

Tectonics Observatory Annual Meeting

- November 9, 2010 -

8:00 am Breakfast in patio area behind 1st floor of S. Mudd

8:30 am Jean-Philippe Avouac – Benioff Conference Room (254 S. Mudd)

8:35 – 11:00 am Groups A & B

Group A – Global Geodynamics and Subduction Processes – Rob Clayton

Laura Alisic	Slab stress and strain rate as constraints on global mantle flow
Erin Burkett	3-D dynamics of slab detachment due to ridge-trench
Ting Chen	Three-dimensional attenuation and velocity structure of the Cocos subduction zone in Mexico
Nadaya Cubas	A mechanical analysis of the correlation between forearc morphology and frictional properties of megathrust
Sara Dougherty	Fine-scale structure along the transition from flat to normal subduction in Central Mexico
Young-Hee Kim	Distribution of hydrous minerals in the Cocos oceanic crust inferred from receiver function analysis
	Evidence of a collision between the Yucatan Block and Mexico in the Miocene
Wei Leng	Re-investigation of the subduction initiation problem
Kristin Phillips	Structure of the subduction system in southern Peru from seismic array data
Steven Skinner	Flat slabs
Yiran Ma	Surface wave dispersion measurements from ambient seismic noise in Southern Peru
Sonja Spasojevic	Sea level and vertical motion of continents from dynamic models since the Late Cretaceous
	Evidence for new class of mantle upwellings from dynamic models
Risheng Chu	Juan de Fuca subduction zone from a mixture of tomography and waveform modeling
Takeo Ito	One dimensional model of Earth structure in the western United States from GPS observation of ocean tidal load

Group B – Seismology – Pablo Ampuero

Asaf Inbal	Monitoring microseismicity in the northern Dead Sea basin using portable seismic mini-arrays
Junle Jiang	Bayesian inversion of the finite fault model using tsunami waveforms for 2007 Mw 8 Pisco, Peru Earthquake
Nina Lin	Post-seismic deformation for 2010 Maule earthquake, Chile
Lingsen Meng	Retrieving earthquake rupture properties by high-resolution array analysis at regional distances: the 2010 M7 Haiti earthquake as seen by the Venezuela National Seismic Network
Sarah Minson	Bayesian kinematic finite fault source models
Ramses Mourhatch	Using rupture-to-rafters simulations to quantify seismic risk from the San Andreas Fault – case studies of Tall Steel Braced Frame Buildings
Hemanth Siriki	Using rupture-to-rafters simulations to quantify seismic risk from the San Andreas Fault-case studies of Tall Steel Moment Frame and Dual-System Buildings
Anthony Sladen	Earthquake source models to elucidate the seismic cycle: the recent contribution of geodesy
Xiangyan Tian	Modeling events in the lower Imperial Valley basin
Shengji Wei	Source model of the 11 th July, 2004 Zhongba earthquake revealed from the joint inversion of InSAR and seismological data
	Path calibration for earthquakes in deep sedimentary basin
Zhongwen Zhan	Expanding the cut-and-paste (CAP) methodology to include core phases

11:00 – 11:45 am Poster Session

11:45 – 12:45 pm Group C

Group C – Dynamics of Fault Slip – Nadia Lapusta

Surendra Somala	Dynamic earthquake rupture modeling with PyLith: SCEC benchmarks and application to tsunamigenic earthquakes
Vahe Gabuchian	Experimental investigation of thrust faults in Homalite
Noda Hiroyuki	Average static stress drops for heterogeneous slip distributions: Comparison of several measures and implications for energy partition in earthquakes

Yihe Huang	Dynamic properties of slip pulses in a 2D slab
Francisco Ortega	A Bayesian approach for apparent inter-plate coupling in the Central Andes subduction zone
Sylvain Barbot	Relative contribution of afterslip and viscoelastic flow following the 2004 Parkfield earthquake Constrains on the Mojavian lithosphere viscosity from postseismic deformation of the 1992 Landers and the 1999 Hector Mine earthquake, CA
Marion Thomas	Exploring the conditions for seismic or aseismic fault slip on the Longitudinal Valley Fault, Taiwan Quasi-Dynamic versus fully-dynamic simulations of slip accumulation on faults with heterogeneous friction properties
Shu-Hao Chang	Investigating frictional properties of the Longitudinal Valley fault from dynamic modeling of pre- and postseismic slip associated with the 2003, Mw 6.8 Chengkung earthquake
Junle Jiang	Dynamic rupture on faults with heterogeneous strength due to non-uniform normal stress: The effect of stress redistribution by prior events
Belle Philibosian	The fault slip record from corals above the Sumatran subduction zone: New data from the Mentawi Islands
Erika Swanson	Assessing stress levels on faults using carbonate clumped isotope thermometry of gouges and vein arrays

12:45 – 1:45 pm Lunch

1:45 – 2:30 Poster Session

2:30 – 3:30 Group D

Group D – Continental Tectonics – Jason Saleeby/Brian Wernicke

Robinson Cecil	Rapid exhumation of the Sierra Nevada in the Cretaceous related to Shatsky rise conjugate subduction
Alan Chapman	Regional displacement analysis and palinspastic restoration of dispersed crustal fragments in the Southern Sierra Nevada, CA
Zorka Saleeby	Sediment burial and exhumation of the Southern Sierra Nevada in relation to mantle lithosphere removal Part Two: Focus on Thermo-Mechanical Modeling Results
Jeffrey Thompson	Revised contemporary lacustrine-carbonate-temperature (LCT) lapse rate for southwestern North America
Janet Harvey	Geology of the Bristol Mountains, CA

Brian Wernicke	Oligo-Miocene unroofing of eastern Grand Canyon recorded in the Sespe Formation, southern California
Tim Raub	Testing the antiquity of Grand Canyon: Paleomagnetic support for Shinumo Quartzite Clasts in Oligocene-Miocene Sespe Formation River Gravels
James Hollingsworth	Slip-rate estimate for the right-lateral Beng Co fault, and implications for the eastward extrusion of Tibet
Yu Wang	Tectonic deformation along the Arakan megathrust, western Myanmar
Alex Copley	Evidence for underthrusting of a strong Indian crust beneath southern Tibet
Nneka Williams	Crustal Deformation along the Nyainquentanglhe Detachment, Southern Tibet

3:30 – 4:30 pm Poster Session

4:30 – 5:15 pm Group E

Group E – Remote Sensing/Miscellaneous – Jean-Philippe Avouac

Pablo Ampuero	Towards earthquake source imaging from space by an optical strong-motion seismometer
	Fault slip embedded in creep: insight into tectonic tremors and slow slip events
James Hollingsworth	Extension during the 1975-84 Krafla Rift Crisis, NE Iceland, constrained by optical image matching
Simon Beckouche	APERS: Affine parameters estimation by random sampling, a robust tie-points detection algorithm
Sebastien Leprince	COSI-Corr 2011, ongoing studies and development
Mark Turner	New developments in G-Plates
Laurie Kovalenko	Outreach Activities

5:15 – 6:00 pm Poster Session

6:00 pm Dinner