

## Joint Workshop Between SCEC and ERI

May 31-June 3, 2006  
Oxnard, California

Thirty-seven scientists from the United States and Japan participated in the third joint workshop between the Southern California Earthquake Center (SCEC) and the Earthquake Research Institute, University of Tokyo, Japan. The workshop “Earthquakes in Urban Areas” featured 25 talks on June 1 and 2 with a field trip on June 3 to visit some of the faults in the Ventura Basin. SCEC produced an abstract volume that provided a synopsis of the different talks that were presented. A major highlight of the meeting was the signing of a memorandum of understanding between SCEC and ERI for continued cooperation in research by SCEC Director Professor Tom Jordan and ERI Director Professor Shubei Okubo.

This workshop was co-organized by SCEC Deputy Director Professor Ralph Archuleta and by ERI Professor Kazuki Koketsu.

The first seven pages of the abstract volume are provided below to summarize the activities.

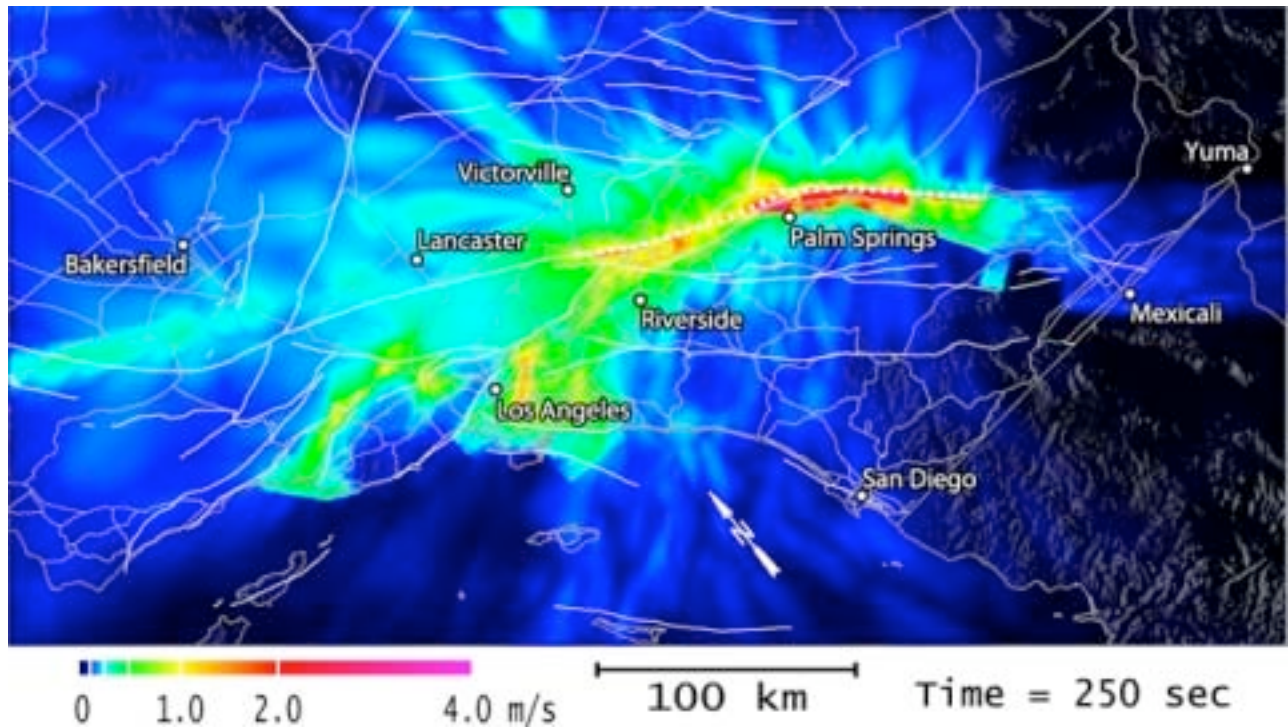
# Earthquakes in Urban Areas

## Joint Workshop

Southern California Earthquake Center  
&  
Earthquake Research Institute

Program and Abstracts

Oxnard, California  
June 1-3, 2006



[Maximum Peak Velocity from TeraShake 2.1: Dynamic Rupture on Southern San Andreas Fault]

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# Earthquakes in Urban Areas

Southern California Earthquake Center  
and  
Earthquake Research Institute

Joint Workshop

June 1-3, 2006  
Embassy Mandalay Beach Resort  
Oxnard, California USA

## Wednesday, May 31

19:00 Ice Breaker/ Opening Reception

## Thursday, June 1

(Chairs: Ralph Archuleta and Kazuki Koketsu)

7:30 Breakfast

8:30 Welcome and Introductions

Tom Jordan  
Naoshi Hirata  
Ralph Archuleta

9:00 Paleoseismologic Evidence for Long-Distance and Long-Term Fault Interactions in Southern California

James Dolan

9:30 Nankai Earthquake Sequence: Observation and Inference

Kunihiko Shimazaki

10:00 Break

10:30	Geometry of Source Faults in Japanese Islands: Results of Seismic Profiling and Geologic Modeling	Hiroshi Sato
11:00	Field and Laboratory Constraints on Dynamic Weakening and Processes of Energy Dissipation During Earthquake Rupture	Judi Chester
11:30	Double-Difference Relocation of Southern California Seismicity: Background Seismicity and Major Active Faults	Egill Hauksson
12:00	Lunch	
13:30	Seismicity Anomaly from the Predicted Rate by the ETAS Model	Yoshihiko Ogata
14:00	Earthquakes Triggered by Silent Slip Events on Kilauea Volcano, Hawaii	Paul Segall
14:30		Shin'ichi Miyazake
15:00	Break	
15:30	Constraints on Repeating Cascadia Megathrust Slow Earthquakes	Tim Melbourne
16:00	Modeling Fault Ruptures Using Laboratory-Derived Friction Laws	Nadia Lapusta
16:30	Estimates of the Slip-Weakening Distance and Fracture Energy from Near-Field Records of the 1999 Chi-Chi, Taiwan Earthquake	Jim Mori
17:00	Ground Motion Modeling of the 1906 M7.9 San Francisco Earthquake	Brad Aagaard
17:30	Open Discussion	
18:00	Happy Hour	
19:00	MOU Signing Ceremony	
19:30	Dinner	

## Friday, June 2

(Chairs: Ralph Archuleta and Kazuki Koketsu)

7:30	Breakfast	
8:30	Some Lessons from Parkfield	Ruth Harris
9:00	TeraShake2: Simulations of Large Earthquakes on the Southern San Andreas Fault With Dynamic Rupture Propagation	Kim Olsen
9:30	Basin and Crustal Velocity Structure Model for Strong Ground Motion Simulation in Kinki, Japan	Tomotaka Iwata
10:00	Break	
10:30	Pseudo-Dynamic Source Models for Strong Ground Motion Prediction	Greg Beroza
11:00	Strong Ground Motion Validation in the Tokyo Metropolitan Area	Hiroe Miyake
11:30	Large-Scale Simulation of Broadband Ground Motions	Rob Graves
12:00	Lunch	
13:30	Simulation of Damaging Long-Period Ground Motions from Distant Earthquakes	Kazuki Koketsu
14:00	Impact of a Large San Andreas Fault Earthquake on Tall Buildings in Southern California	Swami Krishnan
14:30	Effect of Basin Depth on Site Amplification of Ground Motion	Saburo Midorikawa
15:00	Break	
15:30	Weighting Probabilistic Seismic Hazard Estimates via Precariously Balanced Rock Fragility	Matt Purvance
16:00	Borehole Geotechnical Array Data: The Effects of Surface Geology on Ground Response, Liquefaction, and Soil-Foundation-Structure Interaction	Jamie Steidl
16:30	Japanese National Program for Earthquake Prediction Research and Metropolitan Project	Naoshi Hirata
17:00	Earthquake Predictability, Brick by Brick	Tom Jordan
17:30	Discussion	
18:00	Happy Hour	
19:00	Dinner	

## Saturday, June 3

7:30 Breakfast

9:30

Tom Rockwell (San Diego State University) and James Dolan (University of Southern California) will lead a field trip to examine active faults and folds of the Ventura basin region. Geodetic, geomorphologic, and geologic observations, many of the latter derived from extensive petroleum exploration in the area, indicate that the Ventura basin is the locus of rapid north-south shortening at  $\sim 7$  mm/yr. This contraction is accommodated by a complex array of faults, which will be discussed in detail during the trip. Highlights will include a discussion of the spectacular flights of marine and fluvial terraces that have formed above the actively growing Ventura Avenue anticline, recent geologic results from the San Cayetano and Oak Ridge faults -- opposing reverse faults that accommodate most of the north-south compression in the Ventura basin, and a detailed look at the complex transfer of slip between major reverse faults in the Ojai area, including several active blind thrust faults.