. T. Dorsey, Bull. Am. Phys. Soc. **39** (1994), 201.

10. "A Self-Consistent Theory of Surface Superconductivity," R. J. Troy and A. T. Dorsey, Bull. Am. Phys. Soc. **39** (1994), 244.

9. "Nonlocal Conductivity in Type-II Superconductors," R. Wortis, C.-Y. Mou, A. T. Dorsey, and D. A. Huse, Bull. Am. Phys. Soc. **39** (1994), 302.

8. "Hall Effect Near the Vortex Glass Transition in High T_c Superconductors," A. T. Dorsey and M. P. A. Fisher, Bull. Am. Phys. Soc. **37** (1992), 589.

7. "The Effect of Fluctuations on the Transport Properties of High T_c Superconductors in a Magnetic Field," S. Ullah and A. T. Dorsey, Bull. Am. Phys. Soc. **36** (1991), 616.

6. "Local Density of States Near the Core of a Superconducting Vortex," J. D. Shore, M. Huang, J. P. Sethna, and A. T. Dorsey, Bull. Am. Phys. Soc. **35** (1990), 546.

5. "Quasiclassical Studies of the Core States in Superconducting Vortices," S. Ullah and A. T. Dorsey, Bull. Am. Phys. Soc. **35** (1990), 546.

4. "Nonlinear Conductivity of a Superconductor Near T_c," A. T. Dorsey, Bull. Am. Phys. Soc. **35** (1990), 530.

3. "Dynamics of the Normal to Superconducting Vortex Glass Transition," M. Huang, A. T. Dorsey, and M. P. A. Fisher, Bull. Am. Phys. Soc. **35** (1990), 260.

2. "Vortex Core States in Superconducting $NbSe_2$," M. Huang, A. T. Dorsey, and J. P. Sethna, Bull. Am. Phys. Soc. **34** (1989), 427.

1. "Charge Exchange in Alkali Atom-Semiconductor Surface Scattering," A. T. Dorsey, K. W. Jacobsen, Z. H. Levine, and J. W. Wilkins, Bull. Am. Phys. Soc. **33** (1988), 745.