Chris Marone
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Education

1988	Ph.D. Geophysics	Columbia University
1987	M. Phil. Geophysics	Columbia University
1984	M.A. Geophysics	Columbia University
1981	B.A. Geology	Binghamton University

Professional Affiliations

2014-2015	*Visiting Professor*, Università Sapienza di Roma and Instituto Nationale di Geofisica e Vulcanologica, Roma
2009-	*Associate Head*, Dept. of Geosciences, The Pennsylvania State University
2007-2008	*Visiting Fellow*, Instituto Nationale di Geofisica e Vulcanologica, Rome, Italy
2003-	*Professor of Geophysics*, The Pennsylvania State University
2001-2003	*Assoc. Prof. of Geophysics*, The Pennsylvania State University
1997-2000	*Assoc. Prof. of Geophysics*, Massachusetts Institute of Technology
1992-1997	*Asst. Prof. of Geophysics*, Massachusetts Institute of Technology
1991-1992	*Adjunct Asst. Prof.*, University of California at Berkeley
1989-1990	*Research Fellow*, Melbourne Univ. and CSIRO Division of Geomechanics, Australia
1981-1982	*Exploration Geophysicist*, Phelps Dodge Corp., Reston Va.

Research Interests

Marone's recent research has focused primarily on earthquake physics, friction, and fault mechanics. Recent themes have included: 1) rate-state friction mechanics, fault healing and the application of laboratory derived friction laws to the spectrum of fault slip behaviors, 2) poromechanical properties of deforming rocks, 3) the role of dynamic stressing in frictional instability, 4) granular mechanics and the effect of particle properties on friction, jamming and unjamming, 5) the role of shear fabric and clay mineralogy on the frictional strength and constitutive properties of fault rocks, 6) the strength and rheology of fault rocks in nature, with particular focus on samples recovered in scientific drilling.

Honors and Awards

Fellow of the American Geophysical Union
Paul F. Robertson Award for the Breakthrough of the Year, College of Earth and Mineral Sciences, Pennsylvania State University, 2014
Research Achievement Award, Energy Institute, Pennsylvania State University, 2011
Wilson Research Award, College of Earth and Mineral Sciences, Pennsylvania State University, 2010
Outstanding Member of the Penn State Community, Awarded by PSU Fraternity and Sorority Chapters, 2006
Kerr-McGee Career Development Professorship, MIT 1993

Memberships

American Geophysical Union
Seismological Society of America

Graduate Student and Postdoctoral Advising

25 Graduate Students; 8 Post-Doctoral Scholars; 12 NSF Research Experiences for Undergraduates (REU) projects and undergraduate senior theses.

Selected Professional Activities (Recent, Selected)

Lead Convenor, NSF EarthCube Workshop: EarthCube End-User Domain Workshop for Rock Deformation and Mineral Physics Research. Arlington, VA, Nov. 2013.

Pardee Keynote Lecture, 125th Anniversary Pardee Symposium: Advances in Understanding Earth Structure and Process from EarthScope**,** Geological Society of America Annual Meeting, Denver, CO, Oct. 2013.

Chair, Advisory Committee to University NAVSTAR Consortium (UNAVCO) for the NSF-sponsored San Andreas Fault Observatory at Depth (SAFOD) program, 2009-2013.

Associate Head, Department of Geosciences, Head of Graduate Programs and Research, Penn State, 2009-2014.

Chair, Faculty Advisory Committee, College of Earth & Mineral Sciences, Penn State University, 2012-2014.

Member, American Geophysical Union (AGU) Governing Council, 2011-2013.

Chair, AGU Mineral and Rock Physics (MRP) Focus Group, 2010-2012.

Convenor *The First EarthScope Institute on the Spectrum of Fault Slip Behaviors* http://www.earthscope.org/events/earthscope-institute-on-the-spectrum-of-fault-slip-behaviors

Co-organizer, *Grains, Friction, and Faults, Foundation and Centre for Scientific Culture Ettore Majorana*, Erice, Sicily.

Co-leader of the NSF inter-laboratory comparison effort for (SAFOD)

Outreach (Recent, Selected)

Slow Earthquakes May Foretell Larger Events

http://www.sciencedaily.com/releases/2013/08/130815145148.htm

Slow Earthquakes: It's all in the Rock Mechanics

http://news.psu.edu/story/277292/2013/05/20/research/slow-earthquakes-its-all-rock-mechanics?utm_source=Penn+State+Research+%26+Discovery&utm_campaign=5bc625187e-Research_and_Discovery_June_06_2013&utm_medium=email&utm_term=0_50fd643f23-5bc625187e-273772557

Hacking The Planet, Earthquakes. Weather Channel, Aired Mar 2013

http://www.livescience.com/27475-hacking-the-planet-tv-series-from-the-weather-channel-video.html

Science Nation, NSF Office of Legislative and Public Affairs. _Earthquakes to the Core -- Researchers Drill Down at the Epicenter below.

http://www.nsf.gov/news/special_reports/science_nation/earthquakes.jsp

NSF Discovery piece on *Family, Fabric, and Faults* and Mystery Behind Weak Earthquake Faults Solved

http://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=116682

http://www.livescience.com/8169-mystery-weak-earthquake-faults-solved.html

NSF 09-242 *_It's Not Your Fault--A Typical Fault, Geologically Speaking, That Is*

http://www.nsf.gov/news/news_summ.jsp?org=NSF&cntn_id=116096