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Personal

Married, two children.

EDUCATION

Ph.D. Temple University 1972, Physics
B.A. Temple University 1965, Physics

POSITIONS

Professor of Physics, Boston University, Sept. 1984–
Professor, College of Engineering, Boston University, January 1992 –
External Fellow, London Mathematical Laboratory Sept. 2014–
Visiting Scientist, Los Alamos National Laboratory, September 2010-January 2011
Visiting Scientist, Los Alamos National Laboratory, September 2003 - August 2004.
Visiting Scientist, Los Alamos National Laboratory, Septemeber 2002 - August 2003
Visiting Scientist, University of Queensland, Brisbane Australia August 2001.
Visiting Scientist, Los Alamos National Laboratory January 2001 - August 2001
Visiting Scientist (Ulam Scholar) Los Alamos National Laboratory January 2000 - January 2001

Visiting Scientist, Santa Fe Institute, January 2000-June 2000
Visiting Scientist, Institute for Theoretical Physics, University of California at Santa Barbara, September, 1997 - January 1998
Visiting Scientist, Santa Fe Institute, January, 1996- January 1998
Visiting Scientist, Lawrence Livermore Laboratory, Sept. 1,1990 - July 1993
Visiting Scientist, Oersted Institute, Copenhagen, July 1, 1992- Dec. 31, 1992
Visiting Professor, McGill University, January 1,1987–December 31, 1989
Visiting Scientist, IBM Bergen Scientific Center, July 1988
Visiting Scientist, University of Konstanz, August 1985
Visiting Scientist, University of Mainz, July 1985
Visiting Scientist, SUNY Stony Brook, August 1984
Visiting Scientist, St. Francis Xavier University, Nova Scotia, July 1984
Visiting Scientist, Harvard University, Sept. 1983–June 1984

Associate Professor of Physics, Boston University, Sept. 1981–Sept. 1984
Visiting Scientist, IBM Zurich, August 1983
Visiting Scientist, Kernforschungsanlage, Jülich, Germany, July 1983
Visiting Scientist, Kernforschungsanlage, Jülich, Germany, May 1982
Assistant Professor of Physics, Boston University, Jan. 1977–Sept. 1981
Visiting Scientist, Kernforschungsanlage, Jülich, Germany, May 1981
Research Associate, Boston University, Sept. 1976–Jan. 1977
Research Scientist, Institut für Theoretische Physik, Universität zu Köln, Sept. 1974–Sept. 1976
PostDoctoral Fellow, Mathematics Department, MIT, Sept. 1973–Sept. 1974
PostDoctoral Fellow, National Bureau of Standards, June 1972–Sept. 1973

Additional Positions

Consultant, Digital Equipment Corporation, 1984–1985
Consultant, Schlumberger-Doll, 1983–1985
Consultant, Lawrence Livermore National Laboratory, 1992–1993
External Contractor, Los Alamos National Laboratory, 2001-2002 AY
External Contractor, Los Alamos National Laboratory, 2002-2003 AY
External Contractor, Los Alamos National Laboratory, 2003 - 2004 AY
External Contractor, Los Alamos National Laboratory, 2004 - 2005 AY
Associate Chair, Department of Physics, 2004 - 2005 AY
Associate Chair for Condensed Matter Physics, 2005-2006 AY

Honors

Ulam Scholar, Center for Non-Linear Studies, Los Alamos National Laboratory, January 2000 - January 2001
Meeting - Boston University March 29-30, Non-Equilibrium Statistical Mechanics in the 21st Century, A Meeting to Commemorate Bill Klein's Contributions to Statistical Physics on his 60th Birthday
Fellow of the American Physical Society

ACTIVITIES

Associate Director, Center for Polymer Studies, Boston University
Member, Board of Directors, Center for Computational Science, Boston University
Member of External Advisory Board, Colorado Center for Chaos and Complexity, University of Colorado at Boulder
Local Organizing Committee, Stat. Phys. 16, Boston 1986
Co-Organizer, Rutgers Symposium on Kinetics of Phase Transitions May, 1992

Member, Editorial Board, Journal of Statistical Physics, January 1, 1991–December 31, 1993

Co-Organizer of Workshop on Natural Hazard Reduction, Santa Fe Institute, January, 1994

Co-Editor of *Reduction and Predictability of Natural Disasters*, Santa Fe Institute Studies in Science and Complexity, Addison Wesley (1995)

Member of DOE panel on Computational Material Science, Gaithersburg MD February 1995

Co-Organizer of meeting of the IGU on Mathematical Geophysics, Santa Fe, June, 1996

Co-Convener of a session on “Earthquakes, Modelling and Theory” American Union of Geophysics meeting, San Francisco, December, 1996

Co-Convener of a session on “Theory and Modelling in Solid earth Physics” American Geophysics Union meeting, San Francisco, December, 1997

Member of DOE Computational Sciences Initiative Workshop on Materials and Geophysics, Gaithersburg MD, January 1998

Co-Convener of a meeting “Frontiers of Non-Equilibrium Statistical Mechanics” at Clark University, Worcester MA, November 1998

Co-Convener of a session entitled “Dynamics of Space-Time Patterns in Seismicity” American Geophysical Union meeting San Francisco December, 1998

Co-Organizer of the Boston Area Statistical Mechanics Meetings (First Meeting at Brandeis- October 16, 1999)

Co-Editor of *Geo-Complexity and the Physics of Earthquakes* American Geophysical Union Monograph, Washington D.C. (2000)

Co-Convener, Session on General Earthquake Models, American Geophysical Union Meeting, Boston May 2001

Member, Local Organizing Committee - ACES Meeting, Maui, May 2002

Convener-Session on Scaling in the Physics of Earthquakes, ACES Meeting Maui, May 2002

Member American Geophysical Union

Member American Physical Society

Organizer of Meeting “Novel Applications of Statistical Mechanics” May, 2014, Boston University.

PUBLICATIONS

Journal Articles

- [1] W. Klein, “Perturbation Solution of the Kirkwood-Salsburg Equation,” *J. Math. Phys.* **14**, 1049–1059 (1973), [10]
- [2] W. Klein, “Behavior of Distribution Functions in the Thermodynamic Limit,” *J. Math. Phys.* **15**, 1181–1185 (1974)[1]

- [3] W. Klein, "Spectrum of the Kirkwood-Salsburg Operator and Phase Transitions," *J. Math. Phys.* **16**, 1482–1487 (1975), [8]
- [4] W. Klein, "Kirkwood-Salsburg Equations and Phase Transitions," *J. Math. Phys.* **17**, 699–702 (1976)
- [5] N. Grewe and W. Klein, "Continuous Order Phase Transitions on a Decorated Cayley Tree of Connectivity Two," *Zeitschrift für Physik B* **23**, 193–198 (1976), [3]
- [6] N. Grewe and W. Klein, "Rigorous Derivation of the Kirkwood Monroe Equation for Small Activity," *J. Math. Phys.* **17**, 695–698 (1976), [4]
- [7] R. J. Swendsen and W. Klein, "Solution of a Truncated Kirkwood-Salsburg Equation for a Hard Sphere Gas," *Phys. Rev. A* **13**, 872–877 (1976)[3]
- [8] W. Klein, D. J. Wallace, and R. P. K. Zia, "Essential Singularities at First-Order Phase Transitions," *Phys. Rev. Lett.* **37**, 639–642 (1976), [52]
- [9] N. Grewe and W. Klein, "The Kirkwood-Salsburg Equations for a Bounded Stable Kac Potential I. General Theory and Asymptotic Solutions," *J. Math. Phys.* **18**, 1729–1734 (1977), [35]
- [10] N. Grewe and W. Klein, "The Kirkwood-Salsburg Equations for a Bounded Stable Kac Potential II. Instability and Phase Transitions," *J. Math. Phys.* **18**, 1735–1740, (1977), [35]
- [11] P. J. Reynolds, W. Klein, and H. E. Stanley, "A Real Space Renormalization Group for Site and Bond Percolation," *J. Phys. C* **10**, L167–L172 (1977), [223]
- [12] P. J. Reynolds, H. E. Stanley, W. Klein, "Ghost Fields, Pair Connectedness, and Scaling: Exact Results in One Dimension," *J. Phys. A* **10**, L203–L210 (1977), [50]
- [13] W. Klein, H. E. Stanley, S. Redner, and P. J. Reynolds, "Exact Solution for the One-Dimensional Percolation Problem with Further Neighbor Bonds," *J. Phys. A* **11**, L17–L22 (1978), [30]
- [14] P. J. Reynolds, H. E. Stanley, and W. Klein, "Percolation by Position Space Renormalization Group with Large Cells," *J. Phys. A* **11**, L199–L207 (1978), [143]
- [15] W. Klein, H. E. Stanley, P. J. Reynolds and A. Coniglio, "Renormalization Group Approach to the Percolation Properties of the Triangular Ising Model," *Phys. Rev. Lett.* **41**, 1145–1148 (1978), [67]
- [16] A. Coniglio, H. E. Stanley, and W. Klein, "A Statistical Mechanical Theory of Polymer Gelation," *Phys. Rev. Lett.* **42**, 518–522 (1979), [245]
- [17] G. Shlifer, W. Klein, P. J. Reynolds and H. E. Stanley, "Large Cell Renormalization Group for the Backbone Problem in Percolation," *J. Phys. A* **12**, L169–L174 (1979), [28]
- [18] A. Coniglio and W. Klein, "Correlated Site-Bond Percolation and Ising Critical Droplets," *J. Phys. A* **13**, 2775 (1980), [536]
- [19] W. Klein and D. Stauffer, "Note on the Asymptotic Decay of Percolation Clusters," *Phys. Lett. A* **48** (1980), [3]
- [20] P. J. Reynolds, H. E. Stanley, and W. Klein, "A Large Cell Monte Carlo Renormalization Group for Percolation," *Phys. Rev. B* **21**, 1223–1245 (1980), [365]

- [21] W. Klein, “Droplet Models, Renormalization Group and Essential Singularities at First-Order Phase Transitions,” *Phys. Rev. B* **21**, 5254–5261 (1980), [9]
- [22] W. Klein, and N. Grewe, “The Kirkwood Instability in a Mean Field Context,” *J. Chem. Phys.* **72**, 5456–5457 (1980), [17]
- [23] W. Klein and A. Coniglio, “Thermal Phase Transitions at the Percolation Threshold,” *Phys. Lett. A* **84**, 83 (1981), [2]
- [24] W. Klein and Alan C. Brown, “Spinodals and the Mean Field Theory of Freezing,” *J. Chem. Phys.* **74**, 6960 (1981), [23]
- [25] W. Klein and D. Stauffer, “Remark on Percolative Phase Transitions without Infinite Network,” *J. Phys. A* **14**, L405 (1981), [23]
- [26] W. Klein, “Droplet Models, Percolation, and Spinodal Points,” *Phys. Rev. Lett.* **47**, 1569 (1981), [39]
- [27] W. Klein, “Exact Renormalization Group Solution of an Anisotropic Problem,” *J. Phys. A* **15**, 1759 (1982), [3]
- [28] W. Klein and W. Kinzel, “Directed Percolation: Pseudo Correlation Length,” *J. Phys. A* **14**, L413 (1981), [23]
- [29] A. Coniglio, H. E. Stanley, and W. Klein, “Solvent Effects on Polymer Gels,” *Phys. Rev. B* **25**, 6805 (1982), [141]
- [30] A. C. Brown, C. Unger and W. Klein, “Dynamics of Supercooled Fluids,” *Z. für Physik* **48**, 1 (1982)
- [31] W. Klein, “Potts Model Formulation of Continuum Percolation,” *Phys. Rev. B* **26**, 2677 (1982), [31]
- [32] G. F. Tuthill and W. Klein, “General Position-Space Renormalization Group for Correlated Percolation,” *J. Phys. A* **15**, L377 (1982), [18]
- [33] W. Klein, “Renormalization Group and Linear Integral Equations,” *Phys. Rev. B* **27**, 4475 (1983), [2]
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- [37] W. Klein and C. Unger, “Spinodals, pseudospinodals and nucleation,” *Phys. Rev. B* **28**, 445 (1983), [68]
- [38] G. Tuthill and W. Klein, “Position-space renormalization group and correlated percolation,” *J. Phys. A* **16**, 3561 (1983), [1]
- [39] C. Unger and W. Klein, “Nucleation near the classical spinodal,” *Phys. Rev. B* **29**, 2698 (1984), [113]
- [40] W. Klein and A. D. J. Haymet, “Linear integral equations and renormalization group,” *Phys. Rev. B* **30**, 1387 (1984), [3]

- [41] D. Heermann, A. Coniglio, W. Klein and D. Stauffer, “Monte Carlo simulation of metastable states in 3-D Ising models,” *J. Stat. Phys.* **36**, 447 (1984), [29]
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- [52] J. Given and W. Klein, “A BBGKY Hierarchy for Percolation,” *Phys. Rev. B* **38**, 11874 (1988)[1]
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- [63] P. Tamayo and W. Klein, “Reply to Comment on Critical Dynamics and Global Conservation Laws” *Phys. Rev. Lett.* **66**, 2049 (1991), [8]
- [64] W. Klein and G. G. Batrouni, “Supersymmetry in Spinodal Decomposition and Continuous Ordering,” *Phys. Rev. Lett.* **67**, 1278 (1991), [9]
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- [103] K. F. Tiampo, J. B. Rundle, J.S.S. Martins, W. Klein and S. McGinnis, “Methods for Evaluation of Geodetic Data and Seismicity Developed with Numerical Simulations: Review and Applications” *Pure and Applied Geophysics*, **161**, 1489-1507 (2004)[2]
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- [111] K. F. Tiampo, J. B. Rundle, W. Klein and J. R. Holliday “Forecasting Rupture Dimension using the Pattern Informatics Technique” *Tectonophysics*, **424**, 367-376 (2006)[6]
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- [119] H. Wang, H. Gould and W. Klein, “Homogeneous and Heterogeneous Nucleation of Lennard-Jones Liquids” *Phys. Rev. E* **76** 031604 (2007) con-mat 0706.0328[49]
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- [121] J. Xia, H. Gould, W. Klein and J. B. Rundle “Simulation of the Burridge-Knopoff Model of Earthquakes with Variable Range Stress transfer” *Phys. Rev. E*, 031132 (2008) con-mat 0601679 [20]
- [122] R. Dominguez, K. Barros and W. Klein “Early Time Kinetics of Systems with Spatial Symmetry Breaking” *Phys. Rev. E* **79**, 041121 (2009)[3]
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- [126] K. F. Tiampo, W. Klein, H. C. Li, A. Mignan, Y. Toya, S. Z. L. Kohen-Kadosh, J. B. Rundle and C. C. Chen, “Ergodicity and Earthquake Catalogs: Forecast Testing and Resulting Implications” *Pure and Applied Geophysics* **167**, 763-782 (2010)[7]
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- [131] C. Serino, K. F. Tiampo and W. Klein, “ A New Approach to Gutenberg-Richter Scaling” *Physical Review Letters* **106**, 108501 (2011)[9]
- [132] John B. Rundle, James R. Holliday, Mark Yoder, Michael K. Sachs, Andrea Donnellan, Donald L. Turcotte, Kristy F. Tiampo, William Klein and Louise H. Kellogg: “Earthquake precursors: activation of quiescence?” *Geophys J. Int.* (2011) 187, 225-236.[6]
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- [134] R. Dominguez, K. F. Tiampo, C. Serino and W. Klein, “Scaling of Earthquake Models with Inhomogeneous Stress Dissipation” *Physical Review E* **87**, 022809 (2013)[2]
- [135] O. Peters and W. Klein, “Ergodicity Breaking in Geometric Brownian Motion” *Physical Review Letters*, **110**, 100603 (2013)[2]
- [136] A. Santos and W. Klein, “Kinetics of the Melting Transition in DNA” *Journal of Physics A: Math. Theor.* **46**, 415002 (2013)[1]
- [137] K. Barros and W. Klein, “Liquid to Solid Nucleation via Onion Structure Droplets” *Journal of Chemical Physics* **139**, 174505 (2013)[3]
- [138] J. Kazemian, R. Dominguez, K. Tiampo and W. Klein, “Spatial Heterogeneity in Earthquake Fault-Like Systems”, *Pure and Applied Geophysics* DOI 10.1007/s00024-014-0843-6, (2014)
- [139] L. Colonna-Romano, H. Gould and W. Klein, “Anomalous Mean-Field Behavior of the Fully Connected Ising Model”, *Physical Review E*, **90**, 042111 (2014)
- [140] J. Kazemian, K. F. Tiampo, W. Klein and R. Dominguez, “Foreshocks and Aftershocks in Simple Earthquake Models” *Physical Review Letters* **114**, 088501(2015)

- [141] K. Liu, N. Lubbers, W. Klein, J. Tobochnik, B. Boghosian and H. Gould, “The Effect of Growth on Equality in Models of the Economy” *Physical Review Letters* (submitted for publication)
- [142] K. Liu, W. Klein and C. A. Serino, “The Effect of Disorder on Metastable States” *Physical Review Letters* (submitted for publication)
- [143] N. Gulbahce, W. Klein and H. Gould, “Heterogeneity in Classical and Non-Classical Nucleation” *Phys. Rev. Lett.* (submitted for publication) con- mat. 0407304

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Review Articles and Conference Proceedings

- [1] H. E. Stanley, A. Coniglio, W. Klein, H. Nakanishi, S. Redner, P. J. Reynolds, and G. Shlifer, “Critical Phenomena: Past, Present, and Future,” Chapter 1 of *International Symposium on Synergetics*, H. Haken, ed., Springer-Verlag, Heidelberg and New York, pp. 22-38 (1980)
- [2] H. E. Stanley, A. Coniglio, W. Klein, and J. Teixeira, “Connectivity and Theoretical Physics: Some Applications to Chemistry,” *Proceedings of the VI Brazilian Symposium on Theoretical Physics* [Rio de Janeiro], Springer-Verlag, Heidelberg and New York (1980)
- [3] W. Klein, “The mean-field theory of freezing and ‘spinodals’,” in *Physics as Natural Philosophy*, A. Shimony and H. Feshbach, eds., MIT Press (1982)
- [4] W. Klein, “Nucleation, Droplets and the Effect of Interaction Range on Phase Separation,” in *Phase Transitions and Critical Phenomena*, C. Domb and J. L. Lebowitz, eds., in preparation
- [5] W. Klein, “Simulation Studies of Classical and Non-Classical Nucleation,” in *Computer Simulations in Condensed Matter Physics III*, D. P. Landau, K. K. Mon and H. B. Schütter, eds., Springer-Verlag, Heidelberg, Berlin (1990)
- [6] J. B. Rundle, W. Klein and S. R. Brown, “Lattice Automata Models for Earthquakes and Frictional Sliding”, *Proc. Symp. Earthquake Source Physics and Earthquake Precursors*, Tokyo, Japan (1990)
- [7] J. Rundle and W. Klein, “Non-Linear Dynamical Models for Earthquakes and Frictional Sliding: An Overview” in *Proceedings of the 33rd Symposium on Rock Mechanics* J. R. Tillerson and W. R. Wawwesik eds. A. A. Balema, Rotterdam (1992)
- [8] W. Klein and H. Gould, “Clusters and Nucleation,” in *On Clusters and Clustering, From Atoms to Fractals* P. J. Reynolds ed. Elsevier Science (1993)
- [9] H. Gould and W. Klein “Spinodal Nucleation Effects in Systems with Long Range Interactions” *Physica D* **66**, 61-70 (1993)[3]
- [10] J. B. Rundle, W. Klein and D. L. Turcotte, Workshop on Reduction and Predictability of Natural Disasters, Meeting Report, *Trans. Am. Geophys. Un. EOS*, **75**, 148 (1994)
- [11] J. B. Rundle and W. Klein, “New Ideas about the Physics of Earthquakes”, Report to the IUGG Reviews of Geophysics and Space Physics (1995)[6]
- [12] J. B. Rundle, W. Klein and S. Gross, “Rupture Characteristics, Recurrence and Predictability in a Slider Block Model for Earthquakes” in *Reduction and Predictability of Natural*

Disasters, eds. J. B. Rundle, D. L. Turcotte and W. Klein, Sante Fe Institute Studies in Science and Complexity, Addison Wesley (1995)

- [13] J. B. Rundle, W. Klein, S. Gross and D. L. Turcotte, "Observations of Boltzmann Fluctuations in Stochastic Slider-Block Simulations" in *Reduction and Predictability of Natural Disasters*, eds. J. B. Rundle, D. L. Turcotte and W. Klein, Sante Fe Institute Studies in Science and Complexity, Addison Wesley (1995)
- [14] W. Klein, C. Ferguson and J. B. Rundle, "Spinodals and Scaling in Slider-Block Models" in *Reduction and Predictability of Natural Disasters*, eds. J. B. Rundle, D. L. Turcotte and W. Klein, Sante Fe Institute Studies in Science and Complexity, Addison Wesley (1995)
- [15] W. Klein, "The Glass Transition - Possible Research Directions" in *Proceedings of the Kent Island Workshop on Glasses Computational Materials Science*, **4**, 339 (1995)[1]
- [16] C. D. Ferguson, W. Klein and J. B. Rundle, "Long Range Earthquake Fault Models" *Computers in Physics*, **12**, 34 (1998)[9]
- [17] J. B. Rundle and W. Klein, "Coarse Grained Models and Simulations for Nucleation, Growth and Arrest of Earthquakes" to be published in *Earthquake Thermodynamics*, R. Teisseyre and E. Majewski (Cambridge University Press)
- [18] W. Klein, M. Anghel, C. D. Ferguson, J. B. Rundle and J. S. Sa' Martins "Statistical Analysis of a Model for Earthquake Faults with Long Range Stress Transfer" in *GeoComplexity and the Physics of Earthquakes* J. B. Rundle, D. Turcotte and W. Klein eds. (American Geophysical Union, Washington D.C. 2000)[22]
- [19] J. B. Rundle, W. Klein, K. F. Tiampo and S. J. Gross, "Dynamics of Seismicity Patterns in Systems of Earthquake Faults" in *GeoComplexity and the Physics of Earthquakes* J. B. Rundle, D. Turcotte and W. Klein eds. (American Geophysical Union, Washington D. C.)
- [20] K. F. Tiampo, J. B. Rundle, S. McGinnis, S. J. Gross and W. Klein "Observation of Systematic Variations in Non-Local Seismicity Patterns from Southern California" in *GeoComplexity and the Physics of Earthquakes* J. B. Rundle, D. Turcotte and W. Klein eds. (American Geophysical Union, Washington D. C. 2000)
- [21] J. B. Rundle, W. Klein, D. Turcotte, B. D. Malamud, "Precursory Seismic Activation and Critical Point Phenomena" First Workshop of APEC Cooperation for Earthquake Simulation, Brisbane Australia, (2000)[98]
- [22] K. F. Tiampo, J. B. Rundle, S. McGinnis, and W. Klein, "Pattern Dynamics and Forecast Methods in Seismically Active Regions" *Proceedings of the Second ACES Workshop*, Tokyo, Japan pp 471-476 eds. M. Matsu'ura, K. Nakajima, and P. Mora, University of Queensland Press, Brisbane AU (2001)
- [23] J. B. Rundle, A. Donnellan, G. Fox, W. Klein, P. Rundle and K. Tiampo, "General Earthquake Models: Progress and Prospects" *Proceedings 2nd ACES Workshop*, ed M. Matsu'ura, K. Nakajima and P. Mora, University of Queensland Press, Brisbane AU (2001)
- [24] K. F. Tiampo, J. B. Rundle, S. McGinnis, S. J. Gross and W. Klein, "Systematic Variations in Non-local Seismicity Patterns in Southern California" in *Seismotectonics in Convergent Plate Boundaries* eds. Y. Fujinawa and A. Tshida, Terra Scientific Publishing, Tokyo, Japan (2002)

- [25] “J. B. Rundle, W. Klein, K. Tiampo, A. Donnellan and G. Fox, “Strategies for the Detection and Analysis of Space - Time Patterns of Earthquakes on Complex Fault Systems” *Computational Science* **2659** 827-836 (2003)[2]
- [26] W. Klein, J. Xia, C. D. Ferguson, H. Gould, K. F. Tiampo and J. B. Rundle, “Models of Earthquake Faults: Ergodicity and Forecasting” *Journal of Modern Physics B*, **23**, 5553-5569 (2009)
- [27] R. Dominguez, K. F. Tiampo, C. A. Serino and W. Klein, “Characterizing Large Events and Scaling in Earthquake Models with Inhomogeneous Damage,” *Extreme Events and Natural Hazards: The Complexity Perspective*, Geophysical Monograph Series, v. 196, Sharma, A. S., Bunde, A., Dimri, V.P. and Baker, D.N., Eds. (AGU, Washington, D. C., 371 pp) doi:10.1029/GM196, 2012.[1]
- [28] W. Klein, H. Gould, K. F. Tiampo, J. B. Silva, T. Gu, J. Kazemian, C. Serino, and J. B. Rundle, “Statistical Mechanics Perspective on Earthquakes” in *Avalanches in Functional Materials and Geophysics* E. K.H. Salje, A. Saxena and A. Planes editors. Springer Complexity(2016)

INVITED TALKS

IBM Almaden, January 1990

Lawrence Livermore, January 1990

Conference on Clusters, UCLA, January 1990

Invited Speaker, Workshop on Computer Simulation in Physics, University of Georgia, February 1990

Emory University, February, 1990

McGill University, February, 1990

Florida State University, May, 1990

Invited Speaker, SIAM Meeting, Orlando Fla., May 1990

Carnegie-Mellon University, July 1990

UCLA, August 1990

Titan Corporation, August 1990

Invited Speaker, Minerals, Materials and Metals Society, Detroit Mich., Oct. 1990

McGill University, May 1991

Exxon, June 1991

Los Alamos National Lab, July 1991

Lecturer, Summer School on Chaos, Correlations and Complex Patterns, Copenhagen, August 1991

Livermore National Laboratory, March 1992

Oersted Institute, Copenhagen, September 1992

University of Geneva, October 1992

Neils Bohr Institute, Copenhagen, November 1992

C. N. R. S., Paris, November 1992

Brandeis University, Theoretical Seminar, February 1993

Brandeis University, Colloquium, February 1993

Invited Speaker, IMACS Meeting St Louis, October 1993

Dartmouth University, Colloquium, November 1993

Invited Speaker, Workshop on Natural Hazard Reduction, Santa Fe Institute, January 1994

Academy Lecture at Boston University Academy, February 1994

Colloquium, Worcester Polytechnical Institute, February 1994

Seminar U. Mass. Amherst, March 1994

Seminar, College of Engineering, Boston University, April 1994

Seminar NIST, Gaithersburg Maryland, June 1994

Lecturer, Santa Fe Institute Summer School, June 1994

Lecturer, Workshop on Glasses, Kent Island Maryland, February 1995

Colloquium, University of Colorado at Boulder, March 1995

Colloquium, CNLS Los Alamos, June 1995

Colloquium, Lehigh University, March 1996

Department Lecturer, Earth Sciences Department, MIT, March 1996

Seminar, Harvard University, April 1996

Invited Talk, Mathematical Geophysics Meeting, Santa Fe, NM, June 1996

Colloquium, CNLS, Los Alamos, June 1996

Colloquium, Boston College, November 1996

Seminar, Chemistry Department, Boston University, February 1997

Invited Speaker, Special Topics in Statistical Mechanics, NIST April, 1997

Invited Speaker, Workshop on Topics in Nucleation, Boulder Colorado, June 1997

Invited Speaker, DOE workshop on "Nonlinearity in the Earth Sciences" Albuquerque, New Mexico, August 1997

Seminar, ITP Santa Barbara, CA Sept. 1997

Invited Speaker, Workshop on "Jamming and Rheology" ITP, Santa Barbara, October, 1997

Speaker, Session on the Physics of Earthquakes, American Geophysical Union, San Francisco, December 1997

Seminar, Geology Department, University of Southern California, March 1998

Invited speaker, Rutgers Meeting, May 1998

Invited speaker, Southern California Earthquake Center Workshop, June 1998

Colloquium, Clark University, September 1998

Colloquium, Florida State University, Tallahassee FL, November 1998

Seminar, LANL, Los Alamos, NM, January 1999

Invited Speaker APS Meeting, Atlanta, GA March 1999

Invited Speaker SIAM Meeting, San Antonio, TX March 1999

Invited Speaker to meeting on General Earthquake Models, Syracuse University, June 1999

Invited Speaker, Unifying Concepts in Glass Physics, Trieste Italy September 1999

Invited Speaker, GEM/AGU Meeting, San Francisco, December, 1999

Seminar, Sandia National Laboratory, Albuquerque, New Mexico, February 2000

Colloquium, CNLS-Los Alamos National Laboratory, February 2000

Invited Speaker, Complexity in the Earth Sciences, SCEC Meeting Maui, March, 2000

Invited Speaker, International Workshop on Scaling and Disordered Systems, Paris, April 2000

Invited Speaker, Rutgers Meeting, Rutgers University, May 2000

Invited Speaker, ACES International Workshop, Tokyo, Oct. 2000
Invited Speaker, Rutgers Meeting, Rutgers University, May 2001
Invited Speaker, American Geophysical Union Meeting, Boston, May 2001
Invited Speaker, SIAM Meeting, Boulder CO, June 2001
Colloquium, University of Queensland, Brisbane Australia, Aug. 2001
Seminar, University of Queensland, Brisbane Australia, Aug. 2001
Lecture Series on "Fundamentals of the Kinetics of Phase Transitions" Los Alamos National Laboratory February - March 2003
Colloquium, University of California at Davis, April 2003
Seminar, Seminar, Center for Computational Science and Engineering, University of California at Davis, August, 2003
Seminar, Los Alamos National Laboratory, November 2003
Invited Speaker, American Geophysical Union Meeting, December 2003
Invited Speaker, DELFS Meeting, Santa Fe New Mexico, March 2004
Speaker at Central High School in Philadelphia "What is it Like to be a Physicist" April 2004
Seminar, University of California at Davis, June 2004
Invited Speaker, Fourth ACES Meeting, Beijing, China, July 2004
Seminar, Boston University Quantum Condensed Matter Theory Group, October 2004
Seminar, Condensed Matter, U. C. Davis November 2004
Invited Speaker, American Geophysical Union, San Francisco December 2004 (Talk 1)
Invited Speaker, American Geophysical Union, San Francisco, December 2004 (Talk 2)
Seminar, Lujan Center LANCE, Los Alamos National Laboratory, March 2005
Invited Speaker, Next Generation Neutron Source Workshop, San Diego CA, June 2005
Colloquium, U. Mass. Lowell, December 2005
Seminar, Los Alamos National Laboratory, December 2005
Seminar, Center for Computational Science, Boston University, January 2006
Invited Speaker, 5th ACES International Workshop, Maui, Hawaii, April 2006
Invited Speaker, Meeting for M. Zuckermann's 70th Birthday, Vancouver, Canada, August 2006
Colloquium, University of Missouri at Columbia, October 2006
Colloquium, University of California at Riverside, October 2006
Colloquium, University of Western Ontario, Canada, November 2006
Invited Speaker, Application of Statistical Mechanics to the Earth Sciences, Erice, Italy, May 2008
Invited Speaker, 6th ACES International Workshop, Palm Cove, Australia, May 2008
Seminar, Center for Non-Linear Studies, Los Alamos National Laboratory, August 2008
Colloquium, University of Missouri at Rolla, September 2008
Invited Speaker, Novel Phase Transition Behavior in Systems with Long Range Interactions, Tokyo, Japan, October 2008
Invited Speaker, American Geophysical Union meeting, Toronto, Canada, May 2009
Colloquium, Los Alamos National Laboratory, August 2009
Invited Speaker, AOGS Meeting Singapore, August 2009
Colloquium, Virginia Tech, October 2009

Colloquium, Boston University Material Science, November 2009
Invited Speaker, Geophysics and Subsurface Fluid Flow, Gaithersburg Maryland March 2010
Invited Speaker, Simulation Models for Climate Modeling, IPAM, UCLA May 2010
Invited Speaker, Problems and Perspectives in Charged Particle Systems, UC Berkeley 2010
Seminar, Boston College, June 2010
Invited Speaker, Non-Linear Geophysics, AGU December 2010
Seminar, Boston University Earth Science Department, March 2011
Seminar, Complexity Center, Imperial College London, England, March 2011
Invited Speaker, SPS New England Regional Meeting, April 2011
Invited Speaker, Workshop Advances in Simulations of Multi-hazards, Maui, May 2011
Invited Speaker, Statsei7, Santorini, Greece, May 2011
Invited Speaker, Perspectives and Challenges for Statistical Physics in the Next Decade, Natal Brazil, November 2011.
Invited Speaker, Frontiers in Statistical Physics and Complex Systems, Catania, Sicily, June 2012
Invited Speaker, Assimilation of Remotely Sensed Observations to Advance Multihazards Simulation Maui, Hawaii, October, 2012
Seminar for Undergraduates(PY 482), Boston University, March 2013
Colloquium, CNLS Los Alamos National Laboratory, June 2013
Invited Speaker, Workshop - Energy Landscapes: Structure, Dynamics and Exploration Algorithms. Telluride Colorado, 2013
Seminar for graduate students in course in Econophysics, Boston University, Boston, May, 2014
Invited Speaker, “Novel Applications of Statistical Mechanics” Boston, May 2014
Seminar, University of Massachusetts Amherst, October, 2014
Invited Speaker, “Avalanches in Functional Materials and Geophysics” Cambridge England, December 2014
Delivered Graduation Address, Temple University College of Science and Technology, December 2014
Seminar for graduate students in course in Econophysics, Boston University, Boston, May, 2016
Invited Speaker, “Sixty-Fifth Birthday Celebration for John Machta”, Santa Fe New Mexico, June 2016
Colloquium, CNLS, Los Alamos National Laboratory, Los Alamos New Mexico, January 2017

GRADUATE STUDENTS

Gerald Shlifer, Ph.D. 1980, “Numerical Studies of Percolation Models”
Leacir Lucena, Ph.D. 1982, “Migdal-Kadanoff Renormalization Group for Models with Further Neighbor Interactions”
Dieter Heermann, Ph.D. 1983, “Numerical Studies of Non-Classical Nucleation”

Christopher Unger, Ph.D. 1984, "Theoretical Investigation of Nucleation in Systems with Long Range Interactions"

James Given, Ph.D. 1987, "Integral Equation Approach to Continuum Percolation"

Tane Ray, Ph.D 1988, "Numerical Studies of Percolation Models of Spinodal Nucleation"

Pablo Tamayo, Ph.D. 1989 "Cluster Acceleration Algorithms"

Liza Monette, Ph.D. 1989 "Numerical Studies of Spinodal Nucleation"

John Ross, Ph.D. 1993, "Non-Linear Dynamics in a Class of Burridge-Knopoff Models"

Iuval Clejan, Ph.D. 1994, "Theoretical Investigation of Crystallization"

Nicolas Gross, Ph.D. 1994, "Numerical Studies of Continuous Ordering"

Raphael Ramos, Ph.D. 1994, "Molecular Dynamics investigation of Crystallization and Glasses"

Charles Ferguson, Ph.D. 1996, "Theoretical and Numerical Studies of Models of Earthquake Faults"

Cyril Muratov, Ph.D. 1997 "Structure in Systems with Long Range Interactions of the Coulombic Type"

Aaron Schweiger Ph.D. 2007 "Phase Transition Kinetics in Driven Dissipative Systems"

Aaron Santos Ph.D. 2007 "Nucleation and Instabilities in Biological Molecules"

Kipton Barros Ph. D. 2009 "Phase Transitions in Systems with Long-Range Interactions"

Rachele Dominguez Ph. D 2009 "Early Evolution of Symmetry Breaking Phase Transitions"

Christopher Serino Ph.D 2012 "Statistical Properties of Systems with Damage and Defects"

Kang Liu Ph.D 2013 "The Effect of Damage on Nucleation"

Tyler Xuan Gu 2016 "Modified Earthquake Olami, Feder, Christensen Model with Low Noise, Asperities and Inhibitions"

James Silva 2016 " The Role of Heterogeneity in Long-Range Interacting Systems: From Nucleation To Earthquake Fault Systems"

Nick Lubbers 2016 "A Statistical Mechanical Model of Economics"

Rashi Verma(current student) TBA

CO - DIRECTED STUDENTS

J. Yang, Ph.D. 1990 (Advisor - H. Gould, Clark University) "Computer Simulation Studies in the Dynamics of First Order Phase Transitions"

A. Mel'cuk, Ph.D. 1995 (Advisor- H. Gould, Clark University) "Molecular Dynamics Studies of Supercooled Liquids in two Dimensions"

G. Johnson, Ph.D. 2002 (Advisor - H. Gould, Clark University) "Near Mean-Field Effects in Fragile Glass Formers"

N. Gulbahce, Ph.D. 2005 (Advisor - H. Gould, Clark University) "Phase Transitions in Systems with Long-Range Interactions"

J. Xia, Ph.D. 2006, (Advisor H. Gould, Clark University) "Computer Simulations of Statistical Models of Earthquakes"

Hui Wang Ph.D. 2007 (Advisor H. Gould, Clark University) "Nucleation in Ising Models, Lennard-Jones Liquids and the FPU Problem"

Ranjit Chacko(Advisor H. Gould, Clark University) (TBA)

Post-Doctoral Fellows

Frank J. Alexander, Oct. 1996-Sept. 1998

Marian Anghel, Sept. 1998 - Sept. 2000