

John B. Rundle

Education and Employment

Education:

Ph.D., Geophysics & Space Physics, UCLA, 1976

M.S. , Planetary & Space Science, UCLA, 1973

B.S.E., Aerospace and Mechanical Sciences, Princeton University, 1972

Affiliations:

American Physical Society (*Fellow*, 2004-)

American Geophysical Union (*Fellow*, 2008-)

Seismological Society of America

The Computer Society

Professional Activities

Honorary Societies and Fellowships:

National Merit Finalist

Magna Cum Laude, Princeton University, 1972.

Tau Beta Pi, Princeton University

Phi Beta Kappa, Princeton University

Phi Eta Sigma, University of Illinois

Professional Recognition:

Award for Exceptional Contributions in Fundamental Research, Sandia National Laboratories, 1987 (\$2500 Award)

Best Paper of the US Geological Survey, Branch of Geologic Risk Assessment, 1989(with G. King & R. Stein)

Association Lecturer, International Association of Seismology and Physics of the Earth's Interior, Wellington, NZ, 1994.

Distinguished Visiting Scientist, Jet Propulsion Laboratory, Pasadena, California, 1995 -

Award for Outstanding Contributions in Geosciences Research, given at the Geosciences Research Symposium, Lawrence Berkeley National Laboratory, April, 1996, by the Geosciences Research Program, Office of Basic Energy Sciences, US Department of Energy.

Award for Distinguished Service as Chair (1994-1996) of the Advisory Board of the Southern California Earthquake Center, Given at the Southern California Earthquake Center Annual Meeting, 2001.

4th Lorenz Lecturer, American Geophysical Union Fall Meeting, December, 2004.

Elected Fellow, American Physical Society, 2004

2005 NASA Space Act Award - QuakeSim - NASA Tech Brief NPO 41079
August, 2005.

Elected Fellow, American Geophysical Union, 2008

External Professor, The Santa Fe Institute, 2008-

Biographical Listings:

Marquis' Who's Who in Frontiers of Science and Technology

Marquis' Who's Who in the West

Marquis' Who's Who of Emerging Leaders in America

Marquis' Who's Who in America, 60th Edition, 2005

Major Committees, Panels, Workshops:

National Research Council of the National Academy of Sciences, Committee on Geodesy,
Member, 1986 - 1987, *Chairman*, 1988 - 1990.

National Research Council of the National Academy of Sciences, Panel on Modeling, Future of
the Solid Earth Sciences, *Member*, 1988.

National Science Foundation, Evaluation Panel on Science and Technology Centers, Earth
Sciences, *Member*, 1989

National Science Foundation, Evaluation Panel on the Southern California Earthquake Center,
Chairman, 1989

National Aeronautics and Space Administration, Crustal Dynamics Program Investigator
Working Group, 1982 - Present, *Member*

National Aeronautics and Space Administration, GPS Science Working Group, 1987 - Present,
Member

U.S. Department of Energy, Magma Energy Program Science Advisory Panel, 1986 - Present,
Chairman

National Science Foundation, External Advisory Council for the Southern California Earthquake
Center, *Member*, 1991 - *Chairman*, 1995-1995; *Member*, 1997-1999

National Aeronautics and Space Administration, Evaluation Panel on Regional Deformation,
Chairman, 1991

National Science Foundation, Evaluation Panel on Collaborative Research in Geosciences,
Geography and Mathematical Sciences, *Member*, 1991

National Aeronautics and Space Administration, Geoscience Laser Ranging Team, 1989 -
Present, *Member*

Commission on Geodynamics and Tectonophysics of the Internat. Assoc. Seis. Phys. Earths Int.,
1992 - Present, *Member*

United States Delegation to JUST International Workshop on Application of Space Technology
to Combat Natural Disasters, Tsukuba, Japan, November 1993, *Member*

Office of Science and Technology Policy, Executive Office of the President of the United States,
National Forum on Environment and Natural Resources, March 28-30, 1994, *Invited
Participant*

Office of Science and Technology Policy, Executive Office of the President of the United
States, National Earthquake Strategy Workshop, June 6-8, 1994, *Invited Participant*

National Aeronautics and Space Administration, Earth System Science Advisory Committee
(Committee Advisory to the Associate Administrator OF NASA for Mission to Planet Earth ,
June 1994 – Present, *Member*

American Geophysical Union, Technical Committee on Nonlinear Geophysics, 1997-, *Chair*

National Aeronautics and Space Administration, Solid Earth and Natural Hazards, Committee on
Future Directions, Panel on Earthquakes and Crustal Deformation, 1997-1998, *Chair*

Graduate Student Advisory Committee, Santa Fe Institute, 1999-, *Member*

Advisory Board, Center for Dynamics of Complex Systems, Universitat Potsdam, Germany, 2003- *Member*

Technical Divisions Advisory Board, Jet Propulsion Laboratory, Pasadena, CA, 2003-, *Member*

Visiting Committee, Earth and Space Science Division, Jet Propulsion Laboratory, Pasadena, CA, 2003-, *Member*

International Science Committee, Advisory to the Australian Computational Earth Systems Simulator, a Major National Research Facility, September, 2003 -, *Member*
<http://www.access.edu.au/frames.htm>

NASA Capability Roadmap Team, Modeling and Simulation, January, 2005 -2006, *Member*

NASA Working Group on Synthetic Aperture Radar Interferometry, October, 2004 -, *Member*

Search Committee for Editor-in-Chief, Computers in Science and Engineering, a publication of the Computer Society for the IEE and the AIP, *Chair*, 2004.

NSF Panel to review the “Incorporated Research Institutions for Seismology”, October 24-26, 2005, Socorro, NM - *member*

APEC Cooperation for Earthquake Simulations, 2008 - , *Executive Director*

Editorial Boards:

Earth and Planetary Science Journal (Indian Academy of Sciences), 1996-

ARI, Bulletin of Istanbul Technical University, 1996-

American Institute of Physics Advisory Board to *Computing in Science and Engineering*, *Member* 1999-2001; *AIP Representative*, 2002-2003

Computing in Science and Engineering (CiSE), *Associate Editor in Chief*, 2003-

Recent Invited Lectures:

Scaling in Lattice Automata Models for Frictional Sliding, Earthquakes and Avalanches Processes: An Overview, Spring 1991 AGU Meeting, Baltimore, MD, May 28-31, 1991.

Self-Organized Criticality and Earthquakes, Santa Fe Institute for the Study of Complexity, Santa Fe, NM, September, 1991.

Dynamical Models for Crustal Deformation: An Overview, AGU Chapman Conference on Time Dependent Positioning: Modeling Crustal Deformation, Annapolis, MD, September 23-25, 1991.

The Statistical Mechanics of Earthquakes, Lectures given at the Workshop on Nonlinear Dynamics and Earthquake Prediction, International Center for Theoretical Physics, Trieste, Italy, December, 1991

Scaling in Lattice Automata Models for Frictional Sliding, Earthquakes, and Avalanche Processes: An Overview, European Geophysical Society Annual Meeting, Edinburgh, Scotland, April, 1992.

Simulating Earthquakes and Seismicity in the Computer, Seismological Society of America, Santa Fe, NM, April, 1992.

Nucleation and Earthquakes, Rutgers Meeting on Statistical Mechanics, Rutgers University, May, 1992.

Nonlinear Models for Earthquakes, Turcotte Symposium, Ithaca, NY, May 16, 1992.

Scaling and Critical Phenomena in a Class of Burridge Knopoff Models for Earthquakes, SIAM 40th Anniversary Meeting, Los Angeles, CA, July 20, 1992.

- Physics of Earthquakes*, VII Assembly of European Union of Geosciences, Strasbourg, France, April, 1993.
- Simulating Earthquakes in the Computer*, IMACS International Conference on Computational Physics, St. Louis, October, 1993.
- Contributions of Space Technology to Fundamental Studies of Earthquakes*, JUST International Workshop on Application of Space Technology to Combat Natural Disasters, Tsukuba, Japan, November 1993.
- The Statistical Mechanics of Earthquakes*, Association Lecture, International Association of Seismology and Physics of the Earth's Interior, Wellington, NZ, 1994.
- Predicting Earthquakes: New Ideas from the Sciences of Complexity*, Public Lecture Series, Santa Fe Institute for the Study of Complexity, Santa Fe, NM, March 16, 1994.
- Deep Exploration of an Active Silicic Caldera: A Search for Magma in the Crust Beneath Long Valley, California*, VIIth International Symposium on the Observation of the Continental Crust Through Drilling, Santa Fe, NM, April, 1994.
- Earthquakes and Brain Dynamics*, Distinguished Lecturer Series, Department of Geology and Geophysics, University of Wyoming, October 4, 1994
- Earthquakes and Neurobiology: Emergent Behavior in Two Driven Threshold Systems*, Santa Fe Institute Seminar Series, January, 1995.
- Complexity and Scaling in Natural Hazard Occurrence*, invited lecture in "Lecture Series on Natural Hazards", Jet Propulsion Laboratory, June 15, 1995.
- Earthquakes and Complexity*, Departmental Colloquium, Department of Physics, Boston University, October, 1995.
- Citationist for Donald L. Turcotte*, on the occasion of his receiving the American Geophysical Union Charles Whitten Medal, December, 1995.
- The Statistical Mechanical View of Earthquakes: Unifying themes and the Development of General Earthquake Models*, Carnegie Institution of Washington, DTM, February, 1996.
- The Statistical Mechanics of Earthquakes*, Scripps Inst. of Oceanography, March, 1996.
- The Statistical Mechanics of Earthquakes and Other Driven Threshold Systems*, California Institute of Technology, February, 1997.
- Earthquakes and Complexity*, Lawrence Livermore National Laboratory, July, 1997.
- A Users Guide to Models for Viscoelastic and Inelastic Postseismic Deformation*, American Geophysical Union, December, 1997.
- Modeling earthquakes as a complex nonlinear system*, US Department of Energy Workshop on Computational Scientific Initiative/Nonlinear complex systems, Germantown, MD, January, 1998.
- Modeling foreshocks and aftershocks as critical phenomena fluctuations*, Workshop on Seismicity Patterns, Their Statistical Significance and Meaning (sponsored by Univ. of Alaska), Nikko, Japan, May, 1998.
- Pattern dynamics and predictability of seismicity in complex nonlinear systems*, Workshop on Earthquake Stress Triggering, Fault Interaction, and Frictional Failure (sponsored by US Geological Survey), Carmel, CA, June, 1998.
- Finding space-time patterns in complex earthquake sequences: A Pattern Dynamics approach*, Workshop on Earthquake Physics (sponsored by Southern California Earthquake Center), Snowbird, UT, June 1998.
- Can we forecast earthquakes like we forecast El Nino's?*, Lawrence Livermore National Laboratory, July, 1998.

- Modeling and simulations of nonlinear systems*, Symposium on Computer Modeling and Simulation at UC Boulder (sponsored by the Graduate School of the University of Colorado at Boulder), September, 1998.
- Analyzing earthquake hazards with space geodesy: From data to models*, US-Japan workshop on the Utilization of Remote Sensing Technology to Natural Disaster Reduction (sponsored by NIED, Japan), Tsukuba, Japan, October, 1998.
- General Earthquake Models*, presented at the 1st workshop of the APEC Cooperation for Earthquake Simulation, Brisbane, Australia, February, 1999.
- What can we learn about the physics of earthquakes from numerical simulations?*, Department of Geophysics, Stanford University, April, 1999.
- Dynamics of space-time patterns in nonlinear threshold systems*, CNLS-Colorado Days, Los Alamos, NM, May, 1999.
- Space-time complexity, correlations and patterns in earth system processes*, Exxon Research Corporation, Clinton, NJ, October, 1999.
- Systematic variations in non-local space time patterns of southern California seismicity*, International Workshop '99 on Seismotectonics at the Subduction Zone, National Institute for Earth Science and Disaster Prevention, Tsukuba, Japan, November-December, 1999.
- The US General Earthquake Model Program: What We Can Learn About Earthquake Physics, Processes and Patterns from Numerical Simulations*, International Workshop on Solid Earth Simulations and Working Group Meeting of the APEC Countries Cooperation for Earthquake Simulation, Tokyo, Japan, January, 2000.
- Images of Space-Time Patterns in Complex Earth Systems*, given at the US Department of Energy, Basic Energy Sciences Workshop on Imaging, February, 2000.
- What is the Future of Earthquake Science?*, Invited Lecture at the Festschrift Symposium to honor Professor K. Aki's, Los Angeles, March, 2000.
- Transition from Simplicity to Complexity in Earthquake Faults*, Invited talk at the 25th General Assembly of the European Geophysical Union, Nice, France, April, 2000.
- Using Numerical Simulations as an Approach to Understanding Extreme Earthquake Events (Using Virtual_California Simulations to Interpret Earthscope Data)*, Invited Lecture given at the Workshop on Extreme Events, organized by the Center for Science, Policy and Outcomes, Boulder, CO, June, 2000.
- The Statistical Mechanics of Earthquakes*, Invited Lecture at the Gordon Conference on Statistical Mechanics, Plymouth, NH, June 2000.
- Patterns of Earthquakes in a Geometrically Realistic Simulation for the Southern California Earthquake Fault System*, given at the Lawrence Livermore National Laboratory, August, 2000.
- Simplicity and Complexity in Earthquake Dynamics: Dynamical Manifestations of Complex Geosystems*, given at the Jet Propulsion Laboratory, Pasadena, CA, August, 2000.
- General Earthquake Models, Problems and Prospects*, Invited Lecture, 2nd International Symposium of the APEC Countries Cooperation for Earthquake Simulation, Hakone, Japan, October, 2000.
- Nonlinear Network Dynamics of Earthquake Fault Systems*, Institute for Theoretical Dynamics, UC Davis, October, 2000.
- The Statistical Physics of Earthquakes: New Approaches Using Numerical Simulations*, Research Frontiers Lecture, Institute for Geophysics and Planetary Physics, Los Alamos National Laboratory, November, 2000.

- Dynamics of Earthquake Fault Systems*, Invited Colloquium at Center for Nonlinear Science, Los Alamos National Laboratory, November, 2000
- Self-Organization of Earthquake Fault Systems due to Sliding Friction*, Invited talk at the Fall, 2000 American Geophysical Union Meeting, San Francisco, CA, December, 2000.
- Terrametrics Analysis of Space-Time Patterns in Earthquakes, with Applications to Forecasting and Prediction*, Invited talk at the Fall, 2000 American Geophysical Union Meeting, San Francisco, CA, December, 2000.
- Geocomplexity*, Presentation to Dr. Margaret Leinen, Director of NSF/GEO Division, NSF, January, 2001.
- Self-Organization in Leaky Threshold Systems, with Applications to Physics, Biology, and Earthquakes*, NAS Arthur M. Sackler Colloquium, Irvine, CA, March, 2001.
- Scaling in Earthquake Science, IMA/NSF Workshop on Mathematics and Earth Science, University of Minnesota, Minneapolis, MN, March, 2001.
- Simulating Earthquakes in the Computer, with Applications to Earthquake Forecasting*, Colloquium, Department of Physics, Harvey Mudd College, Claremont, CA, March, 2001.
- The Appearance of Equilibrium-like Properties in Driven Dissipative Systems in Complex Earth (and other) Systems*, Invited talk at the Spring, 2001 American Geophysical Union Meeting, Boston, MA, May, 2001.
- The Statistical Physics of Earthquakes: New Approaches Using Numerical Simulations*, Invited Plenary lecture, SIAM Meeting, Boulder, CO, June 2001.
- Simulating Earthquake Fault System Dynamics*, Southern California Earthquake Center II Organizing Workshop, Lake Tahoe, CA, July, 2001.
- Scales in Earthquake Cycle Simulations*, GEM/ACES Workshop on Computational Technologies for Earthquake Science, Maui HPC Center, Maui, HI, July, 2001.
- Evaluating Performance and Observational System Constraints for NASA/GESS missions Using Numerical Stress-Evolution Simulations of Fault Networks*, Global Earthquake Satellite System Workshop, Snowbird, UT, October 2001.
- Coupling of Great Earthquakes Between Northern and Southern California: Analysis via Numerical Simulations*, American Geophysical Union, Fall, 2001.
- A New Kind of Geophysics: The Role of Computational Science & Engineering in the Discovery Process*, Invited Lectures given at Cornell University, Princeton University, and University of California at Berkeley, October 2002.
- Problems and Challenges in Earthquake Simulations*, American Geophysical Union, Fall, 2002.
- Space-Time Patterns, Computer Simulations, and Earthquakes: Is this a "New Kind of Geophysics?"*, presented at US Geological Survey, Menlo Park, CA, May 14, 2003.
- Understanding Complex Earthquake Fault Systems Using Numerical Simulations*, presented at the Summary Symposium on the Solid Earth Simulator Project (1998-2002), Tokyo, Japan, March 13, 2003.
- Damage Mechanics and Spinodals in Self-Organizing Complex Systems*, presented at the Spring AGU-EGS-EUG meeting, Nice France, April 2003
- Strategies for the Detection and Analysis of Space-Time Patterns of Earthquakes on Complex Fault Systems*, presented at the International Conference on Computational Science, Melbourne, Australia, June, 2003.
- How John Hopfield and Eugen Merzbacher Influenced My Life as a Scientist: Earthquakes, Neurobiology, and the Physics of Patterns in Complex Threshold Systems*, presented at the

- Hopfest Symposium in Honor of John Hopfield's Career, Princeton University, Princeton, NJ, June 7-8, 2003.
- Statistical Mechanical Approaches to the Modeling of and Forecasting of Nonlinear Earthquake Physics and Dynamics*, presented at the Hagiwara Symp. at the Inter. Union Geodesy and Geophys., Sapporo, Japan, July 1, 2003.
- Simulating the Earthquake Cycle on Complex Multiscale Earthquake Fault Systems: Towards Ensemble Earthquake Forecasting*, presented at the Graduate Institute of Geophysics, National Central University, Chung Li, Taiwan, October 2, 2003.
- Statistical Physics of Earthquake Fault Systems: The Physics Behind the Faulting*, presented at the Academia Sinica, Taipei, Taiwan, October 8, 2003.
- Computing and Visualizing the Complex Dynamics of Earthquake Fault Systems, Towards Ensemble Earthquake Forecasting*, presented at the Fall, 2003 Am. Geophys. Meeting, San Francisco, CA, December 9, 2003.
- Using Computer Simulations to Develop Technology for Earthquake Prediction*, presented at the Int. Symp. on Predictability of the Evolution and Variation of the Multiscale Earth System, University of Tokyo, January 8-9, 2004.
- Variation, Recurrence and Correlation in Topologically Realistic System-Level Earthquake Stress-Evolution Simulations*, presented at the RELM conference on Earthquake Rupture Forecasting, Lake Arrowhead, California, February 19, 2004.
- Topologically Realistic, System-Level Earthquake Fault Simulations: Toward Ensemble Forecasting*, presented at the Seismological Society of America meeting in Palm Springs, California, April 14, 2004.
- Connecting the Microscale to the Macroscale in Earthquake Processes, Scaling and its Relation to Nucleation in Damage Mechanics*, 4th ACES Workshop, Beijing, China, July 9-14, 2004.
- Recurrence and Correlation in Topologically Realistic System-Level Earthquake Simulations*, 4th ACES Workshop, Beijing, China, July 9-14, 2004.
- Research in Earthquake Physics, Forecasting, and Simulation-based Probabilistic Hazard Assessment at the University of California, Davis*, Disaster Prevention Research Institute, Kyoto University, Japan, October 13, 2004.
- Simulating the Dynamics of Earthquakes with High Performance Computing*, International Workshop on Geodynamics: Observation, Modeling and Computer Simulation, University of Tokyo, Tokyo, Japan, October 14-15, 2004.
- Information Technology and Model Synthesis*, NASA Workshop on Synthetic Aperture Radar Interferometry, October 20-22, 2004.
- Process, Pattern and Prediction: Complexity in Driven Earth Systems*, Lorenz Lecture, American Geophysical Union Fall Meeting, December, 2004. Also presented at the Hydrologic Sciences Colloquium, UC Davis, May 19, 2005.
- Recent Results in Earthquake Forecasting Research at the University of California, Davis, USA*, Workshop on Early Warning Systems for Earthquake Monitoring Using Space Technology, Kandili Observatory and Earthquake Research Institute, Istanbul, Turkey, February 1-2, 2005.
- Understanding the Earthquake Cycle on Complex Multiscale Earthquake Fault Systems: Progress and Prospects*, UC Berkeley Seismological Laboratory Seminar, March 15, 2005.

- Anticipating Disaster - Earthquake Prediction and Computational Geoscience*, Santa Fe Institute Business Network topical meeting, Cisco Systems Headquarters, San Jose CA, March 23, 2005.
- Understanding the Earthquake Cycle on Complex Multiscale Earthquake Fault Systems: Progress and Prospects*, Science Board Meeting, Australian Computational Earth Systems Simulator, a Major National Research Facility, University of Queensland, Brisbane, Australia, April 18-22, 2005.
- A Brief Overview of Tsunamis and the Sumatra Tsunami Event*, Science Board Meeting, Australian Computational Earth Systems Simulator, a Major National Research Facility, University of Queensland, Brisbane, Australia, April 18-22, 2005.
- Forecasting Earthquakes Using the Pattern Informatics Method ("Hotspot Maps"):* *Current Status*, European Geoscience Union, Vienna, Austria, April 25, 2005.
- Forecasting Locations for Destructive Tsunamis Using the Pattern Informatics Method ("Hotspot Maps")*, European Geoscience Union, Vienna, Austria, April 26, 2005.
- Thresholds and Pattern Dynamics*, Sir Mark Oliphant Conferences, International Frontiers of Science and Technology, University of Western Australia, July 4-7, 2005.
- Process, Pattern, Prediction: Understanding Complexity in Driven Dynamical Systems*, Monash University, Melbourne Australia, July 14, 2005.
- Earthquake Forecasting, Issues and Ideas*, University of Queensland/AcCESS, July 20, 2005.
- Relating Observable Earthquake Pattern Formation to Unobservable Earthquake Physics: Implications for Earthquake Forecasting*, Kavli Institute for Theoretical Physics, Santa Barbara, CA August 15, 2005
- The Pattern Informatics Approach to Earthquake Forecasting, Current Status*, California Earthquake Prediction Evaluation Council, Sacramento, CA September 20, 2005.
- Topologically Realistic System-Level Earthquake Stress-Evolution Simulations*, Working Group on California Earthquake Probabilities, US Geological Survey, Menlo Park, CA November 11, 2005.
- 100 Years after the San Francisco Earthquake of 1906: Earthquake Forecasting and Forecast Verification - Status, Prospects and Promise*, Fall 2005 AGU meeting, Eos Trans. AGU, 86(52), Fall Meet. Suppl., Abstract NG21A-07
- Earthquake Forecasting on Complex Multiscale Earthquake Fault Systems - Prospects, and Promise, 100 Years after the San Francisco Earthquake of 1906*, Directors Colloquium Series, NASA Goddard Space Flight Center, Greenbelt, MD March 6, 2006.
- Overview: Earthquake Segmentation, Fault-to-Fault Jumps, and Numerical Paleoseismology*, Working Group on California Earthquake Probabilities, Southern California Earthquake Center, Pasadena, CA March 16, 2006.
- Ideas on Time-Dependent Earthquake Forecasting*, APEC Collaboration for Earthquake Simulations, 5th International Workshop, Maui, HI, April 6, 2006.
- Santa Rosa and the San Francisco Earthquake of 1906*, Public Lecture, Santa Rosa, CA April 23, 2006.
- What Happens....When You Include the Test in The Earthquake Forecast?*, Southern California Earthquake Center - Collaboratory for the Study of Earthquake Predictability, Oxnard, CA June 7, 2006.

- Process, Pattern, Prediction: Using Space Data to Understand and Predict Complexity in Driven Dynamical Earth Systems*, Interface 2006, The 38th Symposium on the Interface of Statistics, Computing Science and Applications, Pasadena, CA May 25, 2006
- Earthquake Forecasting, Numerical Simulations, and Space-Time Patterns*, Seminario Internacional Complutense “Earth Sciences and Mathematics”, Universidad Complutense de Madrid, September 13-15, 2006.
- Earthquake Forecasting and its Verification, Ensemble Forecasting with Seismic Intensity-Based Measures*, Academia Sinica Colloquium, Taipei, Taiwan, October 19, 2006.
- The Physics of Space-Time Interactions: Analysis Based on Recreating Great Earthquakes in the Computer*, Department of Earth Sciences Colloquium, National Central University, Taiwan, October 20, 2006.
- Advances in Earthquake Forecasting with Numerical Simulations and Pattern Analysis*, First Intl. CREST Symp. for “Integrated Predictive Simulation System for Earthquake and Tsunami Disaster, University of Tokyo, October 23-24, 2006.
- Advances in Earthquake Forecasting and Forecast Verification Ensemble forecasting with seismic intensity-based measures*, Department of Earth Sciences, Kyoto University, Kyoto, Japan, November 7, 2006.
- Earthquake Physics and Forecasting: Space-Time Patterns, Ensembles and Numerical Simulations*, 6th Joint Meeting of the UJNR Panel on Earthquake Research, Tokushima, Japan, November 8-11, 2006.
- Forecasting Natural Disasters in the Chaotic and Complex Earth*, Santa Fe Inst. Public Lecture, Santa Fe, NM, November 15, 2006
- California Institute for Hazard Research*, CITRIS Colloquium, UC Berkeley, March 21, 2007.
- Earthquake Risk Assessment and Forecasting: A Summary of Current Issues*, Department of Earth Sciences, University of Western Ontario, Canada, April 26, 2007
- Failure of Rock Masses from Nucleation and Growth of Microscopic Defects and Disorder*, US DoE Symposium on Computational and Numerical Geosciences, Gaithersburg, MD, May 3-4, 2007.
- Numerical Simulations of Earthquakes on Realistic Fault Systems: Virtual California*, SCEC Earthquake Simulators Workshop, November 2-6, 2007.
- Forecasting Large Earthquakes Using Small Earthquakes*, Risk Management Solutions (RMS) Symposium on “Advances in Earthquake Forecasting”, January 23, 2008.
- Short-Term Forecasting of Large Earthquakes*, EQECAT Client Conference, Savannah, GA, April 3, 2008.
- Virtual California 2008: Topology and Dynamics*, 6th ACES International Workshop, Cairns, Australia, May 11-16 2008.
- Performance Analysis of RIPI Forecasts of California Earthquakes*, 6th ACES International Workshop, Cairns, Australia, May 11-16 2008.
- Nucleation and Growth of Microscopic Defects and Disorder in Rock Masses*, 6th ACES International Workshop, Cairns, Australia, May 11-16 2008.
- Hazards, Physical Risks, and Financial Risks of Potential Natural Disasters*, Testimony to the California Board on Forestry and Wildfires, Sacramento, CA, May 8, 2008.
- Financial Innovations for Wildfire and Other Types of Potential Natural Disasters*,

Testimony to the California Board on Forestry and Wildfires, Sacramento, CA, May 8, 2008.

Research and the Future of California Wildfire Policy, Testimony to the California Board on Forestry and Wildfires, Sacramento, CA, May 8, 2008.

Short Term Forecasting of Large Earthquakes Using Small Earthquakes, National Taiwan University, June 23, 2008.

Computing Earthquake Forecast Probabilities Using Numerical Simulations of the Physics of Realistic Fault Systems (Virtual California), National Central University, Taiwan, June 24, 2008; also, Association of Pacific Rim Universities Symposium, Davis, CA, August 21, 2008

Complex Natural Catastrophes: Modeling, Visualizing, and Managing Risk in an Uncertain World, Santa Fe Institute, September 16, 2008.

Patterns in Complex Natural Catastrophes: Modeling and Managing Risk in an Uncertain World, Santa Fe Institute-Morgan Stanley Workshop on Risk, Rye, NY, October 16-18, 2008.

Earthquakes: An example of nucleation in a system with long range (elastic) interactions, Conference on Global Center of Excellence for Physical Sciences Frontier (JST-CREST), University of Tokyo, Tokyo, Japan, October 28-30, 2008.

NASA Programs in Support of "Early Warning", NRC/NAS Committee on Seismology and Geodynamics, Irvine, CA, November 6, 2008.

Publications

Reviewed Publications:

1976:

1. Rundle, J.B., Anelastic processes in strike - slip faulting: Application to the San Francisco earthquake of 1906, *Ph.D. dissertation*, UCLA, 1976.

1977:

2. Rundle, J.B. and D.D. Jackson, A viscoelastic relaxation model for postseismic deformation from the San Francisco earthquake of 1906, *Pure Appl. Geophys.*, 115, 401 - 412, 1977.

3. Rundle, J.B. and D.D. Jackson, A three - dimensional viscoelastic model of a strike - slip fault, *Geophys. J. Roy. Astr. Soc.*, 49, 575 - 592, 1977.

4. Rundle, J.B. and D.D. Jackson, A kinematic viscoelastic model of the San Francisco earthquake of 1906, *Geophys. J. Roy. Astr. Soc.*, 50, 441 - 458, 1977.

5. Rundle, J.B. and D.D. Jackson, Numerical simulation of earthquake sequences, *Bull. Seism. Soc. Am.*, 67, 1363 - 1378, 1977.

1978:

6. Rundle, J.B. Gravity changes and the Palmdale uplift, *Geophys. Res. Lett.*, 5, 41 - 44, 1978.

7. Rundle, J.B., Viscoelastic crustal deformation by finite, quasistatic sources, *J. Geophys. Res.*, 83, 5937 - 5945, 1978.

1979:

8. Thatcher, W. and J.B. Rundle, A model for the earthquake cycle in underthrust zones, *J. Geophys. Res.*, 84, 5540 - 5556, 1979.

1980:

9. Passman, S.L., Grady, D.E., and J.B. Rundle, The role of inertia in the fracture of rock, *J. Appl. Phys.*, 51, 4070 - 4075, 1980.

10. Rundle, J.B. and W. Thatcher, Speculations on the nature of the Palmdale uplift, *Bull. Seism. Soc. Am.*, 70, 1869 - 1886, 1980.

11. Rundle, J.B., Static elastic - gravitational deformation of a layered half - space by point couple stresses, *J. Geophys. Res.*, 85, 5355 - 5363, 1980.

12. Thatcher, W., Matsuda, T., Kato, T. and J.B. Rundle, Lithospheric loading by the 1896 Riku - u earthquake, northern Japan: Implications for plate flexure and asthenospheric rheology, *J. Geophys. Res.*, 85, 6429 - 6435, 1980.

1981:

13. Rundle, J.B. and K.W. Shuler, A composite model for the anisotropic elastic moduli of lean oil shale, *Geophysics*, 81, 163 - 171, 1981.

14. Rundle, J.B. and M. McNutt, Southern California uplift -- Is it or isn't it?, *Trans. Am. Geophys. Un. EOS*, 62, 97 - 98, 1981.

15. Rundle, J.B., Vertical displacements from a rectangular thrust fault in layered elastic - gravitational media, *J. Phys. Earth*, 29, 173 - 186, 1981.

1982:

16. Rundle, J.B., Viscoelastic - gravitational deformation by a rectangular thrust fault in a layered earth, *J. Geophys. Res.*, 87, 7787 - 7796, 1982.

17. Rundle, J.B. and A.T. Smith, Comment on "Interpretation of postseismic deformation with a viscoelastic relaxation model, by J. Wahr and M. Wyss", *J. Geophys. Res.*, 87, 1079 - 1080, 1982.

18. Rundle, J.B. and S.L. Passman, Constitutive laws, tensorial invariance, and chocolate cake, *Geophys. Surveys*, 5, 3 - 36, 1982.

19. Rundle, J.B., Deformation, gravity and potential change due to volcanic loading of the crust, *J. Geophys. Res.*, 87, 10724 - 10744, 1982.

1983:

20. Rundle, J.B., Some solutions for static and pseudo - static deformation in layered, nonisothermal media, *J. Phys. Earth*, 30, 421 - 440, 1983.

21. Rundle, J.B. and J.C. Eichelberger, Continental scientific drilling at Long Valley - Mono Craters, *Trans. Am. Geophys. Un. EOS*, 64, 12 - 15, 1983.

22. Rundle, J.B., Correction to "Deformation, gravity and potential change due to volcanic loading of the crust, by J.B. Rundle, *J. Geophys. Res.*, 88, 10647 -10652, 1983.

23. Rundle, J.B., Models of crustal deformation, *Rev. Geophys. Space Phys.*, and *IUGG Quadrennial Rept.* (invited), 21, 1454 - 1458, 1983.

1984:

24. Rundle, J.B., Kanamori, H. and K.C. McNally, An inhomogeneous fault model for gaps, asperities, barriers, and seismicity migration, *J. Geophys. Res.*, 89, 10219 - 10231, 1984 (correction, *J. Geophys. Res.*, 91, 2218, 1986).

25. Thatcher, W. and J.B. Rundle, A viscoelastic model for periodically recurring earthquakes in subduction zones, *J. Geophys. Res.*, 89, 7631 - 7640, 1984.

26. Rundle, J.B. and J.H. Whitcomb, A model for deformation in Long Valley caldera, 1980 - 1983, *J. Geophys. Res.*, 89, 9371 - 9380, 1984.

27. Rundle, J.B., Models for volcanic processes in Long Valley California: Testing by continental drilling, *Proc. Symp. Observation of the Continental Crust through Drilling*, Columbia University Press, 1984.

28. Whitcomb, J.H. and J.B. Rundle, Gravity changes associated with the January, 1983 earthquake swarm, Long Valley, California, *Geophys. Res. Lett.*, 12, 522 - 5425, 1984.

1985:

29. Rundle, J.B. and J.H. Whitcomb, Modeling crustal deformation in Long Valley Caldera, 1980 - 1983, *Proc. U.S. Geol. Survey Conf. on Volcanic Hazards in Long Valley, California*, 1985.

30. Rundle, J.B., Elbring, G.J., Striker, R.P., Finger, J.T., Carson, C.C., Walck, M.C., Ellsworth, W.L., Hill, D.P., Malin, P.C., Tono, E., Robertson, M., Kuhlman, S., McEvilly, T., Clymer, R., Smithson, S.B., Deemer, S., Johnson, R., Henyey, T., Hauksson, E., Leary, P., McCraney, J., Kissling, E., Seismic imaging in Long Valley, California, by surface and borehole techniques: An investigation of active tectonics, *Trans. Am. Geophys. Un. EOS.*, 66, 194 - 201, 1985.

1986:

31. Rundle, J.B., An approach to modeling present day deformation in southern California, *J. Geophys. Res.*, 91, 1947 - 1959, 1986.

32. Elbring, G.J. and J.B. Rundle, Analysis of borehole seismograms from earthquakes in the south moat of Long Valley caldera: Implications for caldera structure, *J. Geophys. Res.*, 91, 12651 - 12660, 1986.

33. Rundle, J.B. and J. Whitcomb, Modeling gravity and trilateration data in Long Valley, California, 1983-1984, *J. Geophys. Res.*, 91, 12675-12682, 1986.

34. Rundle, J.B., Carrigan, C., Hardee, H. and W.C. Luth, Deep drilling to the magmatic environment in Long Valley caldera, *Trans. Am. Geophys. Un. EOS*, 67, 490 - 491, 1986.

1987:

35. Rundle, J.B. and H. Kanamori, Applications of an inhomogeneous stress (patch) model to complex subduction zone earthquakes: A discrete interaction matrix approach, *J. Geophys. Res.*, 92, 2606 - 2616, 1987.

36. National Academy of Sciences, Committee on Geodesy (J.B. Rundle, Member), Current Problems in Geodesy, *National Academy Press*, 1987.

1988:

37. Rundle, J.B. and D.P. Hill, The geophysics of a restless caldera - Long Valley, California, *Ann. Rev. Earth Planet. Sci.* (invited contribution), 16, 251 - 271, 1988.

38. Rundle, J.B., A physical model for earthquakes: 1. Fluctuations and interactions, *J. Geophys. Res.*, 93, 6237 - 6254, 1988.

39. Rundle, J.B., A physical model for earthquakes: 2. Application to southern California, *J. Geophys. Res.*, 93, 6255 - 6274, 1988.

40. King, G.C.P., Stein, R. and J.B. Rundle, The growth of geologic structures by repeated earthquakes: 1. Conceptual framework, *J. Geophys. Res.*, 93, 13307 - 13318, 1988.

41. Stein, R., King, G.C.P. and J.B. Rundle, The growth of geological structures by repeated earthquakes: 2. Field examples of continental dip - slip faults, *J. Geophys. Res.*, 93, 13319 - 13331, 1988.

1989:

42. Rundle, J.B., A physical model for earthquakes: 3. Thermodynamical approach and its relation to nonclassical theories of nucleation, *J. Geophys. Res.*, 94, 2839 - 2855, 1989.

43. Rundle, J.B., Derivation of the complete Gutenberg - Richter magnitude-frequency relation using the principle of scale invariance, *J. Geophys. Res.*, 94, 12337-12342, 1989.

44. Rundle, J.B. and W. Klein, Nonclassical nucleation and growth of cohesive tensile cracks, *Phys. Rev. Lett.*, 63, 171 - 174, 1989.

45. National Academy of Sciences, Committee on Geodesy (edited by J.B. Rundle, Chairman), Geodesy in the Year 2000, *National Academy Press*, 1989.

46. Rundle, J.B., Geodesy in the Year 2000: An Historical Perspective, *National Academy Press*, 1989.

47. Rundle, J.B., Earthquakes, self - organization, and scaling (invited contribution), *Physics World*, 2, 22, 1989.

48. Rundle, J.B., Julian, B., and D. Turcotte, Are earthquakes deterministic or chaotic?, (A report of a meeting), *Trans. Am. Geophys. Un. EOS*, 70, 880-882, 1989.

1990:

49. Chu, T.Y., Dunn, J.C., Finger, J.T., Rundle, J.B., and H.R. Westrich, The magma energy program, *Geothermal Resources Council Bull.*, 19, 42-52, 1990.

1991:

50. Rundle, J.B. and S.R. Brown, Origin of rate dependence in frictional sliding, *J. Stat. Phys.*, 65, 403-412, 1991.

51. Brown, S.R., Scholz, C.H., and J.B. Rundle, A simplified spring-block model of earthquakes, *Geophys. Res. Lett.*, 18, 215-218, 1991.

52. Rundle, J.B., Review of "Principles of Earthquake Source Mechanics, by B.V. Kostrov and S. Das, Cambridge, 1988", *SIAM Review*, 33, 335-337, 1991.

53. Rundle, J.B., Nonlinear dynamical models for earthquakes and frictional sliding, *Proc. Univ. Minn. Institute for Math. and its Applications Conf. on Chaotic Processes in the Geological Sciences*, Springer-Verlag, 1991.

54. Committee on Geodesy, National Academy of Sciences (J.B. Rundle, Chairman), *Overview and recommendations from "Geodesy in the Year 2000"*, National Academy Press, 1990, *Trans. Am. Geophys. Un. EOS*, 72, 105-108, 1991.

1992:

55. Rundle, J.B. and W. Klein, Nonlinear dynamical models for earthquakes, *Proc. 33rd US Symposium on Rock Mechanics*, J.R. Tillerson and W.R. Wawersik, eds., 737-744, 1992.

1993:

56. Rundle, J.B. and W. Klein, Scaling and critical phenomena in a class of slider block cellular automaton models for earthquakes, *J. Stat. Phys.*, 72, 405-412, 1993.

57. Rundle, J.B. and D.L. Turcotte, Theoretical studies of crustal deformation, in *Contributions of Geodesy to Geodynamics: Crustal Dynamics*, AGU Monograph Ser. vol. 23, pp. 107-129, Amer. Geophys. Un., Washington, DC, 1993.

58. Romanowicz, B. and J.B. Rundle, On scaling relations for large earthquakes, *Bull. Seism. Soc. Am.*, 83, 1294-1297, 1993.

59. Klein, W. and J.B. Rundle., Comment on "Self-organized criticality in a continuous, nonconservative cellular automaton modeling earthquakes", *Phys. Rev. Lett.*, 71, 1288, 1993.

60. Rundle, J.B., Magnitude frequency relations for earthquakes using a statistical mechanical approach, *J. Geophys. Res.*, 98, 21943-21949, 1993.

1994:

61. Fernandez, J. and J.B. Rundle, Gravity changes and deformation due to a magmatic intrusion in a multilayered crustal model, *J. Geophys. Res.*, *99*, 2737-2746, 1994.
62. Fernandez, J. and J.B. Rundle, Fortran program to compute displacement, potential and gravity changes due to a magma intrusion in a multilayered earth model, *Computers & Geosciences*, **20**, 461-510, 1994.
63. Rundle, J.B., J. Sass, J. Finger and J.C. Eichelberger, Deep exploration of an active silicic caldera: A search for magma in the crust, *Proc. VIIIth Int. Symp. Observation Cont. Crust Through Drilling*, 59-62, 1994.
64. Romanowicz, B. and J.B. Rundle, Reply to comment on "On scaling relations for large earthquakes, by Romanowicz and Rundle" from the perspective of a recent nonlinear diffusion equation linking short-time deformation to long-time tectonics, *Bull. Seism.Soc. Am.*, *84*, 1684, 1994.
65. Diez, J.L., Fernandez, J., Vieira, R. and J.B. Rundle, Modelos de Deformacion para el Diseno de la Vigilancia Geodesica de Actividad Volcanica en Lanzarote, *Serie Casa de los Volcanes N^o 3*, ed. A. Garcia, Edit. Cabildo Insular de Lanzarote, Lanzarote, Spain, November, 1994.
66. Rundle, J.B., W. Klein, and D.L. Turcotte, Meeting report, workshop on reduction and predictability of natural disasters, *Trans. Am. Geophys. Un. EOS*, *75*, 148, 1994.
- 1995:**
67. Langbein, J., D. Dzurisin, G. Marshall R. Stein and J.B. Rundle, Results from modeling two color geodimeter and leveling data from Long Valley caldera, 1988-1992, *J. Geophys. Res.*, *100*, 12487-12495, 1995.
68. Rundle, J.B. and W. Klein, New ideas about the physics of earthquakes, *Reviews of Geophysics and Space Physics Supplement*, and *Quadrennial Report to the IUGG and AGU 1991-1994 (invited)*, 283-286, July, 1995.
69. Hofton, M., J.B. Rundle, and G. Foulger, Horizontal surface deformation due to dike emplacement in an elastic-gravitational layer overlying a viscoelastic-gravitational half space, *J. Geophys. Res.*, *100*, 6329-6338, 1995.
70. Rundle, J.B., W. Klein, S. Gross, and D.L. Turcotte, Boltzmann fluctuations in numerical simulations of nonequilibrium threshold systems, *Phys. Rev. Lett.*, *75*, 1658-1661, 1995.
71. Rundle, J.B. and W. Klein, Dynamical segmentation and rupture patterns in a "toy" slider block model for earthquakes, *Nonlin. Proc. Geophys.*, *2*, 61 - 81, 1995.
72. Bahr, D.B. and J.B. Rundle, Theory of lattice Boltzmann simulations of glacier flow, *J. Glaciology*, **41**, 634-640, 1995.
- 1996:**
73. Rundle, J.B., W. Klein and S. Gross, Rupture characteristics, recurrence and predictability in a slider-block model for earthquakes, in *Reduction and Predictability of Natural Disasters*, ed. 74. J.B. Rundle,

D.L. Turcotte and W. Klein, Santa Fe Institute Studies in the Sciences of Complexity, Addison-Wesley, pp. 167-204, 1996.

75. Rundle, J.B., W. Klein and S. Gross, and D.L. Turcotte, Observations of Boltzmann fluctuations in stochastic slider-block simulations, in *Reduction and Predictability of Natural Disasters*, ed. J.B. Rundle, D.L. Turcotte and W. Klein, Santa Fe Institute Studies in the Sciences of Complexity, Addison-Wesley, pp. 261-272, 1996.

76. Klein W., C. Ferguson and J.B. Rundle, Spinodals and scaling in slider block models, in *Reduction and Predictability of Natural Disasters*, ed. J.B. Rundle, D.L. Turcotte and W. Klein, Santa Fe Institute Studies in the Sciences of Complexity, Addison-Wesley, pp. 223-242, 1996.

77. Yu, T.T., J.B. Rundle and J. Fernandez, Surface deformation due to a strike slip fault in an elastic-gravitational layer overlying a viscoelastic-gravitational half space, *J. Geophys. Res.*, **101**, 3199-3214, 1996.

78. Kozuch, M.J., T.T. Yu and J.B. Rundle, Southeastern Caribbean sea level variability and viscoelastic relaxation, *J. Geophys. Res.*, **101**, 8579-8594, 1996.

79. Rundle, J.B., W. Klein and S. Gross, Dynamics of a traveling density wave model for earthquakes, *Phys. Rev. Lett.*, **76**, 4285 - 4288, 1996.

80. Bahr, D.B. and J.B. Rundle, Stick-slip statistical mechanics of glacier sliding, *Geophys. Res. Lett.*, **23**, 2073-2076, 1996.

81. Fernandez, J., T.T. Yu and J.B. Rundle, Horizontal viscoelastic-gravitational displacement due to a rectangular dipping thrust fault in a layered earth, *J. Geophys. Res.*, **101**, 13581-13594, 1996 (correction, *Journal of Geophys. Res.*, **103**, 30283-30286, 1998).

82. Fernandez, J., T.T. Yu and J.B. Rundle, Deformation produced by a rectangular dipping fault in a viscoelastic-gravitational layered earth model, Part I, Thrust fault- FLTGRV and FLTGRH FORTRAN programs, *Computrs. & Geosci.*, **22**, 735-750, 1996 (Correction, **25**, 301-307, 1999).

1 Book Edited:

83. Rundle, J.B., D.L. Turcotte and W. Klein, editors, *Reduction and Predictability of Natureal Disasters*, Santa Fe Institute Studies in the Sciences of Complexity, Addison-Wesley, 296 pp, 1996.

1997:

84. Rundle, J.B., S. Gross, W. Klein, CD Ferguson and DL Turcotte, The statistical mechanics of earthquakes, *Tectonophysics*, **277**, 147-164, 1997.

85. Klein, W., J.B. Rundle and C. Ferguson, Scaling and nucleation in models of earthquake faults, *Phys. Rev. Lett.*, **78**, 3793-3796, 1997.

86. Rundle, J.B., W. Klein, S. Gross and C.D. Ferguson, The traveling density wave model for earthquakes and driven threshold systems, *Phys. Rev. E*, **56**, 293-307, 1997.

87. Bawden, G., A. Donnellan, L. Kellogg, D. Dong and J.B. Rundle, Geodetic measurements of four decades of horizontal strain near the White Wolf fault, southern California, *J. Geophys. Res.*, **102**, 4957-4968, 1997.

88. Rundle, J.B., W. Klein, S. Gross and D.L. Turcotte, Reply to a comment, "Non-Boltzmann fluctuations in numerical simulations of nonequilibrium lattice threshold systems", by H.J. Xu and D. Sornette, *Phys. Rev. Lett.*, **78**, 3798, 1997.

89. Fernandez, J.F., J.B. Rundle, R.D. Granell, and T.T. Yu, Programs to compute deformation due to a magma intrusion in elastic-gravitational layered earth models, *Computrs.&Geosci.*, **23**, 231-249, 1997.

90. Yu, T.T., J.B. Rundle and J. Fernandez, Deformation produced by a rectangular dipping fault in a viscoelastic-gravitational layered earth model. Part II: Strike slip fault STRGRV and STRGRV FORTRAN programs, *Computrs.&Geosci.*, **22**, 751-764, 1997. (Correction: **28**, 89-91, 2002)

91. Gross, S. and J.B. Rundle, A systematic test of time-to-failure analysis, *Geophys. J. Int.*, **133**, 57-64, 1997.

1998:

92. Vincent, P. and J.B. Rundle, Synthetic Aperature Radar Interferometry capability now available to universities (article), *Trans. Amer. Geophys. Un. EOS.*, **79**, 34, 1998.

93. Yu, T-T., J. Fernandez and J.B. Rundle, Inverting the parameters of an earthquake-ruptured fault with a genetic algorithm, *Comptrs. & Geosciences*, **24**, 173-182, 1998.

94. Ferguson, C.D., W. Klein, and J.B. Rundle, Long range earthquake fault models, *Computers in Physics*, **12**, 34-40, 1998.

95. Rundle, J.B. E. Preston, S. McGinnis, W. Klein, Why earthquakes stop: Growth and arrest in stochastic fields, *Phys. Rev. Lett.*, **80**, 5698-5701, 1998.

96. Gross, S. and J.B. Rundle, A systematic test of time-to-failure analysis, *Geophys. J. Int.*, **133**, 57-64, 1998.

1999:

97. Bhattacharyya, J., A.F. Sheehan, K. Tiampo, and J.B. Rundle, Using genetic algorithms to model broadband regional waveforms for crustal structure in the western United States, *Bull. Seism. Soc. Am.*, **89**, 202-214, 1999.

98. Carrasco, J.F., J. Fernandez, J.B. Rundle, and V. Arana, Methods for detecting volcanic unrest using a deformation model, *Bull. Vol.*, **60**, 534-544, 1999.

99. Ferguson, CD, W. Klein and J.B. Rundle, Spinodals, scaling, and ergodicity in a model of an earthquake fault with long-range stress transfer, *Phys. Rev. E.*, **60**, 1359-1373, 1999.

100. Rundle, JB, W. Klein and S. Gross, Physical basis for statistical patterns in complex earthquake populations: Models, predictions, and tests, *PAGEOPH*, **155**, 575-607, 1999.

101. Fernandez, J., T.-T. Yu and JB Rundle, Relaxation models for earthquakes in layered viscoelastic earth, *Recent Res. Devel. Geophysics*, **2**, 1-14, 1999.

102. Fernandez, J, JB Rundle, T.T. Yu, A. Alonso-Medina, JM Carrasco and KF Tiampo, Modeling deformation, potential and gravity changes produced by magmatic intrusion, Book chapter in *Comunicaciones I Asamblea Hispano-Potuguesa de Geodesia y Geofisica, IX* (1999)

103. JB Rundle, T. Henyey, JB Minster and G.Fox, General Earthquake Models, pp. 281-287, *Proceedings 1nd ACES Workshop*, ed. P. Mora, University of Queensland Press, Brisbane, AU (1999).

2000

104. Folch, A., J. Fernandez, JB Rundle and J. Marti, Ground deformation in a viscoelastic medium composed of a layer overlying a half-space: A comparison between point and extended sources, *Geophys. J. Int.*, **40**, 37-50, 2000.

105. Rundle, J.B., W. Klein and K. Tiampo, Linear pattern dynamics in nonlinear threshold systems, *Phys. Rev. E*, **61**, 2418-2431, 2000.

106. Rundle, J.B., Computational earth system science, *Computing in Science and Engineering (CiSE)*, **2**, 20-21, 2000.

107. Preston, E., JS de sa Martins, JB Rundle, M. Anghel and W. Klein, Models of earthquake faults with long-range stress transfer, *Computing in Science and Engineering*, **2**, 34-41, 2000.

108. Rundle, JB, DL Turcotte and W. Klein, Introduction, pp. 1-3, *GeoComplexity and the Physics of Earthquakes*, ed. JB Rundle, DL Turcotte and W. Klein, AGU Monograph 120, American Geophysical Union, Washington, DC, 2000.

109. Rundle, JB, W. Klein, K. Tiampo and S. Gross, Dynamics of seismicity patterns in systems of earthquake faults, *AGU Monograph "Geocomplexity and the Physics of Earthquakes"*, ed. JB Rundle, D. Turcotte and W. Klein, 2000.

110. Klein, W., CD Ferguson, M. Anghel, JB Rundle and JS Sa Martins, Cluster analysis in earthquake fault models with long-range interactions, *AGU Monograph "Geocomplexity and the Physics of Earthquakes"*, ed. JB Rundle, D. Turcotte and W. Klein, 2000.

111. KF Tiampo, JB Rundle, S. McGinnis, SJ Gross and W. Klein, Observation of systematic variations in non-local seismicity patterns from southern California, *AGU Monograph "Geocomplexity and the Physics of Earthquakes"*, ed. JB Rundle, D. Turcotte and W. Klein, 2000.

112. Tiampo, K.F., John B. Rundle, J. Fernandez, and J.O. Langbein, Spherical and ellipsoidal volcanic sources at Long Valley caldera, California, using a genetic algorithm technique, *J. Vol. Geotherm. Res.*, **102**, 189-206, 2000.

113. JB Rundle and W. Klein, Coarse-grained models and simulations for nucleation, growth, and arrest of earthquakes, pp. 307-322 in *Earthquake Thermodynamics and Phase Transformations in the Earth's Interior*, ed. R. Teisseyre and E. Majewski, Academic Press, San Diego, 2000.

114. PB Rundle, JB Rundle, KF Tiampo, J. Martins, S. McGinnis, W. Klein, Triggering dynamics on earthquake fault networks, pp. 305-317, *Proc. 3rd Conf. San Andreas Fault System*, ed. G. Bokelmann and RL Kovach, Stanford Univ. (2000).

115. J.B. Rundle, W. Klein, D.L. Turcotte, B.D. Malamud, Precursory seismic activation and critical-point phenomena, *Pure Appl. Geophys.*, **157**, 2165-2182, 2000.

Book:

116. Rundle, JB, DL Turcotte and W. Klein, *GeoComplexity and the Physics of Earthquakes*, AGU Monograph 120, American Geophysical Union, Washington, DC, 2000.

2001

117. J. Fernández, M Charco, M, K.F. Tiampo, G. Jentzsch, JB Rundle, Joint interpretation of displacement and gravity data in volcanic areas. A test example: Long Valley Caldera, California, *Geophys. Res. Lett.* **28**, 1063-1066, 2001.

118. J. Fernandez, KF Tiampo, G. Jentzsch, M. Charco, JB Rundle, Inflation or deflation? New results for Mayon volcano applying elastic-gravitational modeling, *Geophys. Res. Lett.*, **28**, 2349-2352, (2001).

119. PB Rundle, JB Rundle, KF Tiampo, J.S. S. Martins, S. McGinnis, W. Klein, Nonlinear network dynamics on earthquake fault systems, *Phys. Rev. Lett.*, **87**, 148501 (2001).

120. JB Rundle, A. Donnellan, G. Fox, W. Klein, P Rundle and K Tiampo, General Earthquake Models: Progress and prospects, pp. 147-150, *Proceedings 2nd ACES Workshop*, ed. M. Matsu'ura, K. Nakajima and P. Mora, University of Queensland Press, Brisbane, AU (2001).

121. W. Klein, J Rundle, M. Anghel, J.S.S. Martins, and C. Ferguson, Scaling and phase transitions in models of earthquake faults, pp. 189-190, *Proceedings 2nd ACES Workshop*, ed. M. Matsu'ura, K. Nakajima and P. Mora, University of Queensland Press, Brisbane, AU (2001).

122. K. Tiampo, J Rundle, S. McGinnis and W. Klein, Pattern dynamics and forecast methods in seismically active regions, pp. 471-476, *Proceedings 2nd ACES Workshop*, ed. M. Matsu'ura, K. Nakajima and P. Mora, University of Queensland Press, Brisbane, AU (2001).

123. J. Fernandez, KF. Tiampo, and J.B. Rundle, Viscoelastic displacement and gravity changes due to point magmatic intrusions in a gravitational layered solid earth, *Geophys. J. Int*, **146**, 155-170 (2001).

2002

124. J.B. Rundle, K.F. Tiampo, W. Klein and J.S.S. Martins, Self-organization in leaky threshold systems: The influence of near mean field dynamics and its implications for earthquakes, neurobiology and forecasting, *Proc. Nat. Acad. Sci. USA*, **99**, Supplement 1, 2514-2521, (2002)

125. D.L. Turcotte and J.B. Rundle, Self-organized complexity in the physical, biological, and social sciences, *Proc. Nat. Acad. Sci. USA*, **99**, Supplement 1, 2463-2465, (2002).

126. JS de Sa Martins, JB Rundle, M. Anghel, W. Klein, Transition from simplicity to complexity in models of frictional sliding, *Phys. Rev. E*, **65**, 056117(1-4) (2002).

127. KF Tiampo, JB Rundle, S. McGinnis, SJ Gross and W. Klein, Systematic variations in non-local seismicity patterns in southern California, pp. 283-292 in *Seismotectonics in Convergent Plate Boundaries*, ed. Y. Fujinawa and A. Yoshida, Terra Scientific Publishing (TerraPub), Tokyo, Japan (2002) [ISBN 4-88704-129-2].

128. KF Tiampo, JB Rundle, P. Hopper, J.Sa Martins, S. Gross and S. McGinnis, Parallelization of a large-scale computational earthquake simulation program, *Concurrency & Computation, Practice and Experience*, 14, 531-550 (2002). ACES Special Issue.
129. JB Rundle, PB Rundle, W Klein, J Martins, KF Tiampo, A Donnellan and LH Kellogg, GEM plate boundary simulations for the Plate Boundary Observatory: Understanding the physics of earthquakes on complex fault systems, *PAGEOPH*, 159, 2357-2381 (2002).
130. KF Tiampo, JB Rundle, S. McGinnis and W. Klein, Pattern dynamics and forecast methods in seismically active regions, *PAGEOPH*, **159**, 2429-2467 (2002).
131. KF Tiampo, JB Rundle, S. McGinnis, S. Gross and W. Klein, Mean field threshold systems and phase dynamics: An application to earthquake fault systems, *Europhys. Lett.*, **60**, 481-487, (2002).
132. KF Tiampo, JB Rundle, S.J. Gross, S. McGinnis and W. Klein, Eigenpatterns in southern California seismicity, *J. Geophys. Res.*, 107, B12, 2354, doi:10.1029/2001JB000562 (2002).
133. M. Charco, J Fernandez, MJ Sevilla, and JB Rundle, Modeling magmatic intrusion's effects on the geoid and vertical deflection: Application to Lanzarote, Canary Islands, and Long Valley Caldera, California, *Fisica de la Terra 14*, Geodetic and Geophysical Techniques, Models and Applications, 11-31, (2002) ISSN 0214-4557.

2003

134. JB Rundle, W Klein, KF Tiampo, Andrea Donnellan, and GC Fox, Strategies for the detection and analysis of space-time patterns in complex driven threshold systems, *Computational Science – ICCS 2003, Proc. Int. Conf. Comp. Sci.*, Part III, 827-844 (Springer-Verlag, Berlin 2003).
135. J. Parker, A.Donnellan, G. Lyzenga, JB Rundle and T.Tullis, Performance modeling codes for the QuakeSim problem solving environment, *Computational Science – ICCS 2003, proc. Int. Conf. Comp. Sci.*, Part III, 845-862 (Springer-Verlag, Berlin 2003).
136. K.F. Tiampo, J.B. Rundle, W. Klein, J.S.S. Martins, and C.D. Ferguson, Ergodic dynamics in a natural threshold system, *Phys. Rev. Lett.*, **91**, 238501(1-4) (2003).
137. J.B Rundle, Scaling and critical phenomena in nature *Computing in Science and Engineering (CiSE)*, **5**(5) ,80-81 (2003). (book review of: Self-Organized Criticality in Earth Systems, by S. Hergarten, Springer-Verlag, 2002; ISBN 3540434526)
138. JB Rundle, DL Turcotte, C Sammis, W Klein and R. Shcherbakov, Statistical physics approach to understanding the multiscale dynamics of earthquake fault systems (invited), *Rev. Geophys. Space Phys.*, **41**(4), DOI 10.1029/2003RG000135 (2003).
139. K Tiampo, JB Rundle, S McGinnis, W Klein and Y Ben-Zion, Using eigenpattern analysis to constrain numerical fault models – application to southern California, pp. 67-74 in *Proc. 3rd ACES Workshop*, Maui HI, ed. A. Donnellan and P Mora, GOPRINT, Brisbane, AU. ISBN 0-9750394-0-7 (2003).
140. K Tiampo, JB Rundle, W Klein and JSS Martins, Ergodicity in natural fault systems, pp. 75-82 in *Proc. 3rd ACES Workshop*, Maui HI, ed. A. Donnellan and P Mora, GOPRINT, Brisbane, AU. ISBN 0-9750394-0-7 (2003)

141. JB Rundle, LH Kellogg, KF Tiampo, W Klein and PB Rundle, Integrating NASA space geodetic observations with numerical simulations of a changing earth, pp. 129-136 in *Proc. 3rd ACES Workshop*, Maui HI, ed. A. Donnellan and P Mora, GOPRINT, Brisbane, AU. ISBN 0-9750394-0-7 (2003).

2004

142. A. Donnellan, JB Rundle, J. Ries, GC Fox, M. Pierce, J. Parker, R. Crippen, E. DeJong, B. Chao, W. Kuang, D. McLeod, M. Matsu'ura, J. Bloxham, Illuminating the earth's interior through advanced computing, *Comp. in Sci. Eng (CiSE)*, **6** (1), 36-44 (2004).

143. J.F. Fernandez and JB Rundle, Postseismic viscoelastic-gravitational half space computations: Problems and solutions, *Geophys. Res. Lett.*, **31**, L07608, doi:10.1029/2004GL019654 (2004).

144. M. Charco, J. Fernández, K. Tiampo, M. Battaglia, L. Kellogg, J. McClain, and J. B. Rundle, Study of volcanic sources at Long Valley Caldera, California, using gravity data and a genetic algorithm inversion technique, *Pure Appl. Geophys.*, **161**, 1399-1413 (2004). DOI: 10.1007/s00024-004-2511-8

145. K.F. Tiampo, J. Fernandez, M. Charco, G. Jentzsch, and J.B. Rundle, New results at Mayon, Philippines, from a joint inversion of gravity and deformation measurements, *Pure Appl. Geophys.*, **161**, 1433-1452 (2004).

146. KF Tiampo, JB Rundle, JSS Martins, W Klein and S McGinnis, Methods for evaluation of geodetic data and seismicity developed with numerical simulations: Review and applications, *Pure Appl. Geophys.*, **161**, 1489-1507 (2004)

147. R. Shcherbakov, DL Turcotte and JB Rundle, A generalized Omori law for earthquake aftershock decay, *Geophys. Res. Lett.*, **31**, L11613, doi:10.1029/2004GL019808 (2004).

148. K.F. Tiampo, J.B. Rundle, W. Klein, Y. Ben-Zion, and S. McGinnis, Using eigenpattern analysis to constrain seasonal signals in southern California, *Pure Appl. Geophys.*, **161**, 1991-2003 (2004). DOI: 10.1007/s00024-004-2545-y

149. K.F. Tiampo, J.B. Rundle, W. Klein and J.S.S. Martins, Ergodicity in natural fault systems, *Pure Appl. Geophys.*, **161**, 1957-1968 (2004). DOI: 10.1007/s00024-004-2542-1

150. K.F. Tiampo, J. Fernandez, G. Jentzsch, M. Charco, and J.B. Rundle, Volcanic source inversion using a genetic algorithm and an elastic-gravitational layered earth model for magmatic intrusions, *Computers and Geosciences*, **30**, 985-1001 (2004).

151. JB Rundle, PB Rundle, A Donnellan and GC Fox, Gutenberg-Richter statistics in topologically realistic system-level earthquake stress-evolution simulations, *Earth, Planets and Space*, **56**, 761-771 (2004).

152. KF Tiampo, J. Fernandez, G. Jentzsch, M. Charco, C. Tiede, C. Gerstennecker, A. Camacho, and JB Rundle, Elastic-gravitational modeling of geodetic data in active volcanic areas, *Recent Res. Devel. Geophys.*, **6**, 37-58 (2004) ISBN 81-7736-201-1

2005

153. E.F. Preston, J.S.S. Martins and J.B. Rundle, Simulated dynamical weakening and abelian avalanches in mean-field driven threshold models, *Physica A*, **348**, 572-590 (2005).

154. RH Shcherbakov, DL Turcotte and JB Rundle, Aftershock statistics, *PAGEOPH*, **162**, 1051-1076 (2005).
155. JB Rundle, iSERVO: The international solid earth research virtual observatory, *CiSE*, **7**, 24-26 (2005).
156. J.Fernández, K. F. Tiampo, J. B. Rundle, and Gerhard Jentzsch, On the interpretation of vertical gravity gradients produced by magmatic intrusions, *J. Geodynamics*, 39/5, 475-492. doi: 10.1016/j.jog.2005.04.005 (2005).
157. J.B. Rundle, PB Rundle, A Donnellan, D Turcotte, R Shcherbakov, P Li, BD Malamud, LB Grant, GC Fox, D McLeod, G Yakovlev, J Parker, W Klein, KF Tiampo, A simulation-based approach to forecasting the next great San Francisco earthquake, *Proc. Nat. Acad. Sci.*, 102: 15363-15367 (2005) ; published online before print October 11 2005, 10.1073/pnas.0507528102 <http://www.pnas.org/cgi/content/full/102/43/15363>
158. J.R. Holliday, K.Z. Nanjo, K.F. Tiampo, J.B. Rundle and D.L. Turcotte, Earthquake forecasting and its verification, *Nonlin. Proc. Geophys.*, 12, 965-977 (2005). <http://www.copernicus.org/EGU/npg/12/6/965.htm>
159. R. Shcherbakov, G. Yakovlev, D.L. Turcotte and J.B. Rundle, A model for the distribution of aftershock waiting times, *Phys. Rev. Lett.*, **95**, 218501 (1-4) (2005). DOI10.1103/PhysRevLett.95.218501 <http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=PRLTAO000095000021218501000001&idtype=cvips&prog=normal>
160. CC Chen, JB Rundle, J Holliday, K Nanjo, D.L. Turcotte, SC Li and K.F. Tiampo, The 1999 Chi-chi Taiwan earthquake as a typical example of seismic activation and quiescence, *Geophysical Research Letters*, **32**, L22315, doi:10.1029/2005GL023991. (2005).
161. J. Xia, H. Gould, W. Klein and J.B. Rundle, Simulation of the Burridge-Knopoff model of earthquakes with long-range stress transfer, *Phys. Rev. Lett.*, 95, 248501 (1-4) (2005). <http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=PRLTAO000095000024248501000001&idtype=cvips>
162. J.B. Rundle , R Shcherbakov, W Klein and D L Turcotte, Connecting the microscale to the macroscale in earthquake processes: Scaling and its relationship to damage mechanics, pp. 58-62, *Proc. 4th ACES Workshop*, ed. by XC Yin, P. Mora, and Y Zhang, Beijing, China (2005). ISBN 0-9750394-1-5
163. JB Rundle, P B Rundle, A Donnellan , W Klein, D L Turcotte, GC Fox and D McLeod, Variation, correlation and recurrence in topologically realistic, system-level earthquake simulations, pp. 90-95, *Proc. 4th ACES Workshop*, ed. by XC Yin, P. Mora, and Y Zhang, Beijing, China (2005). ISBN 0-9750394-1-5
164. K.F. Tiampo, J.B. Rundle, W. Klein, Seismicity rate and stress change – stress shadows determined using the Pattern Informatics technique, pp. 271-276, *Proc. 4th ACES Workshop*, ed. by XC Yin, P. Mora, and Y Zhang, Beijing, China (2005). ISBN 0-9750394-1-5

2006

165. Fernández, J. Charco, M., Rundle, J. B., Tiampo, K. F., 2006. A revision of the FORTRAN codes GRAVW to compute deformation produced by a point magma intrusion in elastic-gravitational layered Earth models. *Computers & Geosciences*, **32/2**, 275-281. doi:10.1016/j.cageo.2005.06.015. (2006).
166. JB Rundle , PB Rundle, A Donnellan, P Li, W Klein , Gleb Morein , DL Turcotte and L Grant, Stress Transfer in Earthquakes and Forecasting: Inferences from Numerical Simulations, *Tectonophysics*, **413**, 109-125 (2006). doi:10.1016/j.tecto.2005.10031
167. K.F. Tiampo, JB Rundle and W Klein, Premonitory seismicity changes prior to the Parkfield and Coalinga earthquakes in southern California, *Tectonophysics*, **413**, 77-86 (2006). doi:10.1016/j.tecto.2005.10.011
168. JR Holliday, JB Rundle, KF Tiampo, W Klein, A Donnellan, Modification of the pattern informatics method for forecasting large earthquake events using complex eigenfactors, *Tectonophysics*, **413**, 87-91 (2006). doi:10.1016/j.tecto.2005.10.008
169. R. Shcherbakov, J.B. Rundle, D.L. Turcotte and J. Van Aalsburg, Correlations in aftershock and seismicity patterns, *Tectonophysics*, **413**, 53-62 (2006). doi:10.1016/j.tecto.2005.10.009
170. M Charco, J Fernandez, F Luzon and JB Rundle, On the relative importance of self-gravitation and elasticity in modeling volcanic ground deformation and gravity changes, *J. Geophys. Res.*, **111**, B03404, doi:10.1029/2005JB003754 (2006).
171. P.B. Rundle, J.B. Rundle, K.F. Tiampo, A. Donnellan and D.L. Turcotte, Virtual California: Fault model, frictional parameters, applications, *PAGEOPH*, **163**, 1819-1846 (2006) DOI 10.1007/s00024-006-0099-x .
Published online at: <http://www.springerlink.com/content/j4371q8554241113/>
172. K. Z. Nanjo, J. R. Holliday, C-C. Chen, J. B. Rundle, and D. L. Turcotte, Application of a modified pattern informatics method to forecasting the locations of future large earthquakes in central Japan, *Tectonophysics*, **424**, 351-366 doi:10.1016/j.tecto.2006.03.043 (2006).
<http://dx.doi.org/10.1016/j.tecto.2006.03.043>
173. K.F. Tiampo, J.B. Rundle, W. Klein and J.R. Holliday, Forecasting rupture dimension using the pattern informatics technique, *Tectonophysics*, **424**, 367-376 doi:10.1016/j.tecto.2006.03.043 (2006).
<http://dx.doi.org/10.1016/j.tecto.2006.03.047>
174. T.J. Hayes, K. F. Tiampo, J. B. Rundle, and J. Fernández, Gravity changes from a stress evolution earthquake simulation of California, *J. Geophys. Res.*, **111**, B09408, doi:10.1029/2005JB004092 (2006).
175. R.Shcherbakov, D.L. Turcotte and J.B. Rundle, Scaling properties of the Parkfield aftershock sequence, *Bull. Seism. So. Am.*, **96**, S376-S384 (2006). doi: 10.1785/0120050815.
176. CC Chen, JB Rundle, HC Li, JR Holliday, DL Turcotte and KF Tiampo, Critical point theory of earthquakes: Observation of correlated and cooperative behavior on earthquake faults systems, *Geophys. Res. Lett.*, **33**, L18302(1-5), doi: 10.1029/2006GL027323 (2006)
<http://www.agu.org/journals/gl/gl0618/2006GL027323/> (In print: vol. 34, Art L05306, March 9, 2007)

177. J.B. Rundle, D.L. Turcotte, P.B. Rundle, G. Yakovlev, R. Shcherbakov, A. Donnellan and W. Klein, Pattern dynamics, pattern hierarchies, and forecasting in complex multi-scale earth systems, *Hydrol. Earth. Syst. Sci.*, **10**, 789-796, (2006).
<http://www.copernicus.org/EGU/hess/hess/10/789/hess-10-789.pdf>
178. JR Holliday, JB Rundle, DL Turcotte and KF Tiampo, Using earthquake intensities to forecast earthquake occurrence times, *Nonlin. Proc. Geophys.*, **13**, 585-593 (2006)
<http://www.nonlin-processes-geophys.net/13/585/2006/npg-13-585-2006.pdf>
179. JR Holliday, JB Rundle, DL Turcotte, W Klein and KF Tiampo, Space-time correlation and clustering of major earthquakes, *Phys. Rev. Lett.*, **97**, 238-501 (2006)
<http://scitation.aip.org/getpdf/servlet/GetPDFServlet?filetype=pdf&id=PRLTAO000097000023238501000001&idtype=cvips>
180. K.Z. Nanjo, J.B. Rundle, J.R.Holliday and D.L. Turcotte, Pattern informatics and its application for forecasting large earthquakes in Japan, *PAGEOPH*, 10.1007/s00024-006-0130-2 (2006). Published online at: <http://www.springerlink.com/content/am65584685584073/>
181. JR Holliday, JB Rundle, KF Tiampo and A Donnellan, Systematic procedural and sensitivity analysis of pattern informatics method for forecasting large ($M>5$) earthquake events in southern California, *PAGEOPH*, 10.1007/s00024-006-0131-1 v. 163, No. 11-12, 2433-2454 (2006). Published online at: <http://www.springerlink.com/content/j767001g36722645/>
182. K.F. Tiampo, J.B. Rundle, W. Klein, Stress Shadows Determined from a Phase Dynamical Measure of Historic Seismicity, *PAGEOPH*, 10.1007/s00024-006-0134-y (2006). Published online at: <http://www.springerlink.com/content/310587lh73024117/>
183. G Yakovlev, DL Turcotte, JB Rundle and PB Rundle, Simulation-based distributions of earthquake recurrence times on the San Andreas fault system, *Bull. Seism. Soc. Am.*, **96**, 1995-2007 (2006).
184. K. Z. Nanjo, J. R. Holliday, C-C. Chen, J. B. Rundle, and D. L. Turcotte, Forecasting the location of large future earthquakes using Pattern Informatics: A Reveiw, *Proc. Inst. Statistical Math.*, 54, 281-297 (2006).
- 2007**
185. S. Samsonov, K.F. Tiampo, J.B. Rundle and Z. Li, Application of DInSAR-GPS optimization for derivation of fine scale surface motion maps of southern California, *IEEE Trans. Geoscience & Remote Sensing*, 45, 512-522. (2007) doi 10.1109/TGRS.2006.887166 .
186. J.R. Holliday, C.C. Chen, K.F. Tiampo, J.B. Rundle and D.L. Turcotte and A Donnellan, A RELM earthquake forecast based on Pattern Informatics, *Seism. Res. Lett.*, **78**, 87-93 (2007).
187. M Charco, J. Fernandez, F. Luzon, K.F. Tiampo and J.B. Rundle, Some insights about topographic, elastic and self-gravitation interaction in modeling ground deformation and gravity changes in active volcanic areas, *PAGEOPH*, **164** 1-14 (2007) DOI 10.1007/s00024-004-0190-y

188. W. Klein, H Gould, N. Gulbahce, JB Rundle, KF Tiampo, Structure of fluctuations near mean-field critical points and spinodals and its implication for physical processes, *Phys. Rev. E*, **75**, Art. 031114 (2007). ISSN: 1539-3755
189. JR. Holliday, DL Turcotte and JB Rundle, BASS, an alternative to ETAS, *Geophys. Res. Lett.*, **34**, L12303, doi:10.1029/2007GL029696 (2007)
<http://www.agu.org/journals/gl/gl0712/2007GL029696/>
190. K.F. Tiampo, J.B. Rundle, W. Klein, J. Holliday, J.S.S. Martins and C.D. Ferguson, Ergodicity in natural fault systems, *Phys. Rev. E*, **75**, 0666107 (2007)
doi:10.1103/PhysRevE.75.066107
<http://link.aps.org/abstract/PRE/v75/e066107>
191. JB Rundle, KF Tiampo, W Klein, Pattern Informatics and Cellular Seismology, A comparison of methods, *Trans. Am Geophys. Un. EOS*, **88**, 254, 12 June (2007).
192. DL Turcotte, JR Holliday and JB Rundle, BASS, an alternative to ETAS, *Geophys. Res. Lett.*, **34** Art. No. L12303 doi:10.1029/2007GL029696 (2007).
193. SG Abaimov, DL Turcotte and JB Rundle, Recurrence-time and frequency-slip statistics of slip events on the creeping section of the San Andreas fault in central California, *Geophys. J. Int.*, **170**, 1289-1299 (2007).
194. D.L. Turcotte, R. Shcherbakov and J.B. Rundle, Complexity and earthquakes, Chapter 4.23 in H. Kanamori and G. Schubert, eds., *Treatise on Geophysics, vol 4, Earthquake Seismology*, Elsevier, Amsterdam (2007) ISBN: 978-0-444-51928-3
195. DL Turcotte, SG Abaimov, R Shcherbakov and JB Rundle, Nonlinear dynamics of natural hazards, in A. Tsonis and J Eisner, eds., *Nonlinear Dynamics in Geosciences*, Springer-Verlag, New York, pp 557-580 (2007). DOI 10.1007/978-0-387-34918-3_30 ISBN 978-0-387-34917-6 (Print) 978-0-387-34918-3 (Online) <http://www.springerlink.com/content/1w0104m525r7110j/>
196. J Van Aalsburg, L. B. Grant-Ludwig, G Yakovlev, P. B. Rundle, J. B. Rundle ,D.L. Turcotte and Andrea Donnellan, A feasibility study of data assimilation in numerical simulations of earthquake fault systems, *Phys. Earth. Planet. Int.* , **163**, 149-162 (2007).
- 2008**
197. J.R. Holliday, D.L. Turcotte, and J.B. Rundle, Self-similar branching of aftershock sequences, *Physica A***387**, 933-943 (2008).
198. Xia, JC, Gould, H, Klein, W and Rundle, JB, Near-mean-field behavior in the generalized Burridge-Knopoff earthquake model with variable-range stress transfer, *Phys. Rev E*, **77**, Article 031132, (2008). DOI: 10.1103/PhysRevE.77.031132.
199. Samsonov, SV, Tiampo, KF and Rundle, JB, Application of DInSAR-GPS optimization for derivation of three-dimensional surface motion of the southern California region along the San Andreas fault, *Computrs. & Geosci.*, **34**, 503-514 (2008). DOI: 10.1016/j.cageo.2007.05.013

200. KF Tiampo, DD Bowman, H Collela, and JB Rundle, The stress accumulation method and the Pattern Informatics index: Complementary approaches to earthquake forecasting, *Pure Appl. Geophys. (PAGEOPH)*, **165**, 693-709 (2008). DOI 10.1007/s00024-008-0329-5
201. TJ Hayes, KF Tiampo, J Fernandez and JB Rundle, A gravity gradient method for computing for characterizing the post-seismic deformation field for a finite fault, *Geophys. J. Int.*, **173**, 802-805 (2008). doi: 10.1111/j.1365-246X.2008.03795.x
202. Abaimov SG, Turcotte DL, Shcherbakov, R, Rundle JB, Yakovlev, G, Goltz, C, Newman, WI, Earthquakes: Recurrence and interoccurrence times, *Pure Appl. Geophys.*, **165**, 777-795 (2008). DOI: 10.1007/s00024-008-0331-y
203. Tiampo, KF, Bowman, DD, Colella, H, Rundle, JB, The stress accumulation method and the pattern informatics index: Complementary approaches to earthquake forecasting, *Pure Appl. Geophys.*, **165**, 693-709 (2008). DOI: 10.1007/s00024-008-0329-5
204. JR Holliday, Turcotte, DL and JB Rundle, A review of earthquake statistics: Fault and seismicity-based models, ETAS and BASS, *PAGEOPH*, **165**, 1003-1024 (2008). DOI: 10.1007/s00024-008-0344-6
205. Y. Wu, C. C. Chen, and J. B. Rundle, Detecting precursory earthquake migration patterns using the pattern informatics method, *Geophys. Res. Lett.*, **35**, L19304, (2008). doi:10.1029/2008GL035215
206. A Arjona, Diaz, JI, Fernandez, J, and JB Rundle, On the mathematical analysis of an elastic-gravitational layered earth model for magmatic intrusion: The stationary case, *PAGEOPH* (2008). DOI 10.1007/s00024-004-0385-x