Curriculum Vitae

NAME Ralph V. Chamberlin

ADDRESS Department of Physics
Arizona State University
Tempe, AZ 85287-1504

TELEPHONE (480) 965-3922

CITIZENSHIP United States

EDUCATION

University of Utah, Salt Lake City,	B.S. Physics, June 1978
University of California, Los Angeles,	M.S. Physics, December 1979
	Ph.D. Physics, August 1984

EMPLOYMENT

Department of Physics, Arizona State University
- Professor (2000-present)
- Associate Professor (1992-2000)
- Assistant Professor (1986-1992)

Institut für Festkörperphysik,Technische Hochschule Darmstadt, Germany
- Visiting Associate Professor (1993)

Department of Physics, University of Pennsylvania
- Research Investigator (1984-1986)

Department of Physics, University of California at Los Angeles
- Research Associate/Assistant (1978-1984)
- Teaching Assistant (1979-1980)

Department of Physics, University of Utah
- Undergraduate Research Assistant (1974-1978)
- Undergraduate Teaching Assistant (1975-1977)

HONORS

Marsico Visiting Scholar, University of Denver (2017)
Invited Speaker, Gordon Research Conference on Energetic Materials (2014)
Invited Speaker, Lorentz Center Workshop on Nanothermodynamics (2014)
Humboldt Research Award for Senior U.S. Scientist (2001)
Invited Speaker, Gordon Research Conference on Dielectric Phenomena (1994)
IBM Post-Doctoral Fellowship (1985-1986)
Regents' Fellowship (1978-1984)
General Instruments Corporation Prize (1978)
Special Departmental Scholarship (1974-1978)
Two patents (1996-1997)
>135 seminars and colloquia (1984-present)
>55 conference presentations (1980-present)
88 refereed publications (1978-present)

MEMBERSHIP

Alexander von Humboldt Foundation
American Physical Society
Sigma Xi, The Scientific Research Society

CONTRIBUTED PRESENTATIONS AT SCHOLARLY MEETINGS

Reversibility and Time Dependence of the Magnetization in Ag:Mn and Cu:Mn spin glasses
26th Annual Conference on Magnetism and Magnetic Materials, Dallas, TX, November 1980

The H-T Phase Diagram for the Spin-Glass Ag:Mn
March Meeting of the American Physical Society, Dallas, TX, March 9, 1982

Low Frequency Susceptibility of Ag:Mn
March Meeting of the American Physical Society, Los Angeles, CA, March 24, 1983

Time Decay of the Remanent Magnetization in Spin Glasses
March Meeting of the American Physical Society, Detroit, MI, March 29, 1984

High-Field Behavior of Tetramethyltetraselenafulvalenium Perchlorate $(TMTSF)_2ClO_4$
March Meeting of the American Physical Society, Las Vegas, NV, April 2, 1986

Hall Effect and Magnetoresistance Measurements on $(TMTSF)_2ClO_4$ and the High Field (30T) Transition
March Meeting of the American Physical Society, New York, NY, March 20, 1987

Extreme Quantum Limit in a Quasi 2-Dimensional Organic Conductor
March Meeting of the American Physical Society, New Orleans, LA, March 23, 1988

$(TMTSF)_2ClO_4$ in the Extreme Quantum Limit
International Conference on Science and Technology of Synthetic Metal
Santa Fe, NM, July 28, 1988

Dynamic Magnetization of a Dilute Magnetic Alloy Near the Percolation Transition
March Meeting of the American Physical Society, St. Louis, MO, March 22, 1989

NMR and Magnetization of the Heisenberg Ferromagnet $(CH_3NH_3)_2Cu_xCd_{1-x}Cl_4$ Excitations in Spin Clusters
March Meeting of the American Physical Society, Anaheim, CA, March 13, 1990

Magnetic Relaxation in Magnetic Materials
March Meeting of the American Physical Society, Anaheim, CA, March 14, 1990

Dielectric Susceptibility of $(C_nH_{2n+1}NH_3)_2CuCl_4$
March Meeting of the American Physical Society, Anaheim, CA, March 16, 1990

Percolation Model for Relaxation in Random Systems
International Discussion Meeting on Relaxation in Complex Systems
Heraklion, Crete, June 19, 1990

Relaxation in Condensed Matter
March Meeting of the American Physical Society, Cincinnati, OH, March 22, 1991

A Magnetic Force Microscope Utilizing a Novel Ultra-Small Spring Constant Cantilevered Tip
(Presented by A. DiCarlo) Arizona State University Winter Workshop on Microstructure of Magnetic Materials, Wickenburg, AZ, January 10, 1992

Slow Relaxation in Magnetic Materials
Arizona State University Winter Workshop on Microstructure of Magnetic Materials
Wickenburg, AZ, January 10, 1992

Dynamics of Nanoscopic Magnetic Systems
March Meeting of the American Physical Society, Los Angeles, CA, March 18, 1998

Nonresonant Spectral Hole Burning in a Spin Glass

Centennial Meeting of the American Physical Society, Atlanta, GA, March 25, 1999
A Mean-Field Cluster Model for Ferromagnets
March Meeting of the American Physical Society, Minneapolis, MN, March 23, 2000
Nanoscopic Heterogeneities in the Response of Magnetic Materials
The 8th Joint MMM-Intermag Conference, San Antonio, TX, January 8, 2001
Nanothermodynamic Response of Magnetic Materials
March Meeting of the American Physical Society, Seattle, WA, March 13, 2001
Fluxon Relaxation in Superconductors (Presented by Kurt Stangel)
APS Four Corners Section, Fall Meeting, October 20, 2007
Nanothermodynamics and Nonlinear Corrections to Statistical Mechanics
Dynamics Days 2010, Northwestern University, Evanston, IL, January 5, 2010
Natural Coarse-Graining Length Scales in Ising-Like Simulations of Ferromagnets
(Andrew Shevchuk) Conference on Complex Systems, Tempe, AZ, September 28, 2015
A Common Mechanism for 1/f Noise and Other Forms of Slow Dynamics
Conference on Complex Systems, Tempe, AZ, September 29, 2015
A Simplified Markov Model for 1/f Noise
(Andrew Shevchuk) Meeting of the APS Four Corners Section, Tempe, AZ, October 16, 2015
Noise of 1/f Type in a Constrained Heisenberg Spin Model
(Bryce Davis) Meeting of the APS Four Corners Section, Tempe, AZ, October 16, 2015
Thermal fluctuations and 1/f noise from nanothermodynamics
StatPhys 26, Lyon, France, July 19, 2016
Non-Boltzmann fluctuations in equilibrium molecular dynamics
119th Statistical Mechanics Conference, Rutgers, NJ, May 7, 2018

INVITED PAPERS AT SCHOLARLY MEETINGS
Time Decay of the Remanent Magnetization in Spin Glasses
30th Annual Conference on Magnetism and Magnetic Materials
San Diego, CA, November 27, 1984
Superconductivity, the Present State
Association of Energy Engineers/Spring Energy Conference, Tempe, AZ, April 12, 1989
Clusters and Percolation in Magnetic Transitions
Office of Naval Research Contractors Meeting, Lake Arrowhead, CA, January 23, 1990
Universal Model for Slow Relaxation
March Meeting of the American Physical Society, Indianapolis, IN, March 18, 1992
Magnetic Force Microscopy Utilizing an Ultra-Sensitive Vertical Cantilever
(presented by A. DiCarlo) Scanning Probe Microscopies II at OE/LASE '93
Los Angeles, CA, January 18, 1993
Mesoscopic Model for the Primary Response of Liquids, Glasses, and Crystals
Second International Discussion Meeting on Relaxations in Complex Systems
Alicante, Spain, June 30, 1993
Mesoscopic Model for the Primary Response of Magnetic Materials
The 6th Joint MMM-Intermag Conference, Albuquerque NM, June 21, 1994

Non-Debye Primary Response of Liquids, Glasses, Polymers and Crystals
Gordon Conference on Dielectric Phenomenon, Holderness School NH, August 1, 1994
Nonexponential Relaxation in Condensed Matter
Raymond L. Orbach Symposium, University of California, Riverside, March 18, 1995
Mesoscopic Model for the Universal Response of Condensed Matter
Quantitative Biophysics at the Molecular and Macromolecular Scales
International Centre for Theoretical Physics, Trieste, Italy, July 5, 1995
Time-Domain Spectral Hole Burning in the Slow Relaxation of Supercooled Liquids
MRS 1996 Fall Meeting, Boston, MA, December 5, 1996
Experiments and Theory of the Non-Exponential Relaxation in Liquids, Glasses and Crystals
ESF Workshop Non-Exponential Relaxation and Rate Behaviour
Duisburg, Germany, March 3, 1997
Nonresonant Spectral Hole Burning in the Slow Relaxation of Supercooled Liquids
Third International Discussion on Relaxations in Complex Systems, Vigo Spain, July 2, 1997
Mesoscopic Mean-Field Theory for the Thermal and Dynamic Properties of Condensed Matter
Viscous Liquids and the Glass Transition, Søminenstationen, Holbaek, Denmark, June 17, 2000
Nanoscopic Heterogeneities in the Thermal and Dynamic Behavior of Supercooled Liquids
220th ACS National Meeting Washington, DC, August 21, 2000
Mean-Field Cluster Model for the Response of Supercooled Liquids June 19
The Big World of Nanothermodynamics June 22
4th International Discussion Meeting on Relaxation in Complex Systems
Hersonissis, Crete, June 17-23, 2001
Mean-Field Cluster Model for the Thermal and Dynamic Properties of Condensed Matter
Slow Dynamics and Glass Transition, Bangalore, India, January 7, 2002
Stretched-Exponential Relaxation and Nanothermodynamics in Condensed Matter
4-Corners Meeting of the American Physical Society, Salt Lake City, UT October 5, 2002
Nanothermodynamics and the Williams-Landel-Ferry Equation
76th Annual Meeting of The Society of Rheology, Lubbock, TX, February 14, 2005
Free-Energy Landscape Picture for Dynamics in Disordered Materials
Workshop on Correlated Electrons and Amorphous Materials,
Augsburg, Germany, July 16, 2005
Nanothermodynamics in Disordered Materials
APS Four-Corners Section Meeting, Boulder, CO, October 15, 2005
Nanothermodynamics and Nonlinear Corrections to Statistical Mechanics in Monte Carlo Simulations of Disordered Materials Viscous Liquids and the Glass Transition (VIII),
Sominestationen, Holbaek, Denmark, May 30, 2010
Modeling thermodynamic heterogeneity in disordered materials
North American Thermal Analysis Society, Annual Conference, August 14, 2012
Nanothermodynamics: Small-system thermodynamics applied to large systems
12th Joint European Thermodynamics Conference, Brescia, Italy, July 3, 2013
Adapting Monte Carlo simulations to obey the laws of thermodynamics on intermediate lengths
Gordon Research Conference on Energetic Materials, Sunday River, Maine, June 18, 2014

The big world of nanothermodynamics
Lorentz Center Workshop on Nanothermodynamics, Leiden, Netherlands, December 5, 2014
A physical foundation for 1/f noise and other forms of slow relaxation
Workshop on Fluctuations, Slow Dynamics, and Internal Time in Complex Critical Systems
Kurashiki, Japan, March 25, 2015
Nanothermodynamics and nonlinear corrections to statistical mechanics
Thermodynamics and Nonlinear Dynamics in the Information Age, Telluride, CO, July 16, 2015
Nanothermodynamics and nonlinear corrections to statistical mechanics: 1/f noise and critical scaling
International Workshop on Nonlinearity, Nonequilibrium and Complexity, Mexico City, November 30, 2015

SEMINARS AND COLLOQUIA
Time Decay of the Remanent Magnetization in Spin Glasses
Université Paris-Sud, Orsay, France, March 15, 1984
Experimental Aspects of the Spin-Glass Transition
Dartmouth College, Hanover, NH, April 18, 1986
Field-Induced Phase Transitions in the Organic Conductor $(TMTSF)_2ClO_4$
University of Minnesota, Minneapolis, MN, July 7, 1986
High T_c Superconductors: Facts and Fantasies
Arizona State University, Tempe, AZ, April 9, 1987
Society for the Advancement of Material and Process Engineering
Phoenix, AZ, August 18, 1987
Motorola Government Electronics Group, Science Advisory Board Associates
Phoenix, AZ, October 15, 1987
IEEE Power Industry, Phoenix, AZ, January 14, 1988
High T_c Superconductors: Properties and Applications
IEEE Waves and Devices Group, Phoenix, AZ, April 20, 1988
Sun City Engineering Club, Phoenix, AZ, January 6, 1989
Percolation Model for Relaxation in Random Systems
Boston University, Boston, MA, June 4, 1990
Universität Mainz, West Germany, July 5, 1990
Arizona State University, Tempe, AZ, October 19, 1990
Slow Relaxation in Condensed Matter
MIT, Brown, Princeton, and Exxon Research, April 18-25, 1991
University of Utah, Salt Lake City, UT, May 9, 1991
University of California, Berkeley, CA, May 16, 1991
University of California, Los Angeles, CA, July 31, 1991
Department of Physics and Astronomy, ASU, Tempe, AZ, September 12, 1991
State University of New York, Buffalo, NY, October 10, 1991
Michigan State University, East Lansing, MI, March 2, 1992
Mesoscopic Dynamical Correlations in Condensed Matter

Technische Hochschule Darmstadt, Germany, June 23, 1993

Non-Debye and Non-Arrhenius Primary Response of Liquids, Glasses, Polymers and Crystals

Universität Marburg, Germany, June 24, 1993
Chalmers Technical University, Gothenburg, Sweden, October 20, 1993
Universität Freiburg, Germany, October 25, 1993
Hahn-Meitner Institut, Germany, November 4, 1993
Universität Mainz, November 8, 1993

Slow Relaxation in Magnetic and Non-Magnetic Matter

Universität Duisburg, Germany, October 13, 1993

Mathematical Aspects of the Primary Response of Condensed Matter

Department of Mathematics, ASU, Tempe AZ, September 22, 1994

Universalities in the Primary Response of Condensed Matter

Department of Physics and Astronomy, ASU, Tempe AZ, September 29, 1994
Department of Physics, University of Arizona, Tucson AZ, April 19, 1995
Universität Ulm, Ulm, Germany, June 13, 1995
Philips Research Laboratories, Eindhoven, Netherlands, June 30, 1995
Technische Hochschule Darmstadt, Darmstadt, Germany, June 27, 1996
Universität Bayreuth, Bayreuth, Germany, July 18, 1996

Towards a Thermodynamic Theory for the Kohlrausch-Williams-Watts Law

Max Planck Institute for Polymer Research, Mainz, Germany, June 26, 1995

Nonexponential Relaxation in Condensed Matter

University of Sussex, Brighton, UK, June 4, 1996
Roskilde University, Roskilde, Denmark, July 1, 1996
Universität Dortmund, Dortmund, Germany, June 23, 1997

Dielectric Spectral Hole Burning

University of Swansea, Swansea, UK, June 3, 1996
Universität Leipzig, Leipzig, Germany, June 25, 1996

Slow Relaxation without Energy Barriers

Roskilde University, Roskilde, Denmark, July 2, 1996
Universität Mainz, Mainz, Germany, July 9, 1996

Nonresonant Spectral Hole Burning

Arizona State University, SPS Seminar, Tempe, AZ, March 11, 1997
University of Utah, Salt Lake City, UT, May 8, 1997

Mesoscopic Physics and its Application to the Dynamics of Condensed Matter

Universität Duisburg, Duisburg, Germany, June 14, 2000

Nanoscopic Heterogeneities in the Response of Ferromagnets

Universität Augsburg, Augsburg, Germany, June 19, 2000
Universität Mainz, Mainz, Germany, June 26, 2000

Dynamical Heterogeneities in Condensed Matter

Arizona State University, Tempe, AZ, July 19, 2000

The Big World of Nanothermodynamics

Arizona State University, Tempe, AZ, February 9, 2001

Nanoscopic Heterogeneities in Condensed Matter
Arizona State University, Tempe, AZ, June 6, 2001
Mean-Field Cluster Model for the Thermal and Dynamic Properties of Liquids, Glasses, Polymers, and Crystals
Institut Laue-Langevin, Grenoble, France, June 15, 2001
Jožef Stefan Institute, Ljubljana, Solovenia, October 1, 2001
University of Mainz, Germany, November 12, 2001
University of Bayreuth, Germany, November 22, 2001
Nanoscopic Heterogeneities in the Slow Response of Liquids, Glasses, Polymers and Crystals
Technical University of Munich, Germany, November 15, 2001
Nanocluster Response in Liquids, Glasses, and Magnetic Materials
University of Augsburg, Germany, November 21, 2001
Nanoscopic Heterogeneities in the Thermal and Dynamic Properties of Liquids, Glasses, Polymers and Crystals
Physikalish-Technische Bundesanstalt, Berlin, Germany, November 27, 2001
Mean-Field Cluster Model for non-Debye Response, non-Arrhenius Activation, and non-Classical Critical Scaling
Hahn Meitner Institute, Berlin, Germany, November 28, 2001
Structure and Dynamics of Interacting Iron Nanoparticles
Universität Duisburg, Duisburg, Germany, March 19, 2002
Max-Planck-Institut für Mikrostrukturphysik, Halle, Germany, May 2, 2002
The Big World of Nanothermodynamics
University of Bologna, Bologna, Italy, June 3, 2002
Universität Duisburg, Duisburg, Germany, June 11-13, 2002
Nanothermodynamics and Bose-Ising Statistics
Arizona State University, Tempe, September 12, 2002
Carnegie Mellon University, Pittsburgh, September 30, 2002
Thermal and Dynamic Properties of Complex Systems: From Kohlrausch Relaxation to Nanothermodynamics
Technical University of Dresden, Germany, June 5, 2003
From Kohlrausch Relaxation to Nanothermodynamics
University of Erlangen, Germany, June 12, 2003
Duisburg/Essen University, Germany, June 17, 2003
University of Augsburg, Germany, June 26, 2003
Stretched Exponential Relaxation and Nanothermodynamics
Texas Tech University, May 27, 2004
University of Giessen, Germany, July 14, 2004
Nanothermodynamics: Experiment, Theory, and Simulation
Roskilde University, Denmark, June 23, 2004
University of Dortmund, Germany, July 13, 2004
University of Duisburg, Germany, July 16, 2004

University of California, Berkeley, September 20, 2004
Arizona State University, November 10, 2004

Nanothermodynamics: Measurement and Simulation of Heat Flow in Complex Systems
IEEE Waves and Devices, Phoenix Chapter, Arizona State University, April 28, 2005

Current Topics in Thermodynamics
MURI AFOSR Workshop, Arizona State University, May 6, 2005

Free-Energy Landscape Picture for WLF Behavior
University of Dortmund, Germany, June 29, 2005

Nanothermodynamics in Disordered Materials
Seminars on Liquids and Glasses, Arizona State University, Tempe AZ, November 15, 2005

Nanothermodynamics and the Response of Disordered Materials
Colorado State University, February 13, 2006

Stretched Exponential Relaxation and Nanothermodynamics
Northern Arizona University, April 16, 2007
University of Utah, November 29, 2007
Weber State University, November 30, 2007

Nanothermodynamics Applied to the Local Thermal Properties of Disordered Systems
Elettra Synchrotron Light Laboratory, Trieste, Italy, May 14, 2009
University of Gottingen, Germany, May 18, 2009
University of Dortmund, Germany, May 19, 2009
University of Augsburg, Germany, May 22, 2009

Thermal and Dynamic Heterogeneity in Materials
PSM Degree in Nanoscience Seminar, Arizona State University, September 30, 2009

Nanothermodynamics and Nonlinear Corrections to Statistical Mechanics
Nanoscale Science Seminar, Arizona State University, October 5, 2009
Dynamics Days 2010, Evanston Illinois, January 5, 2010

The Big World of Nanothermodynamics
Engineers Club of the West Valley, Sun City West, February 5, 2010

Nanothermodynamics and Nonlinear Corrections to Statistical Mechanics
University of Texas, Austin, April 20, 2010

Hole-burning measurements, Landau theory, and nonlinear corrections for computer simulations University of Roskilde, Denmark, June 10, 2010

Nanothermodynamics and Nonlinear Corrections to Statistical Mechanics
University of Dortmund, Germany, June 22, 2010
Technical University of Munich, Germany, June 24, 2010
University of Antwerp, Belgium, June 25, 2010
University of Duisburg, Germany, June 28, 2010
University of Muenster, Germany, July 1, 2010
Arizona State University, Tempe, September 16, 2010
University of Missouri, Columbia, March 14, 2011

Stretched Exponential Relaxation: Experiments, Theory, and Simulations

University of Missouri, Columbia, March 14, 2011

Can the canonical ensemble give thermal equilibrium?

University of Missouri, Columbia, March 22, 2012

Modeling thermodynamic heterogeneity in disordered materials

University of Central Florida, Orlando, August 10, 2012

University of Missouri, Columbia, October 12, 2012

The arrow of time

Engineers Club of the West Valley, Sun City West, December 7, 2012

Thermodynamic Heterogeneity in Experiments, Theory, and Simulations

University of Rostock, Germany, June 18, 2013

University of Augsburg, Germany, June 27, 2013

Specific Heat and Local Equilibrium Temperature Inside Disordered Materials

LMU University, Munich, Germany, June 24, 2013

The Laws of Thermodynamics and Computer Simulations

University of Dortmund, Germany, July 9, 2013

The Big World of Nanothermodynamics

Montana State University, Bozeman, October 4, 2013

Nanoscale dynamics from maintaining maximum entropy during equilibrium fluctuations

University of Luxembourg, Luxembourg City, November 27, 2014

Nanothermodynamics and nonlinear corrections to statistical mechanics for fluctuations inside bulk materials

Free University of Brussels, Belgium, May 26, 2015

A common mechanism for 1/f noise and other forms of slow dynamics

Dortmund, Germany, June 9, 2015

Roskilde, Denmark, June 11, 2015

Nanothermodynamics: A poor-man's approach to the crossover from classical to quantum behavior

Sandia National Laboratories, NM, August 11, 2015

Los Alamos National Laboratories, NM, August 13, 2015

Nanothermodynamics and nonlinear corrections to statistical mechanics using the Ising model

Bradley University, Peoria IL, October 9, 2015

Equilibrium response, thermal fluctuations, and 1/f noise from nanothermodynamics

University of Goettingen, Germany, June 28, 2016

University of Augsburg, Germany, June 30, 2016

University of Twente, Netherlands, July 4, 2016

University of Montpellier, France, July 8, 2016

University of Burgundy, France, July 11, 2016

University of Barcelona, Spain, July 14, 2016

University of Heidelberg, Germany, July 26, 2016

Reversible fluctuations, 1/f noise, and other results from relaxing the thermodynamic limit

Arizona State University, Tempe, AZ, April 27, 2017

Equilibrium response, reversible fluctuations, and 1/f noise from nanothermodynamics
University of Denver, Denver, CO, May 24, 2017
NIST, Boulder, CO, May 26, 2017
Hot spots in measurements and simulations
Aberdeen Proving Ground, Aberdeen, MD, October 3, 2017
Equilibrium fluctuations, heterogeneous response, and 1/*f* noise from local transient effects in thermodynamics
The State University of New York, Stony Brook, NY, October 13, 2017
New York University, Manhattan, NY, October 16, 2017
University of Maryland, College Park, MD, October 18, 2017
Beyond Boltzmann's factor: statistical mechanics for interacting particles
University of California, Los Angeles, CA, November 29, 2017
University of California, Irvine, CA, December 1, 2017
Non-Boltzmann fluctuations in equilibrium molecular dynamics
Arizona State University, Tempe, AZ, April 12, 2018
Nanothermodynamics and nonlinear corrections to statistical mechanics
King's College London, June 28, 2018
non-Boltzmann fluctuations from localized energy in equilibrium molecular dynamics
Roskilde University, Denmark, July 5, 2018
University of Muenster, Germany, July 16, 2018
University of Dortmund, Germany, July 17, 2018
Testing statistical mechanics using computer simulations
Arizona State University, Tempe, AZ, September 10, 2018

PATENTS

Non-Contact Force Microscope Having a Coaxial Cantilever-Tip Configuration
United States Patent No. 5,509,300, April 23, 1996.
United States Patent No. 5,602,330, February 22, 1997

PUBLICATIONS IN JOURNALS AND BOOKS

1 SQUID Detection of EPR in Dilute CMN
R.V. Chamberlin, L.A. Moberly, and O.G. Symko
J. Phys. (Paris) **39**, C6-1217-1218 (1978)

2 High-Sensitivity Magnetic Resonance by SQUID Detection
R.V. Chamberlin, L.A. Moberly, and O.G. Symko
J. Low Temp. Phy. **35**, 337-347 (1978)

3 Reversibility and Time Dependence of the Magnetization in Ag:Mn and Cu:Mn Spin Glasses
R.V. Chamberlin, M. Hardiman, and R. Orbach
J. Appl. Phys. **52**, 1771-1772 (1981)

4 H-T Phase Diagram for Spin-Glasses: an Experimental Study of Ag:Mn
R.V. Chamberlin, M. Hardiman, L.A. Turkevich, and R. Orbach
Phys. Rev. B **25**, 6720-6729 (1982)

5 The H-T Phase Diagram for the Spin-Glass Ag:Mn
R.V. Chamberlin, M. Hardiman, L.A. Turkevich, and R. Orbach
J. Mag. Magn. Mat. **31-34**, 1423-1424 (1983)

6 Time Decay of the Remanent Magnetization in Spin Glasses
R.V. Chamberlin, G. Mozurkewich, and R. Orbach
Phys. Rev. Lett. **52**, 867-870 (1984)

7 Time Decay of the Remanent Magnetization in Spin Glasses as a Function of the Time Spent in the Field-Cooled State
R.V. Chamberlin.
Phys. Rev. B **30**, 5393-5395 (1984)

8 Dynamic Scaling in the $Eu_{0.4}Sr_{0.6}S$ Spin Glass
N. Bontemps, J. Rajchenbach, R.V. Chamberlin, and R. Orbach
Phys. Rev. B **30**, 6514-6520 (1984)

9 Time Decay of the Remanent Magnetization in Spin Glasses
R.V. Chamberlin
J. Appl. Phys. **57**, 3377-3381 (1985)

10 Magnetization Study of the Field-Induced Transitions in Tetramethyltetraselenafulvalenium Perchlorate, $(TMTSF)_2ClO_4$
M.J. Naughton, J.S. Brooks, L.Y. Chiang, R.V. Chamberlin, and P.M. Chaikin
Phys. Rev. Lett. **55**, 969-972 (1985)

11 Experimental Search for the Spin Glass Transition in $Eu_{0.4}Sr_{0.6}S$: a Dynamic Scaling Analysis
N. Bontemps, J. Rajchenbach, R.V. Chamberlin, and R. Orbach
J. Mag. Magn. Mat. **54-57**, 1-5 (1986)

12 Time Decay of the Thermoremanent Magnetization in the Insulating Spin Glass $Eu_{0.4}Sr_{0.6}S$
J. Ferré, M. Ayadi, R.V. Chamberlin, R. Orbach, and N. Bontemps
J. Mag. Magn. Mat. **54-57**, 211-212 (1986)

13 Magnetization Studies of the Field-Induced Transitions in $(TMTSF)_2ClO_4$
J.S. Brooks, M.J. Naughton, R.V. Chamberlin, L.Y. Chiang, and P.M. Chaikin
J. Mag. Magn. Mat. **54-57**, 637-640 (1986)

14 Magnetic Field Induced Phases of $(TMTSF)_2ClO_4$
P.M. Chaikin, J.S. Brooks, R.V. Chamberlin, L.Y. Chiang, D.P. Goshorn, D.C. Johnston, M.J. Naughton, and X. Yan
Physica (Amsterdam) **143B**, 383-387 (1986)

15 On the Kwak Transition: Field-Induced States in Two-Dimensional Organic Conductors
P.M. Chaikin, E.J. Melé, L.Y. Chiang, R.V. Chamberlin, M.J. Naughton, and J.S. Brooks
Synth. Met. **13**, 45-61 (1986)

16 Small Sample Magnetometers for Simultaneous Magnetic and Resistive Measurements at Low Temperatures and High Magnetic Fields

J.S. Brooks, M.J. Naughton, Y.P. Ma, P.M. Chaikin, and R.V. Chamberlin
Rev. Sci. Instr. **58**, 117-121 (1987)

17 Rapid Magnetic Oscillations in an Organic Conductor: Possibility of a New Type of Quantum Oscillation
X. Yan, M.J. Naughton, R.V. Chamberlin, S.Y. Hsu, L.Y. Chiang, J.S. Brooks, and P.M. Chaikin
Phys. Rev. B **36**, 1799-1802 (1987)

18 Magnetic Field Induced Transitions in Organic Conductors: Experiments
X. Yan, R.V. Chamberlin, L.Y. Chiang, M.J. Naughton, J.S. Brooks, and P.M. Chaikin
Low-dimensional conductors and superconductors, NATO Advanced Studies Institute, Series B: Physics **155**, 211-220, eds. D. Jerome and L.G. Caron, Plenum Press (1987)

19 High-Field Behavior of $(TMTSF)_2ClO_4$: Generalized Quantum Hall Effect and Wigner Crystallization
R.V. Chamberlin, M.J. Naughton, X. Yan, P.M. Chaikin, S.Y. Hsu, L.Y. Chiang, and J.S. Brooks
Japn. J. Appl. Phys. **26**, Suppl. 26-3, 575-576 (1987)

20 Extreme Quantum Limit in a Quasi Two-Dimensional Organic Conductor
R.V. Chamberlin, M.J. Naughton, X. Yan, L.Y. Chiang, S.Y. Hsu, and P.M. Chaikin
Phys. Rev. Lett. **60**, 1189-1192 (1988)

21 Angular-Dependence of the Field-Induced Transitions and Rapid Oscillations in $(TMTSF)_2ClO_4$
X. Yan, M.J. Naughton, O.S. Cheena, R.V. Chamberlin, S.Y. Hsu, L.Y. Chiang, and P.M. Chaikin
Sol. St. Comm. **66**, 905-908 (1988)

22 Reentrant Field Induced Spin Density Wave Transitions
M.J. Naughton, R.V. Chamberlin, X. Yan, S.Y. Hsu, L.Y. Chiang, M.Y. Azbel, and P.M. Chaikin
Phys. Rev. Lett. **61**, 621-624 (1988)

23 Orientational Anisotropy of the Upper Critical Field in Single Crystal $YBa_2Cu_3O_7$ and $Bi_2(CaSr)_3Cu_2O_x$
M.J. Naughton, R.C. Yu, P.K. Davies, J.E. Fischer, R.V. Chamberlin, Z.Z. Wang, T.W. Jing, N.P. Ong, and P.M. Chaikin
Phys. Rev. B **38**, 9280-9283 (1988)

24 $(TMTSF)_2ClO_4$ in the Extreme Quantum Limit
R.V. Chamberlin, M.J. Naughton, L.Y. Chiang, S. Hsu, X. Yan, and P.M. Chaikin
Synth. Met. **27**, B41-B48 (1988)

25 On the Shubnikov-De Haas Oscillations in $(TMTSF)_2ClO_4$
X. Yan, M.J. Naughton, R.V. Chamberlin, L.Y. Chiang, X. Shu, and P.M. Chaikin
Synth. Met. **27**, B145-B150 (1988)

26 A Potpourri of Magnetic Effects in $(TMTSF)_2ClO_4$
P.M.Chaikin, M.Y.Azbel, M.J.Naughton, R.V.Chamberlin, X.Yan, S.Hsu and L.YChiang

Synth. Met. **27**, B163-B173 (1988)

27 Reentrance in the Field-Induced Spin Density Wave System
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B. F. Davis and R. V. Chamberlin
J. Stat. Mech. Theory Expt. **18**, 103206 (2018)

FUNDED RESEARCH PROPOSALS

Development of an Atomic Scale Force Magnetometer
R.V. Chamberlin (2/87-1/88)
University Research Fund, Arizona State University: $19,551

Fracton Dynamics on Fractal Networks
R.V. Chamberlin (11/87-10/91)
Office of Naval Research: $313,499

Electrons and Atoms: Contemporary Experiments for Advanced Undergraduates
S.M. Lindsay, J.C.H. Spence, I.S.T. Tsong, and R.V. Chamberlin (5/88-4/89)
National Science Foundation: $32,650
University Matching Funds: $32,650

Acquisition of an NMR Spectrometer for Studies of Polymer Electrolytes
R.F. Marzke (PI), G.H. Wolf, P.F. McMillan, C.A. Angell and R.V. Chamberlin (1994)
National Science Foundation: $97,440
University Matching Funds: $72,860

Mesoscopic Structures in Magnetic Materials
R.V. Chamberlin and M.R. Scheinfein (9/95-8/96)
Vice President for Research, Arizona State University: $5,000

Materials Research Science and Engineering Center at Arizona State University
P.F. McMillan et al. (1996-2001)
National Science Foundation: $4,180,000

Dynamics of Mesoscopic Structures in Magnetic Materials
R.V. Chamberlin and M.R. Scheinfein (8/97-6/02)
National Science Foundation: $270,000

Structural Recovery and Physical Aging in Plasticizing Environments
G.B. McKenna (PI) R.V. Chamberlin (Consultant) (6/03-5/07)
National Science Foundation: $460,000

Two-Gap Superconductivity and its Implications for Applications of MgB_2
D. C. Larbalestier (PI), N. Newman, R. V. Chamberlin et al. (9/05-8/07)
National Science Foundation: $46,000

Nanothermodynamics applied to thermal processes in heterogeneous materials
R. V. Chamberlin (PI) (7/08-6/12)
DOD-Army Research Office: $184,772

Nonlinear corrections to temperature in computer simulations of complex systems
R. V. Chamberlin (PI) (11/11-3/15)
DOD-Army Research Office: $281,928

Graduate Student Supervision; Ph.D. Students

Anthony DiCarlo	Ph.D. 1992: A novel vertically cantilevered magnetic force microscope
Dallas W. Kingsbury	Ph.D. 1994: The glass transition in strong and fragile glass forming liquids
Wolfgang Sedlmeier	Supervised, 1994-95

Aaron Marmorstein	Supervised, 1994-95 Masters in passing, 1995.
Dirk Jordan	Supervised, 1995-96
Joel Andersen	Supervised, 1997-98
Vidya Krishnamurthy	Supported, 1998, 2001 Masters in passing, 2001
Wei Liang	Supported, 1998
Kurt Stangel	Supervised, 2002-2008 Masters in passing 2005
Lei Tu	Supported, 2008-2010 Masters in passing 2010
Michael Bell	Supported, 2011-2012
Shane Moffet	Supported, 2011-2014 Masters in passing 2015
Andrew Shevchuk	Supervised, 2013-2016
Bryce F. Davis	PhD 2018: Broken ergodicity and 1/*f* noise from finite, local entropy baths
Michael Clark	Supervised, 2017-current

M.S. Students

John K. O'Farrell	M.S. 1989	The rotating sample susceptometer
Vineet Pancholi	M.S. 1992	Complex magnetic susceptibility at high frequency
Mohammad Javaheri	M.S. 2008	A free-energy landscape picture and Landau theory for the dynamics of disordered materials

Undergraduate Student Supervision

Cliff Jordan &	EE 490Senior Design Lab 1989	
Keith Stapley	Superconducting magnetic energy storage	
Michael Smith	REU 1994	Magnetic force microscopy of magnetic recording media
Volney Douglas	Supported, 1997-98	
Kevin Dixon	Supported 1999-2002	
Parker Lund	REU 2000	
Alan Cook	NASA summer grant 2000	
Lucinda VanNatta	REU 2001	
Jason Rugolo	Senior Honors project 2005-2006	Rotary Valve for Engines
Josh Vermaas	Supported 2008-2009	
Alexander Brown	Supported 2011-2012	
Derek Nasir	Supported 2013-2014	

Notable Department Service

Years	Service
1987-89	Budget and Policy Committee
1987-89	Committee on Committees
1988-92	Undergraduate Advisor
1990-92	Personnel Committee
1992	Chair, Graduate Exam Committee
1993-95	Budget and Policy Committee
1995-96	Department Bylaws Committee

1995-99 Committee on Committees
1996-98 Personnel Committee
1995-2000 Undergraduate Advisor
2000-01 Head Undergraduate Advisor
2002-04 Personnel Committee
2004- Honors Disciplinary Advisor, Physics
2002-05 Undergraduate Advisor
2003-05 Chair, Graduate Exam Committee
2004-05 Department Space Committee
2005-07 Head Undergraduate Advisor
2005- Articulation Task Force Representative, Physics
2005- Arizona Course Equivalency Transfer, Physics
2006-08 Committee on Committees (Chair from 2007-08)
2006-07 University Physics (PHY121/131) Task Force Committee
2006-10 Undergraduate Program Committee
2010-14 Co-Chair, Graduate Program Committee
2012 Department representative at AAPT Physics Department Chairs Conference
2014-16 Committee on Committees (Chair)
2014-17 Graduate Exam Committee (Chair)
2018-present Personnel Committee

College

2003-2006 CLAS Academic Standards Committee (Chair from 2004-2006)
2008-2011 CLAS Curriculum Committee

University

2005- Barrett Honors College Faculty Council
2007-2009 University Standards Committee

Professional

2005 Co-organizer of Workshop on Correlated Electrons and Glassy Matter, Augsburg, Germany, July 16-17.
2007- Humboldtian on Campus Representative for Arizona State University.
2009 Danish National Research Foundation: Chair of site-visit review panel for mid-term review of the Centre for Viscous Liquid Dynamics, Roskilde University, Denmark, May 11-12.
2012 American Physical Society Department Chairs Congressional Visit Day
2013 Grand Award Judge, Intel ISEF Science Fair, Phoenix, AZ, May 14-15, 2013