# **Poster Presentations by Category**

# Plaza Ballroom, Hilton Palm Springs Resort

September 9-12, 2007

# Collaboratory for the Study of Earthquake Predictability (CSEP)

#### QuakeML: an XML-based data exchange format for seismology

Euchner, Fabian (ETH Zurich), Danijel Schorlemmer (USC), Jan Becker (GFZ Potsdam), Andres Heinloo (GFZ Potsdam), Philipp Kästli (ETH Zurich), Joachim Saul (GFZ Potsdam), Bernd Weber (GFZ Potsdam), and the QuakeML working group

#### The CSEP Testing Center

Liukis, Maria (USC), Danijel Schorlemmer (USC), Phil Maechling (USC), Thomas H. Jordan (USC), John Yu (USC), Fabian Euchner (ETH), Jeremy D. Zechar (USC), and the CSEP Working Group

# Face to Phase: Probabilistic Estimates of Monitoring Completeness of Seismic Networks

Schorlemmer, Danijel (USC) and Jochen Woessner (ETH)

# Probabilistic Completeness Studies of the INGV Seismic Network in Italy

Schorlemmer, Danijel (USC), Francesco Mele (INGV), and Warner Marzocchi (INGV)

#### Defining and Implementing CSEP Natural Laboratories

Schorlemmer, Danijel (USC), Jeremy D. Zechar (USC), and Thomas H. Jordan (USC)

### Optimizing earthquake forecasts based on smoothed seismicity

Zechar, Jeremy (USC) and Thomas H. Jordan (USC)

# Crustal Deformation Modeling (CDM)

# PyLith 1.0: A Finite-Element Code for Modeling Quasi-Static and Dynamic Crustal Deformation

Aagaard, Brad (USGS), Charles Williams (RPI), and Matthew Knepley (ANL/CIG)

#### 3-D models of deformation in arbitrarily heterogeneous elastic half-space

Barbot, Sylvain (UCSD), Yuri Fialko (UCSD), and David Sandwell (UCSD)

# PBO Nucleus Project Status: Integration of 209 Existing GPS Stations in the Plate BOundary Observatory

Blume, Frederick (UNAVCO), Charles Meertens (UNAVCO), Greg Anderson (UNAVCO), Susan Eriksson (UNAVCO), and Eleanor Boyce (UNAVCO)

# A three-dimensional numerical investigation of San Andreas Fault configuration through the San Gorgonio Pass

Dair, Laura and Michele Cooke (UMass-Amherst)

#### Analog modeling of the San Andreas Fault at the San Gorgonio knot

Del Castello, Mario (UMass-Amherst) and Michele Cooke (UMass-Amherst)

#### The QuakeSim Modeling Environment

Donnellan, Andrea (JPL), John Rundle (UC Davis), Lisa Grant (UC Irvine), Dennis McLeod (USC), Geoffrey Fox (Indiana U), Marlon Pierce (Indiana U), Terry Tullis (Brown U), Walt Brooks (NASA Ames), Jay Parker (JPL), and Robert Granat (JPL)

#### Incorporation of all SCIGN GPS sites into PBO processing

Herring, Thomas (MIT), Robert King (MIT), Simon McClusky (MIT), and Nancy King (USGS)

Asymmetric motion along the San Franciso Bay Area faults. Implication on the magnitude of future seismic events

Houlié, N. (UC Berkeley) and B. Romanowicz (UC Berkeley)

#### Are fault-cored anticlines built by repeated earthquakes on the fault?

Huang, Wen-Jeng (Indiana) and Kaj M. Johnson (Indiana)

# Implementation of Finite Element Models Using the SCEC Community Fault Model: Meshing and Test Computations

Jiangning, Lu (MIT), Carl W. Gable (LANL), Bradford H. Hager (MIT), and Charles A. Williams (RPI)

# Coupled afterslip and viscoelastic flow following the 2002 Denali Fault, Alaska Earthquake

Johnson, Kaj M. (Indiana), R. Burgmann (UC Berkeley), and Jeffrey Freymueller (Alaska)

Interseismic Deformation along Intersecting Faults: Application to the Greater Los Angeles Region, CA Marshall, Scott T. (UMass), Michele Cooke (UMass), and Susan Owen (USC/IPL)

#### GeoFEST elastic calculation using LaGriT-meshed CFM fault

Parker, Jay (JPL/Caltech), Carl W. Gable (LANL), Gregory Lyzenga (JPL/Caltech), and Charles Norton (JPL/Caltech)

#### Non-volcanic tremor near Parkfield, CA excited by the Denali and Sumatra earthquakes

Peng, Zhigang (Georgia Tech), John Vidale (UW), Ken Creager (UW), Justin Rubinstein (UW), Joan Gomberg (USGS), and Paul Bodin (UW)

#### Rate-State Modeling of Stress Relaxation in Geometrically Complex Faults Systems

Smith, Deborah Elaine (UCR) and James Dieterich (UCR)

# Stress Evolution of the San Andreas Fault System: Dependencies on Paleoseismicity, Recurrence Intervals, and Fault Locking Depths

Smith-Konter, Bridget (IPL) and David Sandwell (SIO)

#### New insights on Southern Coyote Creek Fault and Superstition Hills Fault

Van Zandt, Afton J. (SDSU), Robert J. Mellors (SDSU), Thomas K. Rockwell (SDSU), Matt K. Burgess (SDSU), and Michael O' Hare (SDSU)

# The October 2006 Superstition Hills Creep Event: combined observations from creep-meter, field mapping, InSAR, and B4 altimetry

Wei, Meng (SIO), Karen Luttrell (SIO), Afton Van Zandt (SDSU), David Sandwell (SIO), Rob Mellors (SDSU), Yuri Fialko (SIO), and Ken Hudnut (USGS)

# Using Finite Element Meshes Derived from the SCEC Community Fault Model to Evaluate the Effects of **Detailed Fault Geometry and Material Inhomogeneities**

Williams, Charles (RPI), Carl Gable (LANL), Bradford Hager (MIT), and Jiangning Lu (MIT)

#### Mechanical modeling of the magma intrusion along the East Rift Zone of Kilauea, Hawaii

Yun, Sang-Ho (USGS), Zhong Lu (USGS), Charles Wicks (USGS), and Michael Poland (USGS)

### Retrospective Earthquake probability forecasts in Southern California

Zhuang, Jiancang (ISM), David D. Jackson (UCLA), Yan Y. Kagan (UCLA), Yosihiko Ogata (ISM), Maria Liukis (USC), Danijel Schorlemmer (ETH), and Philip J. Maechling (USC)

#### Earthquake Forecasting and Predictability (EFP)

#### Search for Minimum-Magnitude Earthquakes in South African Gold Mines

Boettcher, Margaret (USGS), Art McGarr (USGS), and Malcolm Johnston (USGS)

# Evaluating Thermoelastic Strain as an Earthquake Trigger

Ebel, John E. (Boston College) and Yehuda Ben-Zion (USC)

# Correlation of Static and Peak Dynamic Coulomb Failure Stress with Aftershocks, Seismicity Rate Change, and Triggered Slip in the Salton Trough

Eddo, Jeff (SDSU) and Kim Olsen (SDSU)

# Accelerating Moment Release in Areas of High Stress? Preliminary Results

Guilhem, Aurelie (UC Berkeley), Roland Burgmann (UC Berkeley), Andrew M. Freed (Purdue University), and Tabrez Ali (Purdue University)

# A Five Year Seismic Cycle on EPR Transform Faults

McGuire, Jeff (WHOI)

### Aseismic Transients and Earthquake Triggering in the Salton Trough

McGuire, Jeff (WHOI) and Tom Herring (MIT)

# Occurrence Patterns of Earthquake Sequences in Southern California

Peng, Zhigang (Georgia Tech)

# Preliminary Results for Using Pattern Informatics to Image Fault Systems in Three Dimensions

Perlock, Patricia A. (University of Western Ontario) and Kristy F. Tiampo (University of Western Ontario)

#### Developments in earthquake forecast modelling and testing

Rhoades, David (GNS Science) and Matthew Gerstenberger (GNS Science)

#### A method for forecasting the locations of future large earthquakes: An analysis and verification

Shcherbakov, Robert (UCD), James Holliday (UCD), Donald Turcotte (UCD), and John Rundle (UCD)

#### Improvement and Earthquake Predictability Test of the Load/Unload Response Ratio Method

Shen, Zheng-Kang (UCLA), Yuehua Zeng (USGS), and Yongge Wan (CEA/China)

# Aftershock Productivity and Long-Range Triggerability Maps for California

van der Elst, Nicholas J. (UCSC) and Emily E. Brodsky (UCSC)

#### ETES: The Inverse Problem

Werner, Max (UCLA) and David D. Jackson (UCLA)

# Realization of earthquake probability forecasts using the ETAS model

Zhuang, Jiancang (ISM), Maria Liukis (USC), Danijel Schorlemmer (ETH), David D. Jackson (UCLA), and Philip J. Maechling (USC)

### **Earthquake Geology**

Mechanical models of folding above blind-thrust faults: Implications for assessing fault activity, slip rates, and paleo-earthquake histories

Benesh, Nathan P. (Harvard), Andreas Plesch (Harvard), John H. Shaw (Harvard), and Erik K. Frost (USC)

Geometry and Segmentation of the Palos Verdes Fault, San Pedro Bay region, offshore Southern California Brankman, Charles M. (Harvard) and John H. Shaw (Harvard)

# Structure of the San Andreas Fault at SAFOD from the Surface to 5 km depth

Evans, James P. (Utah State), Sarah D. Draper, Kelly K. Bradbury, and Corey D. Barton

#### Damage zone structure and deformation patterns along segmented strike slip faults

Finzi, Yaron (UBC), Elizabeth H. Hearn (UBC), Vladimir Lyakhovsky (GSI), and Yehuda Ben-Zion (USC)

### Observations from the Cajon Pass Crystalline Core, California

Forand, David (USU) and Jim Evans (USU)

# Paleoseismologic and Geomorphologic Analyses of the Northern Calico Fault

Ganev, Plamen N. (USC), Kimberly Le (UNC), Austin Elliott (USC), James F. Dolan (USC), and Michael Oskin (UNC)

# The width of dextral faults and shallow decollements levels in the San Jacinto fault zone, southern California

Janecke, Susanne and Benjamin Belgarde

### Paleoseismology of Blind thrust faults in the Los Angeles basin

Leon, Lorraine A. (USC), James F. Dolan (USC), John H. Shaw (Harvard), and Thomas L. Pratt (USGS)

# Pleistocene and Holocene slip rate of the San Andreas fault at Badger Canyon, San Bernardino, California McGill, Sally (CSU San Bernardino), Katherine Kendrick (USGS Pasadena), Ray Weldon (University of Oregon), and Lewis Owen (University of Cincinatti)

Fate of slip along the Calico fault north of its intersection with the Manix fault, central Mojave Desert Miller, David M. (USGS) and David J. Lidke (USGS)

# Recurrence of ground rupturing earthquakes on the southernmost San Andreas fault at Coachella, CA Philibosian, Belle (U of Oregon), Ray Weldon (UO), Katherine Kendrick (USGS), Kate Scharer (Appalachian State), Sean Bemis (UO), Reed Burgette (UO), and Beth Wisely (UO)

# Evidence for 4-5 earthquakes at the Frazier Mountain paleoseismic site since A.D. 1400

Scharer, Kate (Appalachian State U), Ray Weldon (UO), Tim Dawson, Robert Sickler, Helen-Mary Sheridan (U Chicago), Kate McGinnis (Appalachian State U), Teri Gerard (Appalachian State U), Nick Weldon (Colorado C), and Sarah Hunt (UO)

# Slip-Predictable Earthquake Model On The Southernmost San Andreas Fault is Supported By Multiple Event Offsets Measured by a Ground-Based Lidar Survey, Southern Mecca Hills, California

Seitz, Gordon (SDSU), Jeff Dingler (SIO), Danny Brothers (SIO), Liz Johnstone (SIO), and Neal Driscoll (SIO)

### Pulverized Tejon Lookout Granite: Attempts at Placing Constraints on the Processes

Sisk, Matthew (SDSU), Thomas Rockwell (SDSU), Gary Girty (SDSU), Ory Dor (USC), and Yehuda Ben-Zion (USC)

# Fall 2007 paleoseismic and Holocene slip rate investigations along the San Andreas Fault, at Parkfield, California

Toké, Nathan (ASU) and J Ramon Arrowsmith (ASU)

# Examining the style and rate of uplift along the Claremont segment of the San Jacinto Fault Zone Tung, Jack (CSULA) and Nate Onderdonk (CSULB)

# Damage asymmetry from geomorphic signals along the trifurcation area of the San-Jacinto Fault Wechsler, Neta (USC), Thomas Rockwell (SDSU), and Yehuda Ben-Zion (USC)

#### Southernmost Long-Term Earthquake Record for the San Andreas Fault

Williams, Pat (SDSU) and Gordon Seitz (SDSU)

# Numerical Modeling of Relationships Between Magnitude and Surface Rupture Characteristics

Zielke, Olaf (ASU) and J Ramon Arrowsmith (ASU)

# Extreme Ground Motion (ExGM)

# Extreme Accelerations and Velocities Caused by Past Earthquakes

Anderson, John (UNR)

#### Catalog of Precarious Rocks and Related Ground Motion Indicators at Yucca Mountain

Anderson, John G., James N. Brune, Rebecca Brune, Yui Miyata, and David von Seggern

#### Physical Limits on Ground Motion at Yucca Mountain

Andrews, D. J. (USGS Menlo Park), T. C. Hanks (USGS Menlo Park), and J. W. Whitney (USGS Denver)

## Fragility Estimation for Precipitous Cliffs and a Rock Stack on Yucca Mountain, Nevada

Purvance, Matthew D. (UNR) and James N. Brune (UNR)

### Ground Motion Catalog of 6832 Foamquakes - Implications for Extreme Ground Motions

Purvance, Matthew D. (UNR), John G. Anderson (UNR), James N. Brune (UNR), and R. Anooshehpoor (UNR)

# Fault and Rupture Mechanics (FARM)

Cracks, pulses and macroscopic asymmetry of dynamic rupture on a bimaterial interface with velocityweakening friction

Ampuero, Jean-Paul (ETH Zurich) and Yehuda Ben-Zion (USC)

#### Computation and Analysis of M < 5 Southern California Potency Tensors

Bailey, Iain (USC), Thorsten Becker (USC), and Yehuda Ben-Zion (USC)

# Characteristics of the brittle damage zone of simulated propagating mode II ruptures

Beeler, N. M. (USGS)

#### Constitutive relations for shear induced weakening

Beeler, N. M. (USGS), D. L. Goldsby (Brown), T. E. Tullis (Brown), and B. J. deMartin (Brown)

Experimental Observation of Stopping Phases Generated by Fault Barriers Associated with Short Fault **Branches** 

Biegel, Ronald (USC), Charles Sammis (USC), and Ares Rosakis (Caltech)

#### Fluid Dynamic Evidence for Extremely Low Viscosity Coseismic Fault Fluids

Brodsky, E.E. (UCSC), F. Meneghini, C. D. Rowe, and J.C. Moore

Simulations of small repeating earthquakes that reproduce the observed scaling of seismic moment with recurrence time

Chen, Ting (Caltech) and Nadia Lapusta (Caltech)

### Direct measurement of slip-weakening distance from near-fault strong motion data

Cruz-Atienza, Víctor M. (SDSU), Kim B. Olsen (SDSU), and Luís A. Dalguer (SDSU)

### Unstable unilateral rupture at bimaterial interface with slip-weakening friction model

Dalguer, Luis A. (SDSU) and Steven M. Day (SDSU)

#### A constitutive model for fault gouge deformation in dynamic rupture simulations

Daub, Eric (UCSB) and Jean Carlson (UCSB)

### Experimental observations of inelastic compaction during unstable sliding; implications for fault strength and stability

deMartin, Brian J. (Brown), Terry E. Tullis (Brown), David L. Goldsby (Brown), and Nick M. Beeler (USGS)

Damage characterization in sandstones along the Mojave section of the San Andreas Fault with a new method: initial results and implications for the depth and mechanism of dynamic rock pulverization

Dor, Ory (USC), Yehuda Ben-Zion (USC), Judith S. Chester (Texas A&M), Jim Brune (UNR), and Thomas K. Rockwell (SDSU)

# Modeling the Reduction of High-frequency Seismic Radiation Due to Plastic Strain Localization at Fault

Duan, Benchun (Texas A&M) and Steven M. Day (SDSU)

### Complexity of Earthquakes: An approach through fractals and An exploration through simple mechanical models

Elbanna, Ahmed (Caltech) and Thomas Heaton (Caltech)

# Dynamic rupture verification for SORD, and application to the TeraShake scenario

Ely, Geoffrey (IGPP/SIO), Steven Day (SDSU), and Bernard Minster (IGPP/SIO)

# Earthquake Nucleation on Geometrically Complex Faults: The Effects of Normal Stress Variation

Fang, Zijun (UCR), James H. Dieterich (UCR), and Guanshui Xu (UCR)

### Flash Heating and Weakening of Crustal Rocks During Coseismic Fault Slip

Goldsby, David (Brown) and Terry Tullis (Brown)

# Experimental investigation of frictional properties of granite at seismic slip rates

Hartsig, Colleen (UCSD), Kevin Brown (SIO), and Yuri Fialko (SIO)

Slip localization within a complex fault-zone: The Pretorius fault, Tautona mine, South Africa (NELSAM project)

Heesakkers, Vincent (U of Oklahoma), David Lockner (USGS), and Ze'ev Reches (U of Oklahoma)

Relationship Between Sonic Velocity Data and Fracture Densities at the San Andreas Fault Observatory at Depth

Jeppson, Tamara (USU) and Jim Evans (USU)

# Nonlinear Inversion for Dynamic Rupture Parameters from the 2004 Mw6.0 Parkfield Earthquake Jimenez, Rosa (SDSU) and Kim Olsen (SDSU)

#### Spectral element modeling of dynamic rupture and long-term slip on rate and state faults

Kaneko, Yoshihiro (Caltech), Nadia Lapusta (Caltech), and Jean-Paul Ampuero (ETH Zurich)

Strike-slip fault terminations at seismogenic depths; the structure and kinematics of the Glacier Lakes fault, Sierra Nevada, U.S.A.

Kirkpatrick, James D. (U of Glasgow), Zoe K. Shipton (U of Glasgow), Jim P. Evans (Utah State), S. Micklethwaite (Australian National University), S.J. Lim (Utah State), and P. McKillop (Utah State)

High-Resolution Imaging of the San Andreas Fault from Fault-Zone Trapped Waves Recorded at the SAFOD Borehole Seismograph and Surface Array

Li, Yong-Gang Li (USC), Peter M. Malin (Duke), John E. Vidale (UW), and Elizabeth S. Cochran (UCR)

# Elastodynamic simulations of seismic and aseismic slip history of a planar strike-slip fault in 3D

Liu, Yi (Caltech) and Nadia Lapusta (Caltech)

Transition of shear cracks from sub-Rayleigh to supershear speeds in the presence of favorable heterogeneity

Liu, Yi (Caltech) and Nadia Lapusta (Caltech)

## Pulse-like and Crack-like Ruptures in Experiments Mimicking Crustal Earthquakes

Lu, Xiao (Caltech), Nadia Lapusta (Caltech), and Ares Rosakis (Caltech)

#### Scaling relations of earthquakes in a damage rheology model

Lyakhovsky, Vladimir (Geological Survey of Israel) and Yehuda Ben-Zion (USC)

# Rupture Dynamics on a Bi-material Interface for Dipping Faults

Ma, Shuo (Stanford University) and Greg Beroza (Stanford University)

### Properties of large-slip asperities from the updated database of finite-source rupture models

Mai, P. Martin (ETH Zurich)

#### Strain localization in a continuum model for fault gouge and amorphous materials

Manning, M. Lisa (UCSB), James Langer (UCSB), and Jean Carlson (UCSB)

Self-healing vs. crack-like rupture propagation in presence of thermal weakening processes: The effect of small, but finite width of shear zone

Noda, Hiroyuki (Kyoto), Eric M. Dunham (Harvard), and James R. Rice (Harvard)

#### Rupture Termination and Jump in Parallel Strike-Slip Faults

Oglesby, David D. (UC Riverside)

# Resolution of GPS Data from the 2004 Mw6.0 Parkfield Earthquake

Page, Morgan (UCSB), Susana Custodio (UCSB), Ralph J. Archuleta (UCSB), and J. M. Carlson (UCSB)

New observations of gouge powder from rupture-zones of recent earthquakes, laboratory rupture experiments, and an active fault-zone

Reches, Ze'ev (U of Oklahoma), Mishima D Tetsuya (U of Oklahoma), Gregory Strout (U of Oklahoma), David Lockner (USGS), and Vincent Heesakkers (U of Oklahoma)

Earthquake occurrence in geometrically complex systems of faults with rate- and state-dependent frictional properties

Richards-Dinger, Keith (UCR) and James Dieterich (UCR)

#### Finite Difference Modeling of Rupture Propagation with Strong Velocity-Weakening Friction

Rojas, Otilio (SDSU), Eric Dunham (Harvard), Steven Day (SDSU), Luis A. Dalguer (SDSU), and Jose Castillo (SDSU)

#### Fault surface topography and its relation to fault zone internal architecture

Sagy, Amir (UCSC) and Emily E. Brodsky (UCSC)

# Coupled Poro-Thermo-Mechanical Effects and the Tendency for Slow vs. Fast Fault Slip

Segall, Paul (Stanford), A. Rubin (Princeton), T. Matsuzawa (NIED, Japan), and S. Schmitt (Stanford)

Slip-Length Scaling in Large Earthquakes: The Role of Deep Penetrating Slip Below the Seismogenic Layer

Shaw, Bruce E (Columbia) and Steven G Wesnousky (UNR)

## Energy Partition during In-Plane Dynamic Rupture on a Frictional Interface

Shi, Zheqiang (USC), Yehuda Ben-Zion (USC), and Alan Needleman (Brown)

### Effect of 3D Stress Heterogeneity on Aftershock Sequences

Smith, Deborah Elaine (UCR) and James Dieterich (UCR)

#### Rock Pulverization in the Horse Canyon Double Restraining Bend

Stillings, M. (SDSU), T. Rockwell (SDSU), G. Girty (SDSU), O. Dor (USC), N. Wechsler (USC), and Y. Ben-Zion (USC)

#### Localization of Deformation in Elastic-Plastic Analysis of Dynamic Shear Rupture

Templeton, Elizabeth L. (Harvard) and James R. Rice (Harvard)

# Incorporating undrained pore fluid pressurization into analyses of off-fault plasticity during dynamic rupture

Viesca, Robert C. (Harvard), Elizabeth L. Templeton (Harvard), and James R. Rice (Harvard)

#### Effects of Non-linear Terms on Pore Fluid Pressurization

Vredevoogd, Michael (UCR), David Oglesby (UCR), and Stephen Park (UCR)

# **Ground Motion Prediction (GMP)**

# Reduction in the Uncertainties in the Ground Motion Constraints by Improved Field-Testing Techniques of Precariously Balanced Rocks

Anooshehpoor, Rasool (UNR), Matthew D. Purvance (UNR), James N. Brune (UNR), and Tom Rennie

# Modeling uncertainty of nonlinear site response in the Los Angeles Basin

Assimaki, Dominic (Georgia Tech), Wei Li (Georgia Tech), Jamison H. Steidl (UCSB), and Jan Schmedes

# Validation of ground motion simulations for engineering applications

Baker, Jack W. (Stanford) and Nirmal Jayaram (Stanford)

# Unfractured Sandstones along the San Andreas Fault: New Tensile Strength and Wave Velocity Data, and Implications for Constraints on Extreme Ground Motion and Absolute Stress

Brune, James N. (UNR), Jaak Daemen (UNR), James B. Scott (UNR), John N. Louie (UNR), and Matthew D. Purvance (UNR)

## Distribution of Toppling Accelerations of Precarious Rocks with Distance from Active Faults: Lovejoy Buttes, Victorville, and Granite Pediment

Brune, James N. and Richard J. Brune

# Precariously Balanced Rocks at Silverwood Lake, Seven Kilometers from the San Andreas Fault in Cajon Pass: What's Going On?

Brune, James N., Glenn Biasi, and Richard J. Brune

# Attenuation of Radiated Ground Motion and Stresses from Three-Dimensional Supershear Ruptures

Dunham, Eric M. (Harvard) and Harsha S. Bhat (Harvard)

### Broadband Ground Motion Simulations for ShakeOut

Graves, Robert (URS), Brad Aagaard (USGS), and Ken Hudnut (USGS)

# Rupture process and strong ground motions of 2007 Chuetsu-oki earthquake -- Directivity pulses striking the Kashiwazaki-Kariwa Nuclear Power Plant

Irikura, Kojiro (AIT, Japan), Takao Kagawa (Geo-Institute), Ken Miyakoshi (Geo-Institute), and Susumu Kurahashi (AIT)

### On the Probability Law Governing Ground Motion Metrics: A Case Study the 2004 Parkfield Earthquake Lavallée, Daniel (UCSB)

# Effect of Rupture Complexity on Near-Field Strong Ground Motion: Aspects of Rupture Directivity Mena, Banu (ETH Zurich) and P. Martin Mai (ETH Zurich)

# Structural Damage Detection Using Numerical Techniques: Prototype Study of the UCLA Factor

Muto, Matt (Caltech), Thomas Heaton (Caltech), Swaminathan Krishnan (Caltech), and Monica Kohler (UCLA)

Constraints From Precariously Balanced Rocks on Preferred Rupture Directions for Large Earthquakes on the Southern San Andreas Fault

Olsen, Kim (SDSU) and James Brune (UN Reno)

# ShakeOut: 1 Hz ground motion simulations for the southern San Andreas fault

Olsen, Kim (SDSU), Steven Day (SDSU), Yifeng Cui (SDSC), Jing Zhu (SDSC), Gideon Juve (USC), and Phil Maechling (USC)

# Precariously Balanced Rocks (PBR) Surface Exposure History, Constrained by In-Situ Terrestrial Cosmogenic Nuclides (TCNs)

Perg, Lesley (UMN), Lisa Grant Ludwig (UCI), Katherine Kendrick (USGS), James Brune (UNR), Matt Purvance (UNR), Rasool Anooshehpoor (UNR), Sinan Akciz (UCI) and Debbie Weiser (Occidental/SCEC

# On the Spatial Correlation of Earthquake Source Parameters

Schmedes, Jan (UCSB), Ralph J. Archuleta (UCSB), and Daniel Lavallée (UCSB)

# Nonlinear attenuation and rock damage during strong seismic ground motions

Sleep, Norman H. (Stanford) and Paul Hagin (Stanford)

#### Pseudo-Dynamic Modeling of Large Strike-Slip Earthquakes

Song, Seok Goo (URS Corporation), Arben Pitarka (URS Corporation), and Gregory C. Beroza (Stanford University)

# Precarious rocks and near-fault earthquake motions from a reverse fault in New Zealand: Cross Validating the North American Studies

Stirling, Mark (GNS Science), Matthew Purvance (Nevada Seismology Lab), and Rasool Anooshehpoor (Nevada Seismology Lab)

### Geotechnical Site Characterization in California and Beyond: A Progress Report

Yong, Alan (USGS), Susan E. Hough (USGS), Michael J. Abrams (NASA-JPL/Caltech), Chris J. Wills (CGS), William Owens (Caltrans), Martha Merriam (Caltrans), Stan Schwarz (Honeywell), Robert S. Dollar (USGS), Mehdi Khan (USGS), Nina Varghis (USGS), Joshua I

# Lithospheric Architecture and Dynamics (LAD)

# Southern California Modeling Of Geodynamics (SMOG-3D): Visco-plastic models of instantaneous lithospheric deformation

Fay, Noah (University of Arizona), Boris Kaus (ETH Zurich, USC), Thorsten Becker (USC), and Gene Humphreys (University of Oregon, Eugene)

# The San Andreas Fault in Southern California is Almost Nowhere Vertical - Implications for Tectonics Fuis, Gary S. (USGS), Dan Scheirer (USGS), Vicki Langenheim (USGS), and Monica Kohler (UCLA)

# Crustal and Upper-Mantle Structure of the Red Sea: a comparison to the Gulf of California

Hansen, Samantha (UCSC), Susan Schwartz (UCSC), Arthur Rodgers (LLNL), James Gaherty (LDEO), and Abdullah Al-Amri (King Saud University)

# Scaling Relations of Strike Slip Earthquakes With Different Slip Rate Dependent Properties at Depth Hillers, Gregor (UCSB) and Steve Wesnousky (UNR)

# Late Cenozoic Tectonic Evolution along the Pacific-North America Transform Boundary as Recorded in **Borderland Basins**

Legg, Mark R. (Legg Geophysical), Marc J. Kamerling (Venoco, Inc.), and Robert D. Francis (CSU Long

# Late Neogene structural and stratigraphic relations in the Santa Rosa Mountains, southern California: implications for Quaternary strain distribution in the southern San Andreas Fault system

Matti, J.C. (USGS), V.E. Langenheim (USGS), D.M. Morton (USGS), B.F. Cox (USGS), and G.P. Landis

# 3D Fault Geometry and Offshore Basin Evolution in the Northern Continental Borderland

Schindler, C. Sarah (CSUB), Craig Nicholson (UCSB), and Christopher C. Sorlien (UCSB)

#### **Next Generation Attenuation (NGA)**

#### U.S. National Center for Engineering Strong Motion Data

Haddadi, Hamid (CGS), Moh Huang (CGS), William Leith (USGS), John Parrish (CGS), William Savage (USGS), Anthony Shakal (CGS), and Christopher Stephens (USGS)

# Petascale Cyberfacility for Physics-Based Seismic Hazard Analysis (PetaSHA)

#### **PetaSHA Simulations Optimization**

Cui, Yifeng (SDSC), Jing Zhu (SDSC), Kim Olsen (SDSU), Amit Chourasia (SDSC), Reagan Moore (SDSC), Luis Dalguer (SDSU), Steve Day (SDSU), Victor Cruz-Atienza (SDSU), Philip Maechling (USC), and Thomas Iordan (USC)

#### DynaShake platform and dynamic source models for the southern San Andreas Fault ShakeOut scenario

Dalguer, Luis A. (SDSU), Steven M. Day (SDSU), Kim Olsen (SDSU), Victor Cruz-Atienza (SDSU), Yifeng Cui (SDSC), Jing Zhu (SDSC), Otilio Rojas (SDSU), Andrew Gritz (SDSU), David Okaya (USC), and Philip Maechling (USC)

#### A novel mechanism for compressing multi-terabyte wavefields

Lopez, Julio (CMU), Leonardo Ramirez (CMU), Jacobo Bielak (CMU), and David O'Hallaron (CMU)

# Accelerating SCEC Seismic Hazard Research through the use of High Performance Computing on the PetaSHA Project

Maechling, Philip (USC), Thomas H. Jordan (USC), Carl Kesselman (USC/ISI), Reagan Moore (SDSC), J. Bernard Minster (UCSD), and the CME Collaboration (CMU,SDSC,USGS, USC, UCSD, USC/ISI, UCSB)

#### SCEC Science Workflows - Reducing the Time to Insight

Meyers, David (USC), Ewa Deelman (USC/ISI), Phil Maechling (USC), David Okaya (USC), Scott Callaghan (USC), Gideon Juve (USC), Karan Vahi (USC/ISI), Gaurang Mehta (USC/ISI), Mona Wong-Barnum (SDSC), Carl Kesselman (USC/ISI), and Rob Graves (URS Corp.)

#### How Scientific Workflows Work - a FAQ for SCEC Scientists

Okaya, David (USC), David Meyers (SCEC), Mona Wong-Barnum (SDSC), Ewa Deelman (ISI), Phil Maechling (SCEC), and Karl Kesselman (ISI)

#### ShakeOut and its effects in Los Angeles and Oxnard areas

Ramirez-Guzman, Leonardo (CMU), Ricardo Taborda (CMU), Julio Lopez (CMU), John Urbanic (PSC), Jacobo Bielak (CMU), and David O'Hallaron (CMU)

### A review of the current approach to CVM-Etrees

Taborda, Ricardo (CMU), Julio Lopez (CMU), David O'Hallaron (CMU), Tiankai Tu (CMU), and Jacobo Bielak (CMU)

# Seismic Hazard and Risk Analysis (SHRA)

### Efficient Approach to Vector-valued Probabilistic Seismic Hazard Analysis of Multiple Correlated Ground **Motion Parameters**

Bazzurro, Paolo (AIR), Polsak Tothong (AIR), and Jaesung Park (AIR)

# The October 21, 1868 Hayward Earthquake, Northern California -- 140 Years Later

Brocher, Tom (USGS), Jack Boawright (USGS), Jim Lienkaemper (USGS), David Schwartz (USGS), Susan Garcia (USGS), and the 1868 Hayward Earthquake Alliance

# Preliminary Sample Collection and Methodology for Constraining Age of Precariously Balanced Rocks (PBR)

Grant Ludwig, Lisa (UCI), Katherine Kendrick (USGS), Lesley Perg (UMN), James Brune (UNR), Matt Purvance (UNR), Rasool Anooshehpoor (UNR), Sinan Akciz (UCI), and Debbie Weiser (Occidental/SCEC Intern)

### CyberShake 2007: An Update on Physics Based Probabilistic Seismic Hazard Calculations

Graves, Robert (URS), Scott Callaghan (USC), Ewa Deelman (USC/ISI), Edward Field (USGS), Nitin Gupta (USC), Thomas H. Jordan (USC), Gideon Juve (USC), Carl Kesselman (USC/ISI), Philip Maechling (USC), Gaurang Mehta (USC), David Meyers (USC), David Okaya (

# Simplified algorithms for calculating double-couple rotation

Kagan, Yan (UCLA)

### Response of Moment Frame Buildings to Earthquakes on the Puente Hills Fault

Olsen, Anna (Caltech) and Tom Heaton (Caltech)

# Long-Period Building Response to Earthquakes in the San Francisco Bay Area

Olsen, Anna (Caltech), Brad Aagaard (USGS), and Tom Heaton (Caltech)

# Empirical site response and comparison with measured site conditions at ANSS sites in the Reno area

Pancha, A., J. G. Anderson, G. Biasi, A. Anooshepor, and J. N. Louie

# Field Tests of Doomed Precariously Balanced Rocks between the San Jacinto and Elsinore Faults

Purvance, Matthew D. (UNR), Rasool Anooshehpoor (UNR), James N. Brune (UNR), Richard Brune, Deborah Weiser (Occidental/SCEC Intern), Katherine Kendrick (USGS), Sinan Akciz (UCI), and Lisa Grant Ludwig (UCI)

# Comparison between Precariously Balanced Rocks and the ShakeOut Simulation: Ground Motion Constraints and Implications for Electric Substation Damage

Purvance, Matthew D. (UNR), Robert W. Graves (URS), James N. Brune (UNR), Brad Aagaard (USGS), and Ken Hudnut (USGS)

# Multi-Hazard Demonstration Project Preliminary Liquefaction Deformation Analysis at Lifeline Crossings for the Mw 7.8 Southern San Andreas Earthquake Scenario

Real, Charles (CGS), Cindy Pridmore (CGS), and Ralph Loyd (CGS)

# San Andreas Fault Rupture Hazard to Lifelines -- Part of a Mw 7.8 Earthquake Scenario

Treiman, Jerome A. (California Geological Survey)

#### Spontaneous Seismicity Stationarity Analysis in California

Wang, Qi (UCLA), Jiancang Zhuang (Institute of Statistical Mathematics, Japan), and David Jackson (UCLA)

#### Ground Motion Selection and Modification Working Group

Watson-Lamprey, Jennie (Watson-Lamprey Consulting), Yousef Bozorgnia (PEER), Norm Abrahamson (PG&E), Jack Baker (Stanford), Allin Cornell (Stanford), Christine Goulet (UCLA), Curt Haselton (CSU Chico), Erol Kalkan (CGS), Nico Luco (USGS), Tom Shantz (Calt

### Progress toward more detailed site-conditions maps in southern California

Wills, Chris J.,(CGS) Mike Silva (CGS), and Alan Yong (USGS)

# Multi-Hazard Demonstration Project: Seismically Induced Landslide Hazard Analysis at Lifeline Crossings for the Mw 7.8 Southern San Andreas Earthquake Scenario

Wilson, Rick (CGS), Tim McCrink (CGS), Jerome Treiman (CGS), and Michael Silva (CGS)

# Statistical modeling of seismic moment release in California

Zaliapin, Ilya (UNR), Suresh Nathagoundenpalayam (UNR), Yan Kagan (UCLA), and Frederic Schoenberg (UCLA)

# Seismology

#### A high-frequency secondary event during the 2004 M6.0 Parkfield earthquake

Allmann, Bettina (SIO, UCSD) and Peter Shearer (SIO, UCSD)

### Products and Services Available from the Southern California Earthquake Data Center (SCEDC)

Appel, Vikki, Ellen Yu, Shang-Lin Chen, Faria Chowdhury and Robert Clayton

# Improvement of the SCEC-3D Model of the Los Angeles Basin Using Teleseismic Receiver Functions Chu, Risheng (SLU) and Lupei Zhu (SLU)

#### Calico Fault Structure Determined Using Traveltime Data from Seismicity and Explosions

Cochran, Elizabeth S. (UCR), Yong-Gang Li (USC), Peter M. Shearer (UCSD), John E. Vidale (UW), Yuri Fialko (UCSD), Daniela Herrera (UCR), Naomi Brown (UCR and UH), and Mathilde Radiguet (UCSD and ENS)

# Dynamic triggering of high-frequency bursts by strong motions during the 2004 Parkfield earthquake sequence

Fischer, Adam (USC), Zhigang Peng (Georgia Tech), and Charles G. Sammis (USC)

### Widespread Triggering of Non-Volcanic Tremor in California

Gomberg, Joan (USGS), Justin Rubinstein (U Washington), Zhigang Peng (Georgia Tech), Ken Creager (U Washington), and John Vidale (U Washington)

# Microseismicity of the Malibu Coast and Santa Monica-Dume Fault Zones

Green, Joe (CSUN) and Gerry Simila (CSUN)

# Smooth, Mature Faults Radiate More Energy than Rough, Immature Faults in Parkfield, CA

Harrington, Rebecca M. (UCLA) and Emily E. Brodsky (UCSC)

#### Why BASS instead of ETAS

Holliday, J.R. (UCD), J. Van Aalsburg, D.L. Turcotte, and J.B.Rundle

#### California's Largest Historical Earthquake?

Hough, Susan E. (USGS Pasadena)

# Shear Wave Velocity Structure beneath the central Basin and Range Province, eastern California: Implications for crustal-scale tectonic models

Kamath, Nishant (USGS), Shannon Leslie (USGS), and Walter D. Mooney (USGS)

# Quantifying uncertainties in source parameter estimation using a small aperture array

Kane, Deborah (UCSD), German Prieto (Stanford), Frank Vernon (UCSD), and Peter Shearer (UCSD)

# Southern California Adjoint Source Inversions

Kim, YoungHee (Caltech) and Jeroen Tromp (Caltech)

# The Velocity Contrast Across the Parkfield section of the San Andreas Fault near the SAFOD drill site

Lewis, Micheal (USC), Yehuda Ben-Zion (USC), Zhigang Peng (GT), Zheqiang Shi (USC), and Peng Zhao (GT)

# Seismic Documentation for Rock Damage and Heal on the San Andreas Fault Involved in the 2004 M6 Parkfield Earthquake

Li, Yong-Gang (USC), Po Chen (Lamont), Elizabeth S. Cochran (UCR), John E. Vidale (UW), and Peter E. Malin (Duke)

# Variations of the velocity contrast and rupture properties of M6 earthquakes along the Parkfield section of the San Andreas Fault

Peng, Zhigang (Georgia Tech), Yehuda Ben-Zion (USC), Peng Zhao (Georgia Tech), Zheqiang Shi (USC), and Michael Lewis (USC)

# Observations and Interpretation of Fundamental-Mode Rayleigh Surface Wavefields Recorded by the Transportable Array (USArray Component of Earthscope)

Pollitz, Fred (USGS)

### Analysis of focal mechanism variability about strike-slip faults in California

Powers, Peter (USC) and Thomas Jordan (USC)

#### Strong Tidal Modulation of Non-Volcanic Tremor

Rubinstein, Justin (UW), Mario La Rocca (INGV), John Vidale (UW), Ken Creager (UW), and Aaron Wech (UW)

# Non-Volcanic Tremor Driven by Large Transient Shear Stresses

Rubintein, Justin (UW), John Vidale (UW), Joan Gomberg (USGS), Paul Bodin (UW), Ken Creager (UW), and Steve Malone (UW)

# Uncertainty analysis of finite fault inversions: A back-projection approach

Shao, Guangfu (UCSB) and Chen Ji (UCSB)

# The complex evolution of transient slip derived from precise tremor locations in western Shikoku, Japan

Shelly, David (Stanford University), Greg Beroza (Stanford University), and Satoshi Ide (University of Tokyo)

# Analysis of fault zone head waves in the San Andreas and Southwest Fracture Zone around the hypocenter of the 2006 M6 Parkfield earthquake

Shi, Zheqiang (USC), Yehuda Ben-Zion (USC), Zhigang Peng (Georgia Tech), Michael Lewis (USC), and Peng Zhao (Georgia Tech)

# The San Fernando Valley - High School Seismograph (AS-1) Project

Simila, Gerry (CSUN)

### Rupture directivities of the 2003 Big Bear sequence

Tan, Ying (Caltech) and Don Helmberger (Caltech)

# Variations of strain-drops of aftershocks of the 1999 Izmit and Duzce earthquakes along the Karadere-Duzce branch of the North Anatolian fault

Yang, Wenzheng (USC), Zhigang Peng (Georgia Tech), and Yehuda Ben-Zion (USC)

#### Z/H Rayleigh-wave analysis on broadband Southern California seismic data

Yano, Tomoko E. (UCSB), Toshiro Tanimoto (UCSB), and Shunsuke Shikato (UCSB)

# Variations of velocity contrast along the rupture zone of the 2004 M6 Parkfield earthquake on the San Andreas Fault

Zhao, Peng (Georgia Tech), Zhigang Peng (Georgia Tech), Yehuda Ben-Zion (USC), Michael Lewis (USC), and Zheqiang Shi (USC)

# Southern San Andreas Fault Evaluation (SoSAFE)

#### Low-latency high-rate GPS data streams from the EarthScope Plate Boundary Observatory

Anderson, Greg (UNAVCO), Mike Jackson (UNAVCO), Chuck Meertens (UNAVCO), and Keith Stark (Stark Consulting, LLC)

# A revised slip rate estimate for the Mission Creek-Coachella Valley strand of the southern San Andreas fault at Biskra Palms Oasis, Indio, California

Behr, Whitney (USC), Ken Hudnut (USGS Pasadena), John Platt (USC), Katherine Kendrick (USGS Riverside), Warren Sharp (BGC), Kathryn Fletcher (BGC), Bob Finkel (LLNL), and Dylan Rood (LLNL)

# Next Steps to Improve Rupture Scenarios for the Southern San Andreas Fault

Biasi, Glenn (UNR), Ray Weldon (University of Oregon), and Kate Scharer (Appalachian State, NC)

### Mapping the Southern San Andreas Fault using the B4 LiDAR Dataset

Bohon, Wendy (OSU), David Raleigh (OSU), and Lindsay Schoenbohm (OSU)

# New Seismic CHIRP Evidence for Transpression and Transtension Beneath the Salton Sea, California

Brothers, Daniel (UCSD), Neal Driscoll (UCSD), Graham Kent (UCSD), Alistair Harding (UCSD), Jeff Dingler (UCSD), and Jeff Babcock (UCSD)

# A New, Older Age for the 'T2' Fan Surface at Biskra Palms from U-series Dating of Pedogenic Carbonate: Implications for Landform Dating and Long-Term Slip Rates on the Southern San Andreas Fault

Fletcher, Kathryn (UC Berkeley), Warren Sharp (BGC), Katherine Kendrick (USGS), Whitney Behr (USC), Ken Hudnut (USGS), and Tom Hanks (USGS)

#### Temporal Slip Rate Variability along the Southern San Jacinto Fault

Le, Kimberly and Mike Oskin (UNC Chapel Hill)

#### Geothermal Features Southeast of the Salton Sea and a Possible Extension of the San Andreas Fault

Lynch, David K. (Thule Scientific & USGS Volunteer) and Kenneth W. Hudnut (USGS)

#### ShakeOut Scenario 2008: Performance of Tall Steel Buildings

Muto, Matt (Caltech) and Swaminathan Krishnan (Caltech)

# Utility of LiDAR and NAIP/ADS40 Imagery in updating/revising Alquist-Priolo Earthquake Fault Zone Maps

Perez, Florante (CGS), William Bryant (CGS), and Christopher Wills (CGS)

# Evidence for Large Earthquakes on the San Andreas Fault at the Burro Flats Paleoseismic Site: A.D. 150 to Present

Yule, Doug (CSUN), Kerry Sieh (Caltech), and Caryn Howland (CSUN)

# **Tectonic Geodesy**

# The EarthScope Plate Boundary Observatory Unified Geodetic Network

Anderson, Greg, Mike Jackson, Karl Feaux, David Mencin, Brian Coyle, Barrett Friesen, Katrin Hafner, Wade Johnson, Ben Pauk, Chris Walls, PBO Data Management/IT Team, and Chuck Meertens (UNAVCO)

#### The Velocity of Earth's Center

Argus, Donald (JPL)

#### InSAR Accuracy: Uncertainty in Range Change and Rate

Argus, Donald (JPL) and Paul Lundgren (JPL)

#### **GEODVEL: Plate Motions From Space Geodesy**

Argus, Donald (JPL), Richard Gordon (Rice University), Richard Eanes (Center for Space Research), Michael Heflin (JPL), Chopo Ma (Goddard Space Flight Center), Susan Owen (JPL), Pascal Willis (Insititut Geographique National and JPL), Zuheir Altamimi (IGN

# Preliminary evaluation of high rate real-time GPS data processing by Real Time GIPSY (RTG)

Borsa, Adrian (USGS), Aris Aspiotes (USGS), Yoaz Bar-Sever (JPL), Robert Dollar (USGS), Ken Hudnut (USGS), Nancy King (USGS), and Robert Meyer (JPL)

# NASA's DESDynI InSAR Mission

Donnellan, Andrea (JPL), Brad Hager (MIT), Paul Rosen (JPL), and Howard Zebker (Stanford)

#### Detection of fault creep using PS-InSAR: the Rodgers Creek fault, northern California

Funning, Gareth (UC Riverside), Roland Burgmann (UC Berkeley), Alessandro Ferretti (TRE Milano), and Fabrizio Novali (TRE Milano)

### A general method for calculating gravity changes in complex fault networks

Hayes, Tyler (UWO), Kristy Tiampo (UWO), and John Rundle (UC Davis)

#### Bridging The Deformation Spectrum: The PBO Borehole Strainmeter Network

Hodgkinson, Kathleen, D. Brent Henderson, Greg Anderson, David Mencin, James Matykiewicz, Jim Wright, Wade Johnson, Tim Dittman, PBO Data Management/IT Group, and Mike Jackson (UNAVCO)

#### GeoEarthScope: Aerial and Satellite Imagery and Geochronology

Phillips, David (UNAVCO), M.E. Jackson (UNAVCO), and C.M. Meertens (UNAVCO)

# InSAR measurements of secular deformation in Southern California over a time period between 1992 and 2006

Rivet, Diane (UCSD) and Yuri Fialko (UCSD)

#### Investigating Creep on the Central San Andreas Fault using InSAR and GPS

Ryder, Isabelle (UC Berkeley) and Roland Burgmann (UC Berkeley)

# The integration of GPS and DINSAR data for high resolution deformations studies

Samsonov, Sergey (UWO), Pablo Gonzalez (University of Madrid), Kristy Tiampo (UWO), Jose Fernandez (University of Madrid), and John Rundle (UC Davis)

### Accuracy and Resolution of ALOS Interferometry: Coherence Matters!!

Sandwell, David (SIO), Meng Wei (SIO), Yuri Fialko (SIO), Rob Mellors (SDSU), and Masanobu Shimada (JAXA)

## GPS-Explorer: A web-based GPS data and products exploration and modeling tool

Webb, Frank (JPL), Yehuda Bock (UCSD), Sharon Kedar (JPL), Paul Jamason (UCSD), Ruey-Juin Chang (UCSD), Danan Dong (JPL), Ian Mcleod (UCSD), George Wadsworth (UCSD), Brian Newport (JPL), and Todd Ratcliff (JPL)

# **Unified Structural Representation (USR)**

# Using TDR, Helium density, digital grain size analysis, and chemical data to characterize the physical properties of near surface fault zones: a proof-of-concept approach

Campbell, Cameron D. (SDSU), Afton Van Zandt (SDSU), Peter Winther (SDSU), Matt Burgess (SDSU), Aaron K. Hebeler (SDSU), Sarah L. Johnson (SDSU), Adam Cosentino (SDSU), and Gary H. Girty (SDSU)

# Available 3-D Crustal Travel-time Velocity Models for Southern California: How do They Compare and What are the Standard Errors?

Hauksson, Egill (Caltech)

#### Evaluating SCEC 3D Community Fault Model v3.0 and Regional Seismicity Catalogs

Nicholson, Craig (UCSB), Andreas Plesch (Harvard), Guoqing Lin (UCSD), Peter Shearer (UCSD), and Egill Hauksson (Caltech)

### A new velocity model for southern California: CVM-H 5.0

Plesch, Andreas (Harvard), Peter Suess (Harvard), Jason Munster (Harvard), John H. Shaw (Harvard), Egill Hauksson (Caltech), Toshiro Tanimoto (UCSB), and members of the USR Working Group

# The giant low-angle fault system beneath the Palos Verdes anticlinorium, California

Sorlien, Christopher (UC Santa Barbara) and Leonardo Seeber (LDEO)

#### Development of a State-wide 3-D Seismic Tomography Velocity Model for California

Thurber, Clifford (UW-Madison), Guoqing Lin (UW-Madison), Haijiang Zhang (MIT), Egill Hauksson (Caltech), Peter Shearer (UC San Diego), Felix Waldhauser (Lamont), Jeanne Hardebeck (USGS), and Tom Brocher (USGS)

# Working Group on California Probabilities (WGCEP)

# ALLCAL -- An Earthquake Simulator for All of California

Ward, Steven N. (UCSC)

#### **SCEC Intern Programs**

The SCEC Internship Programs, 2007

Perry, Sue (SCEC)

# SCEC Intern Program: Undergraduate Studies in Earthquake Information Technology (USEIT)

SCEC/UseIT: Mitigating Hazardous Objects

Aung, Lily (USC)

SCEC/UseIT: Better, Stronger, Faster

Bansal, Ranna (Princeton)

SCEC/UseIT: Helping Users Better Utilize SCEC-VDO

Chan, Alysha (Scripps College)

SCEC/UseIT: Teaching Earth Science Through Games and Movies

Dumbacher, Brian (USC)

SCEC/UseIT: Earthquake & Disaster Preparations

Flowers, Rosie (Rust College)

# SCEC/UseIT: Technology, Serious Games & Earthquake Mitigation

Hairston, Jennifer (Wilberforce University)

### SCEC/UseIT: Educational Game Design and Development

Jameson, Doreen (UNM)

# SCEC/UseIT: Point System for the Mitigation Game

Love, Portia (Rust College)

#### SCEC/UseIT: Visualization Grand Challenge

MacLeod, Eric (College of the Desert)

#### SCEC/UseIT: The Simulation Game in 3D

McQuinn, Emmett (Clemson)

#### **SCEC/UseIT:** Interactive Education

Millar, Alexandra (Hamilton College)

#### SCEC/UseIT: Topography/Satellite Images Anywhere!

Milner, Kevin (USC)

### SCEC/UseIT: Serious Game Design

Punihaole, Tom (USC)

# SCEC/UseIT: Serious Gaming for Serious Situations

Richardson, David (USC)

#### SCEC/UseIT: Flash! Savior of the Universe!

Sain, Jared (USC)

# SCEC/UseIT: Development of a Decision-Oriented Game

Solomon, James Bodie (Pasadena City College)

#### SCEC/UseIT: The Creation of the Educational Game

Tillman, Ashlynn (Rust College)

# SCEC/UseIT: Serious Educational Gaming

Wilson, Anna (Occidental College)

#### SCEC/UseIT: Mitigation Graphic Design

Wilson, Chesela (Philander Smith College)

## SCEC/UseIT: Serious Games for Education

Wong, Esther (USC)

#### SCEC Intern Program: Summer Undergraduate Research Experience (SURE)

#### **SCEC/SURE:** Economic Preparations

Abbott, Corey (Occidental)

# SCEC/SURE: A Finite Differences Model for Dynamic Ruptures along Rough Faults

Belanger, David (Harvard) and Eric M. Dunham (Harvard)

# A MATLAB Program to Measure the Fractal Dimension of Seismicity with Application to Southern California

Boyce, Brian (Lincoln University), Aaron Kositsky (USC), and Charles Sammis (USC)

# SCEC/SURE: Damage Zone Structure Along the Calico Fault

Brown, Naomi (UH Manoa and UCR), Elizabeth Cochran (UCR), Daniela Herrera (UCR), Peter Shearer (UCSD), Yong-Gang Li (USC), Yuri Fialko (UCSD), and John Vidale (UW)

### A Test of Two Earthquake Modeling Methods

Burrill, Christine (MHC), Keith Richards-Dinger (UCR), James Dieterich (UCR), and David Oglesby (UCR)

# SCEC/SURE: Seismic Velocity Variations in California Middle and Lower Continental Crust: Observations from the San Gabriel Mountains

DeWalt, Heather (Ohio University) and Andy Barth (IUPUI)

# Paleoseismologic Investigation of the Calico Fault, Newberry Springs, CA: Stratigraphy

Elliott, Austin (USC), Plamen Ganev (USC), James Dolan (USC), Mike Oskin (UNC Chapel Hill), and Kim Lee (UNC Chapel Hill)

### SCEC/SURE: Investigations of the Superstition Hills Fault

Hanna, Alexander (CSUN and UCR), Elizabeth Cochran (UCR), Joan Gomberg (USGS), and Jennifer Stevens (UCR)

# SCEC/SURE: Basin Data Collection for Post-Fire Debris Flow Analysis for Southern California

Hiller, James (Diablo Valley College/SCEC/USGS Landslides Hazards Team)

# SCEC/SURE: Collaborative Effort to Constrain Slip Along Southern San Andreas Fault and Digitize Active Faults of Pakistan

Hinojosa, Jessica (Stanford), Kandace Kelley (Purdue), Nick Rousseau (CSUN), and Doug Yule (CSUN)

Multi-Hazards Demonstration Project: It's Your Fault... Prepare Now!

Hyung, Eugenia (OSU)

#### SCEC/SURE: The International Earthquakes and Mega Cities Initiative

Johnson, Steven (Grinnell College)

Collaborative Research: SCEC/CSUN Catalyst Program A) An alternative approach to restoring slip across the San Andreas fault at Biskra Palms, B) Towards a digital active fault map of Pakistan

Kelley, Kandace (Purdue), Jessica Hinojosa (Stanford), Nick Rousseau (CSUN), and Doug Yule (CSUN)

# The Multi-Hazards Demonstration Project: It's your fault...prepare now!

Kelly, Stephanie (Cornell University)

#### Multi-Hazards Demonstration Project: It's Your Fault... Prepare Now!

Leeper III, Robert (Cerritos College), Eugenia Hyung (Ohio State University), Stephanie Kelly (Cornell University), and Rosie Santilena (CSU Los Angeles)

SCEC/SURE: Rainfall intensity-duration thresholds for debris flows in post-burn areas of Southern California

Leone, Lindsay (Dartmouth College)

# SCEC/SURE: Velocity Contrast Along the Hayward Fault From Analysis of Fault Zone Head Waves

Ohlendorf, Summer (UC Berkeley), Zhigang Peng (Georgia Tech), and Yehuda Ben-Zion (USC)

SCEC/SURE: Collaborative Research: SCEC/SURE, CSUN Catalyst Program a) An alternative approach to restoring slip across the San Andreas fault at Biskra Palms b) Towards a digital active fault map of Pakistan

Rousseau, Nick (CSUN), Jessica Hinojosa (Stanford), Kandace Kelley (Purdue), and Doug Yule (CSUN)

# Multi-Hazards Demonstration Project: It's Your Fault... Prepare Now!

Santilena, Rosie (CSULA), Eugenia Hyung (OSU), Stephanie Kelly (Cornell), and Robert Leeper III (CSU Fullerton)

SCEC/SURE: Paleoseismic Investigation of the San Andreas Fault at Frazier Mountain, California Sheridan, Helen-Mary (SCEC/SURE, UChicago)

Compton Blind-Thrust Fault: Compelling Evidence for Holocene Activity of Los Angeles Basin, California

Tsang, Stephanie (UCLA), Lorraine Leon (USC), James Dolan (USC), and John Shaw (Harvard)

# SCEC/SURE: Are Balanced Rock Orientations Controlled by Fracture Patterns?

Weiser, Deborah (Occidental College), Lisa B. Grant (UCI), James Brune (UNR), and Matthew Purvance (UNR)

#### SCEC/SURE: Dynamic Models of Earthquakes and Tsunamis

Wendt, James (Pomona College), David Oglesby (UCR), and Eric Geist (USGS)

# SCEC Intern Program: Advancement of Cyberinfrastructure Careers through Earthquake System Science (ACCESS)

# **Examining Earthquake Magnitude Errors**

Coddington, Amy (Macalester College), Jeremy Zechar (USC), and Thomas Jordan (USC)