Seminars and Conferences

UCSB On-campus

2006-2007

Off Campus-Invited Lectures

2006

July 24 – August 8, Tokyo Institute of Technology, "Geodynamics," Toshiro Tanimoto

2006, Goldschmidt Conference, keynote address, "Duration of Ultrahigh-Pressure Tectonism," Bradley Hacker

2006, Geochemical Earth Reference Model Conference, "Dehydration and intermediate- Depth Seismicity in Subducting Slab," Bradley Hacker

2006, University of Southern California, "Continental reworking," Bradley Hacker

2006, American Geophysical Union, fall meeting, "Resolution of GPS data from the 2004 Mw6.0 Parkfield," Ralph Archuleta, Morgan Page, Susana Custodio, Jean Carlson

2006, American Geophysical Union, fall meeting, "Oversaturation of peak ground velocity along strike slip faults," Ralph Archuleta, Jan Schmedes

2006, American Geophysical Union, fall meeting, "Dynamic modeling of the 2004, Mw 6.0 Parkfield earthquake," Ralph Archuleta, Shou Ma, Susana Custodio

2006, American Geophysical Union, fall meeting, "The San Gabriel Mountains: A natural seismic insulator for Los Angeles," Ralph Archuleta, Shou Ma, Morgan Page

2006, American Geophysical Union, fall meeting, "b-Values as a proxy for stress - inferences for dynamic modeling of the 2004 Parkfield earthquake," Ralph Archuleta, Susan Custodio

2006, American Geophysical Union, fall meeting, "Effect of realistic 3D-velocity structure on rupture dynamics and ground motion," Ralph Archuleta, Susana Custodio

2006, American Geophysical Union, fall meeting, "'HOT Faults', fault organization, and the occurrence of the largest earthquakes," Ralph Archuleta, Gregor Hillers

2006, American Geophysical Union, fall meeting, "An application of site response functions to ground motion prediction," Ralph Archuleta

July 2006

July 2006, Water Replenishment District Of Southern California, "Groundwater Travel Times near the Montebello Spreading Grounds: Inferences from Geochemical and Physical Approaches" Jordan Clark

August 2006

August 2006, Sagehen California Goldschmidt 2006, "Carbon sources and signals through time in an alpine groundwater basin," Jordan Clark

September 2006

September 2006, Inland Empire Utilities Agency, "SF6 Tracer Experiments from Artificial Recharge Operations," Jordan Clark

September 4-8, 2006, Proceedings, European Conference on Earthquake Engineering and Seismology, Geneva, Switzerland, "Strong Motion Simulations Using Hybrid 1D-3D Velocity Models and Correlated Source Parameters, 1st European Conference on Earthquake Engineering and Seismology," Ralph Archuleta

September 8, 2006 Institute of Geology, Chinese Earthquake Administration, "Calibrating rates of rapid landscape erosion using cosmogenic nuclides," Douglas Burbank

September 15 – 16, 2006, Nada junior high and Nada High School, Kobe, Japan, "Nonlinear processes for seismic wave/noise generation," Toshiro Tanimoto

October 2006

October 2006, Geological Society of America, Annual meeting, "Groundwater times determined with geochemical and physical techniques near artificial recharge ponds," Jordan Clark

October 2006, Geological Society of America, Annual meeting "Groundwater flowpaths and aquifer interactions in the Upper, Middle, and Lower Floridan aquifer, Southern Florida," Jordan Clark

October 6, 2006, Department of Geology, University of Missouri Columbia, "Folding and faulting for offshore Santa Barbara to Los Angeles: From low risk to catastrophic earthquake scenarios," Christopher Sorlien, Kris Broderick, Sarah Hopkins, Craig Nicholson, Leonardo Seeber, and Marc Kamerling

October 19, 2006, The NSF-CUREE Workshop on Strong-motion research need and opportunities, Oakland, California, "The George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES)," Jamison Steidl

October 23, 2006 Geological Society of America, Annual meeting, "Geomorphic- Geodynamic coupling at the orogen scale: a Himalayan transect in central Nepal," Douglas Burbank

November 2006

November 2006, Association of Engineering Geologists, "Tracing recharge water from spreading ponds: Insights from a decade of studies," Jordan Clark

December 2006

December 2006, American Geophysical Union, Annual meeting, "Mixing and transport in the Stockton Deep Ship Channel," Jordan Clark

December 2006, American Geophysical Union, Annual meeting, "Near the Far Scale Gas Exchange Associated with natural marine Hydrocarbon Seeps," Jordan Clark

December 2006, American Geophysical Union, Annual meeting, "Hydrocarbon Plume Dynamics in the World's Most Spectacular Hydrocarbon Seeps, Santa Barbara, California, Jordan Clark

December 6, 2006, Center For Complexity, University of California, "Nonlinear processes for seismic wave/noise generation," Toshiro Tanimoto

December 11- 15, 2006, American Geophysical Union, San Francisco, CA
S23A-0144, "Excitation of Normal modes by Nonlinear Interaction of Ocean Waves," Toshiro Tanimoto
S21-B06, "Recovering shallow shear wave velocity structure in the Los Angeles basing by combing cross correlation and Z/H ratio techniques," Toshiro Tanimoto and M. Etzel
S23D-0195, "The Z/H Rayleigh-wave analysis of broadband seismic data," T. Yano, Toshiro Tanimoto, and L. Rivera
S43A-1366, "Off Great-Circle Propagation of Surface Waves and the Effect on Depth Dependent Surface Azimuthal Anistropy in Southern California Through the use of Beamforming," Toshiro Tanimoto, K. Prindle

2007

2007, Louisiana State University, "Continental reworking," Bradley Hacker

2007, California State University Fresno, "Continental reworking," Bradley Hacker

2007, University of California Santa Cruz, "Continental reworking," Bradley Hacker

2007, Seismological Society of America, "Oversaturation of peak ground velocity along strike slip faults," Ralph Archuleta, Jan Schmedes

2007, Seismological Society of America, "Resolution of GPS data from the 2004 M_W6.0 Parkfield earthquake," Ralph Archuleta, Morgan Page, Susana Custodio, Morgan Page

2007, Seismological Society of America, "Status and future of the COSMOS VDC (http://db.cosmos-eq.org/): a search engine for world-wide strong-motion data," Ralph Archuleta, Melinda Squibb, Jamison Steidl

2007, Seismological Society of America, "Combining different datasets to obtain a rupture model: The 2004 M6.0 Parkfield earthquake," Ralph Archuleta, Susana Custodio, Morgan Page, Jean Carlson

January 2007

January 4, 2007, American Association of Petroleum Geologists, Annual meeting, "Reconstructing orogenesis using single-crystal dating," Douglas Burbank

February 2007

February 2007, 4th Mini conference on Noble Gases 2007, Potsdam, "Noble gas studies at Managed Aquifer Recharge (MAR) operations: Insights on the behavior of gases during recharge," Jordan Clark

February 16, 2007, American Association for the Advancement of Science, 2007 Annual meeting, San Francisco, California, "A Virtual tour of the NEES permanently instrumented field site at Garner Valley, CA.," Jamison Steidl

March 2007

March 2007, Geological Society of America, Annual meeting, "Timing and groundwater circulation within the Floridan aquifer system of South Florida Southeastern Section," Jordan Clark

March 2007. GRA-3 Symposium, Tools and Technology Series, "SF_6 Tracer Experiments at Managed Aquifer Recharge Sites

March 2007, Yale University, "Seawater chemistry and the Evolution of Carbonate Biomineralization," Susannah Porter

April 2007

April 10 – 12, 2007, Seismological Society of America, 2007 annual Meeting, Kona, Hawaii, "Two methods of noise analysis for planetary seismology," Toshiro Tanimoto

April 12, 2007, Seismological Society of America, 2007 Annual meeting, Hawaii, "New techniques for using borehole observations to evaluate site response," Jamison Steidl

May 2007

May 2007, Stanford University, "Seawater chemistry and the Evolution of Carbonate Biomineralization," Susannah Porter

May 2, 2007, Department of Civil Engineering, University of California Los Angeles, "Earthquake ground motions and site response," Jamison Steidl

June 2007

June 13, 2007, Southern California Earthquake Center, CVM/USR workshop, Palm Springs, California, "Surface Wave Tomogrpahy," Toshiro Tanimoto

June 25-28, 2007, International Conference on Earthquake Engineering, Thessaloniki, Greece, "Effects of Correlation of Source Parameters on Ground Motion Estimates," Ralph Archuleta, Jan Schmedes, Pengcheng Liu

Workshops

Earth Education Collaboration
August 8,9,and 10, 2007 EarthEd Advisory Group Meeting

The goals are to introduce a faculty team from a variety of institutions to the EarthEd Online software system. A primary goal is to test determine how this resource fits the team's needs, and to specify what modifications and additions are needed to proceed to the beta test stage. A strategy for moving the software system from beta test to possible adoption will be developed. Also, because the team has extensive experience with online learning, another goal is to summarize "best practices" and other related issues to this learning modality.
Funding from National Science Foundation, Division of Undergraduate Education, and UCSB Office of Instructional Development. Funded by the National Science Foundation, Division of Undergraduate Education.
http://earthednet.org/Collab/Wkshop_2006/

Notes of EarthEd Workshop August 2006

The EarthEd Advisory committee met on 8, 9, 10 August 2006 in Hood River Oregon to review, evaluate, and suggest directions for future work related to EarthEd. There are ten (10) Advisory committee members, plus Wm. Prothero, the Project's PI.

Participants, affiliation, email:
Stuart J. Birnbaum, University of Texas @ San Antonio (TX); stuart.birnbaum@utsa.edu
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William Prothero prothero@geol.ucsb.edu

The Advisory Board found

- the project has excellent potential for sustainability and wide adoption. Specifically, access to data tools such as Our Dynamic Planet (ODP) and Global Ocean Data Viewer (GLODV) improves student learning through exploration of earth data. These tools are based on real earth-science data, collected by reputable institutions (for example the Smithsonian Volcano Database) and as such are highly reliable. Students use these data tools to formulate and test hypotheses and learn through a constructivist-learning model.

- the integration of science writing is unique; this is an extremely strong pedagogical component of EE. Students must incorporate their observations of data using the data tools and have the additional ability to develop and embed their own diagrams and graphs constructed using these data tools. We know of no other applications that have this capability. Additionally, a calibrated peer review (CPR) approach to the science writing enhances the impact and learning through the use of EE.
- many additional aspects of EE enhance student learning and class management.

To maximize the benefit of this project the following issues should be addressed:

1. EarthEd has matured to the point where focus must now be placed upon making it work well. Program bugs NEED to be fixed and extensive testing be carried out. The key components of the software must be robust and reliable. This perhaps could best be accomplished through the application of a modular approach described below (see 7).

2. Examples of pedagogy should be developed to better permit the audience/target groups in the educational market (instructors, students) recognize utility at their level of instruction.

3. We recommend that serious consideration of sustainability be addressed with respect to a revenue stream. This will be needed to support continuing development and maintenance.

4. Continued use by a diverse group of "early adopters" is seen as critical to the evaluation of both strengths and weaknesses of EE and to provide feedback. These early adopters will identify uses not previously considered and expand avenues for dissemination.

5. Consider permitting the user to migrate the program to a user-identified server, either in-house or commercial. Having the administrative files housed on local computers may improve adoption by those instructors who prefer local control of the learning environment. Local control will facilitate timely incorporation of current events, uploading new problems, editing existing assignment, CPR paper examples, grading criteria etc. by the adopting instructor.

6. Consider running EarthEd in a browser-like environment as students and instructors are more familiar with working in a browser environment. Many board members are convinced that it would enhance adoptability of EE.

7. The best approach to facilitate the use of EE is, perhaps, to adopt a modular approach that provides a clear separation of Class Management tools, pedagogical tools and Data tools. This could be accomplished through the design of a new front-end interface that contains a menu for quick selection and simplified login to access modules.

8. Initial wide adoption may be found by using a focused version of EE for Oceanography labs.

9. Interface needs to be structured to be more intuitive; the learning curve is steep. While students may be able to adapt, teachers may not adopt. The recommendation to either simulate a browser environment, or actually run EE through a browser (bullet 6) is an important first step. Additionally, providing the ability for the instructor to easily upload and use their own exam questions and other pedagogical materials is important (bullet 5).

10. Many of the beta-testers agree that the Pedagogy of Writing is one of the most important elements of EarthEd to retain. It needs to be expanded and made more easily accessible.

We recommended providing simplified guidelines that assist instructors in:

- Teaching students the characteristic elements of a good science paper
- Organizing and evaluating scientific writing
- Developing rubrics and score sheets

Other Issues:

- The Advisory Board also recommends that copyright and fair-use issues be addressed
- Perhaps some of the elements of the Class Management (for example the Grade Book) should be reconsidered—there is a large potential for compatibility conflicts with WebCT, Blackboard etc.
- Create a Teachers Guide (possibly written by users instead of the developer) which may incorporate screenshots for explanation or video tutorials

International Symposium on Antarctic Earth Sciences University of California, Santa Barbara Aug. 26- Aug. 31, 2007

Planning workshops for symposium were held after the American Geophysical Union in December 2006 and, Seismological Society of America in April of 2007.

NEES@UCLA and NEES@UCSB team up for Training

A training workshop and visit to the NEES permanent field sites took place May 18th and 19th, 2006. Personnel from both NEES@UCSB and NEES@UCLA equipment sies led a group of 20 participants to the *Wildlife Liquefaction Array,* the *Borrego Valley Array* and the *Garner Valley Array.* This two-day workshop and training included presentations of the research vision for two NEES equipment site facilities, a tour of the facilities available to researchers and discussions of the capabilities of the facilities for both research and educational uses. In addition, on July 14th, 2006, a joint NEES@UCLA and NEES@UCSB Outreach event was held at the Garner Valley site. [Ommitted from last year's annual report].