News of the Institute

Northern California Chapter Honors Innovation and Excellence in Earthquake Risk Reduction

Each year, the Northern California Chapter of EERI bestows Innovation and Excellence in Earthquake Risk Reduction awards on an individual and an organization. This year the recipients were David Bonowitz and the City of Berkeley. The awards were presented during the chapter meeting on April 13, 2005. Bonowitz received the award for his many years of advocacy of earthquake risk reduction and service on earthquake committees of the Structural Engineers Association of Northern California. He has also been involved in numerous activities of the EERI Northern California Chapter and served as vice president and chairman of the Quake ’06 Campaign Steering Committee.

The award to the city of Berkeley was accepted by Arrietta Chakos and Dan Lambert. The city is a model for disaster preparedness and hazard mitigation in California. By taking a multihazard approach to preparedness and damage prevention, the city has significantly improved the community’s resources for recovery and resilience. Berkeley has a progressive retrofit incentive program that allows owners of vulnerable homes to get a tax rebate if they agree to retrofit. Another of the city’s most significant achievements continued on page 4

Announcement

8NCEE Abstracts Due June 1

Don’t miss the most important earthquake conference ever held! The deadline is June 1 for authors to submit abstracts for the 8th U.S. National Conference on Earthquake Engineering (8NCEE), being held April 18–22, 2006, in San Francisco. EERI members should have received the second announcement and call for papers in the mail in February. To access submission instructions and the submission site, visit www.1906eqconf.org.

The 8NCEE is part of the 100th Anniversary Earthquake Conference, with the theme of “Managing Risk in Earthquake Country,” that will commemorate the 1906 San Francisco earthquake. It will also include the Centennial Meeting of the Seismological Society of America and the Disaster Resistant California Conference sponsored by the California Governor’s Office of Emergency Services. The program will feature joint multidisciplinary plenary sessions at the beginning of each day, technical sessions, seminars, poster sessions, exhibits, field trips, and tutorials on topics that should be of interest to practicing professionals and educators. A link to the second announcement with more information can be found at the web site indicated above.
**News of the Profession**

**NSF Tsunami Research Grants**

The National Science Foundation recently funded the following six tsunami small grants for exploratory research in the broadly defined social science area. In an effort to support each other’s work, the teams are sharing information about their data types, locations, plans, and goals.

The principal investigator’s (PI) name is indicated after each project title.

**Social Vulnerability Mapping and GIS in Tsunami Impact Analysis**

(PI: Carla Prater, Texas A&M University [TAMU]): The Hazard Reduction and Recovery Center and the Spatial Sciences Laboratory at TAMU will expand on their recent work in hazard mapping that links hazard exposure (and disaster impact) with a comprehensive notion of vulnerability. A community vulnerability assessment that involves hazard exposure, physical and structural vulnerability, and social vulnerability currently being developed and tested for the Mid-America Earthquake Center in Memphis, Tennessee, will be extended to India. The extension of these mapping tools to a developing country will contribute to the effectiveness of disaster management by enhancing the understanding of disaster impacts and the recovery process.

**Indian Ocean Tsunamis: Environmental and Socio-Economic Impacts on the Malay-Thai Peninsula**

(PI: Benjamin Horton, University of Pennsylvania): A multinational, multidisciplinary team will use a suite of research methods drawn from science, engineering, and social science to collect data on height, velocity, extent, and effects of the tsunami flood at differentially affected stretches of the coastline along the Malay-Thai Peninsula, where there is a coincidence of natural and socio-economic forces and outcomes. The social science field survey will focus on livelihood impacts and patterns of local and institutional response by different groups and populations. The team will construct and interpret trajectories of environmental change in the area over the recent past, and assess future risk. The physical and social data will help to improve numerical tsunami models, and produce maps that local planners can use in planning evacuation routes and rebuilding settlements, hotels, and infrastructure. This project will ultimately help people and organizations improve the management of profound or rapid change and will stimulate breakthroughs in knowledge about human action and development as well as organizational, cultural, and societal adaptation to catastrophic events.

**Factors Affecting Behavioral Response to Natural Warning Signs of Tsunami: The Case Study of the December 26, 2004, Earthquake**

(PI: Bruce Houghton, University of Hawaii): A multidisciplinary, multicultural research team of physical scientists and psychologists will collect short-lived social data from people in affected areas of the Andaman coast, Thailand. The team will investigate (1) people’s awareness of, and response to, the natural warning signs of the tsunami, as well as warnings provided by other people and observation of other people’s actions; (2) the factors that determined which responses the respondent chose; (3) the factors that respondents retrospectively believe would have influenced them to act differently; and (4) pre- and post-impact preparedness for tsunami. An effective overall tsunami warning system must reflect social dynamics around both official warnings and natural warnings. The study will be used to frame effective outreach education programs that are essential to prepare communities to respond to the unique demands of warning messages for both distant and local tsunami.

**Physical and Social Infrastructure Impacts and Interdependencies in the December 2004 Tsunami in Southern Thailand**

(PI: Thomas Birkland, University at Albany, SUNY): A team of researchers will collect perishable data in southern Thailand that can be used to apply the principles of systems science to complex sociotechnological relationships. This project will provide direct observation of the interrelationships between the physical and social infrastructures during the recovery phase of a natural disaster. The data will be used in models that test the hypothesis of coupling between physical and social systems. Both the social and engineering sciences will benefit by testing hypotheses developed and applied in economic sectors in a developing country. This research will be useful to managers and government officials in natural hazards agencies by contributing to basic knowledge about individual, group, and organizational behaviors and how they interact with physical infrastructures.

**Cross-Cultural Comparison of Emergent Norms Governing the Handling of Mass Fatalities in the Wake of the Indian Ocean Tsunami**

(PI: Henry W. Fischer III, University of Pennsylvania): Comparative research into the south Asian response to mass fatalities in the wake of the tsunami will test whether similar knowledge of western cultures is applicable. International research teams will gather data about mass fatality approaches, challenges, and issues encountered in India, Sri Lanka, and Thailand. The teams will identify the procedures used to recover, identify, and dispose of bodies. The project will study how survivors may have developed new or “emergent” norms to direct the response to the large number of bodies. With limited time and resources, conflicting culture norms are likely to have presented local governments and survivors with a difficult set of challenges. Their responses should be studied...
for the benefit of others who may face such problems when cultures clash in the future.

The Role of Coastal Ecosystem Degradation in Tsunami Damage (PI: Philip R. Berke, University of North Carolina): An interdisciplinary team will explore the links between ecosystem degradation and damage and examine the potential tsunami mitigation benefits of coastal ecosystems. The study will be carried out over several interrelated tasks: (1) identify three to six matched pairs of sites (high versus low environmental degradation) within the tsunami impact zone; (2) examine remote sensing images of each matched pair to determine links between losses and ecosystem integrity; (3) conduct a field investigation of one matched pair to verify remote sensing data and assess the influence of the context and environmental planning institutions in ecosystem protection; and (4) analyze and synthesize multiple sources of data to determine the influence of environmental degradation on disaster losses. The study will provide insights into the role of ecosystem degradation, remote sensing as a research tool, and environmental conservation as a mitigation strategy.

Learning from Earthquakes

Additional Tsunami Briefings

A special EERI LFE briefing by members of the reconnaissance teams and other contributors on the great Sumatra (M9.0) earthquake and Indian Ocean tsunami of December 26, 2004, has been scheduled for May 23 in Washington, D.C. Others are being planned for the Midwest and San Francisco. Information on speakers, venues, and directions will be e-mailed to members and posted on the EERI web site, www.eeri.org.

News of the Institute

Talking Points Guide for Media Interviews

You will find a guide containing “Talking Points for Media Interviews” inserted in the centerfold of this Newsletter, attached with removable glue.

The guide is intended for your use in preparing for media interviews. The first two topic areas are “general earthquake risk” and “research funding.” The guide recommends that these two areas be emphasized if you are interviewed by the media following an earthquake or other event that attracts attention to seismic issues. They are points upon which there is general agreement in the earthquake community; referring to them will present a consistent message that will serve to advance the causes of earthquake engineering practice and research.

The balance of the guide is devoted to background information about the following five categories: hazard mitigation, earthquake size and impact, buildings and codes, response and recovery, and EERI’s earthquake professionals. This information is meant to help you answer technical questions. Agreed upon by specialists within the EERI membership, these points are intended to provide accurate bases for responses. After the occurrence of earthquakes and tsunami elsewhere, reporters often ask, “Can this happen here?” This information will help you construct your answers appropriately.

You may also wish to take a more proactive approach to using this guide and contact the media yourself whenever an opportunity occurs to get the message out. For example, after a major earthquake or related hazard, the media are often looking for members of the professional community to interview.

News of the Membership

Frangopol Awarded Newmark Medal

Dan M. Frangopol, an EERI member since 1987 and a professor in the Department of Civil, Environmental, and Architectural Engineering at the University of Colorado at Boulder, has been awarded the prestigious Nathan M. Newmark Medal for 2005 by the American Society of Civil Engineers (ASCE). The medal was presented at the 2005 ASCE Structures Congress last month in New York City. It is given to an ASCE member whose outstanding contributions in structural mechanics have substantially strengthened the scientific base of structural engineering.

Frangopol was cited for "outstanding contributions to structural engineering and engineering mechanics, particularly the modeling and optimization of the lifetime system performance of deteriorating materials and structures in civil infrastructure."

Frangopol’s research has been in the area of modeling and optimization of the lifetime system performance of deteriorating materials and structures in civil infrastructure, safety and reliability in structural engineering and engineering mechanics, life-cycle cost analysis and design of highway bridges, and multi-criteria optimization. More recently, he has focused on health monitoring of high-temperature materials and systems and life-cycle analysis and optimization of micro-systems.
Northern California Chapter

continued from page 1

is the strengthening of 520 of 600 unreinforced buildings since the city enacted the URM Masonry Compliance Program in 2000. Berkeley’s latest effort is a proposal to address collapse risks in soft story apartment buildings. The city is sponsoring Assembly Bill 304 in the state legislature to recognize the International Existing Building Code Appendix Chapter 4 as a uniform retrofit standard statewide for soft-story apartments.

The speaker for the meeting was James Dalessandro, author of the book 1906: The Novel. The title of his presentation was “The Great Earthquake—Then and Now.” He discussed his research on the 1906 earthquake that formed the basis for his book and showed a 19-minute preview of an upcoming movie based on his novel.

Since the publication of his book in 2002, Dalessandro has become a strong and vocal advocate for earthquake risk reduction in the San Francisco Bay Area.

Job Opportunity

ATC Director of Projects

The Applied Technology Council (ATC) is seeking an experienced full-time structural engineering professional to manage and supervise ATC’s technical projects, which cover a broad range of topics in structural engineering and hazard mitigation.

This is a key position within ATC’s management and organizational structure, with promotion potential.

Responsibilities include supervision and management of project personnel, technical proposal development, report review and technical writing, supervision and execution of quality control of ATC product and report development activities, and presentations on ATC projects and products at technical meetings and conferences.

A complete job description can be downloaded from the ATC web site, www.atcouncil.org.

News of the Institute

EERI Seismic Risk Analysis Seminars

In July 2005, EERI will host a new technical seminar on Seismic Risk Analysis for Engineers and Decision Makers. Speakers will include Charlie Kircher, who will give an overview of the subject and who is guiding the development of the seminar; Ron Hamburger on the vulnerability of buildings; Michael O’Rourke on the vulnerability of lifelines; Thalia Anagnos on economic and societal losses; and Mary Comerio on the stakeholder’s perspective on seismic risk and loss assessment.

The seminars will be held on July 18 in San Francisco, California, and July 19 in southern California. Venue, registration details, and a complete agenda will be announced soon and available on EERI’s web site, www.eeri.org.

Student Member Resumés Online

EERI is pleased to announce that resumés of student members who will be graduating and entering the job market in an earthquake field have been posted at www.eeri.org/news/career_resumes.php. The Institute’s Board of Directors hopes that this resource for potential employers is mutually beneficial to members and students.

Publications

ATC/MCEER Bridge Reports

The ATC/MCEER Joint Venture, a partnership of the Applied Technology Council (ATC) and the Multi-disciplinary Center for Earthquake Engineering Research (MCEER), State University of New York at Buffalo, has announced the availability of two new publications: the MCEER/ATC-49-1 Liquefaction Study Report, and the MCEER/ATC-49-2 Design Examples report. Both are companion documents to the two-volume MCEER/ATC-49 Recommended LRFD Guidelines for the Seismic Design of Highway Bridges, published in 2004.

MCEER/ATC-49-1 documents a comprehensive study of the effects of liquefaction and associated hazards—lateral spreading and flow. The study was limited to two sites and bridges in relatively high seismicity locations, one in Washington state and one in Missouri.

The resulting Liquefaction Study Report contains detailed discussions on the following: recommended procedures to evaluate liquefaction potential and lateral spreading effects, ground mitigation design approaches and procedures to evaluate the beneficial effects of pile pinning in restraining lateral spreading, results from the studies of the western U.S. and central U.S. bridge sites, and cost implications.

The resulting MCEER/ATC-49-2 Design Examples report contains two design examples that illustrate use of MCEER/ATC-49. The examples contain flow charts and detailed step-by-step procedures.

MCEER/ATC-49-1 and MCEER/ATC-49-2 are available from both ATC and MCEER. For more information, visit mceer.buffalo.edu or www.atcouncil.org.
Publications

San Simeon Report Erratum

EERI members should have received in the mail the reconnaissance report on the San Simeon earthquake of December 22, 2003. It has been brought to our attention that figure 2-6, which shows the Cambria strong-motion station record, was mistakenly repeated in figure 2-7. The correct figure 2-7 is shown below.

![Figure 2-7. Acceleration, velocity and displacement during the San Simeon earthquake at the first floor of the one-story Twin Cities Community Hospital, in the direction of rupture propagation.](image)

Risk Analysis Monograph Errata

EERI was recently informed by author Robin McGuire of the following errata in his monograph Seismic Hazard and Risk Analysis that was sent to members in August last year. We thank him for making these corrections available to the membership.

Equation 69 (page 138) should read:

\[ a^s_{rp} = a_{rp} \sqrt{AF_{rp}} \exp\left[0.5K_H \sigma_\delta^2 / (1 - K_{AF}) \right] \]

Table 11 (page 139) should read:

<table>
<thead>
<tr>
<th></th>
<th>PGA</th>
<th>10 Hz</th>
<th>3 Hz</th>
<th>1 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>(K_{AF})</td>
<td>0.47</td>
<td>0.72</td>
<td>0.75</td>
<td>0.19</td>
</tr>
<tr>
<td>(K_H)</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>(\sigma_\delta)</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Factor</td>
<td>1.08</td>
<td>1.16</td>
<td>1.18</td>
<td>1.05</td>
</tr>
</tbody>
</table>

Publications

Performance-Based Design

The Indian Society of Earthquake Technology (ISET) has produced a special issue of the ISET Journal of Earthquake Technology dedicated to performance-based seismic design. The table of contents for this March 2004 special issue, edited by M. J. Nigel Priestley, can be viewed at [home.iitk.ac.in/~vinaykg/issue14.html](http://home.iitk.ac.in/~vinaykg/issue14.html). Information about purchasing papers or contributing to the journal can be found at [home.iitk.ac.in/~vinaykg/iset.html](http://home.iitk.ac.in/~vinaykg/iset.html).

Earthquakes in Human History

Earthquakes in Human History: The Far-Reaching Effects of Seismic Disruptions, was released in January 2005 by the Princeton University Press. Coauthors Jelle Zeilinga de Boer and Donald Theodore Sanders explain the geological processes responsible for earthquakes, and describe how these events have had long-lasting effects on human societies and cultures. They consider the repercussions of natural disasters on developments in such areas as literature, religion, politics, and science. Early chapters consider biblical references to a quaking earth and show how earthquakes in the 14th and 18th centuries in England and Portugal were taken as signs from God. A discussion of the New Madrid earthquake of 1811 notes that while it was one of the strongest ever recorded in North America, it remains relatively unknown because the region was sparsely populated. Modern-era quakes in San Francisco (1906), Japan (1923), Peru (1970), and Nicaragua (1972) round out the book. In 2001, the authors published the book Volcanoes in Human History: The Far-Reaching Effects of Major Eruptions.
Announcements

IX Chilean Meeting on Seismology and EQ Engineering

The IX Chilean Meeting of Seismology and Earthquake Engineering will be held in Concepción, Chile, November 16-19, 2005. The meeting is organized by the Universidad de Concepción and the Chilean Association of Seismology and Earthquake Engineering (ACHISINA). For more information, visit www.achisin2005.udec.cl.

10th Canadian Masonry Symposium

The 10th Canadian Masonry Symposium, organized by the Department of Civil Engineering at the University of Calgary and the Canada Masonry Design Centre, will take place June 8-12, 2005 at the Banff Centre in Banff, Alberta, Canada.

A sample of topics includes historic masonry, analytical techniques, strengthening techniques, codes and standards, design aids, and training and education in masonry. For information on the conference program and registration, visit www.ucalgary.ca/~tenthcms/.

Nominations Sought for Prakash Award

The Shamsher Prakash Foundation is soliciting nominations for the 2005 Shamsher Prakash Annual Prize for Excellence in the Practice of Geotechnical Engineering, which is given to a young (less than 45 years old) engineer, scientist, or researcher from anywhere in the world. Candidates should be specialists in geotechnical engineering or geotechnical earthquake engineering, have made significant independent contributions to the field, and show promise of future excellence. The award includes a cash prize of $1,100.

Nominations are due on or before July 31, 2005. All nominations will be reviewed by a judging committee of international experts from Canada, Japan, the United Kingdom, and the United States. The award will be announced by December 31, 2005.

For information on submitting nominations, visit www.yoga10.org or e-mail Sally Prakash at sallyp@umr.edu.

Nonlinear Dynamics Workshop

The Abdus Salam International Centre for Theoretical Physics, in collaboration with the Department of Earth Sciences of the University of Trieste, will host the 8th Workshop on Nonlinear Dynamics and Earthquake Prediction, October 3-15, 2005, in Trieste, Italy.

The workshop is dedicated to training in advanced R&D methodologies for fundamental studies of the earth’s evolution and dynamics, instability of the earth lithosphere, and applied problems.

The workshop will cover new achievements in seismology and provide a unified treatment to methods that are currently used in interpreting actual data. Attention will be given to the accuracy and statistical significance of prediction methods, to their rate of errors, and to the interaction with disaster management authorities.

Lectures will focus both on methodology and results of interpretation of seismic observations. During computer exercises, students will be allowed to process their own data.

Topics will include data analysis by pattern recognition methods, models of lithosphere dynamics and seismicity, analysis of earthquake sequences, use of global data banks for regional studies, and reliability of earthquake prediction. Particular attention will be paid to the planning of future research based on the requests received from the participants.

Scientists and students from all countries that are members of the UN, UNESCO, or IAEA can attend the workshop. A degree in physics, mathematics, geophysics (theoretical or computational), computer science, or a related discipline is required.

A limited number of travel grants are available for researchers from developing countries. There is no registration fee to attend the workshop. For an application, which is due May 28, 2005, visit agenda.ictp.trieste.it/smr.php?1676.

Call for Papers

Kuwait Remote Sensing Conference

A call for papers has been issued for the Kuwait First Remote Sensing Conference and Exhibition, to be held in Kuwait September 26-28, 2005.

It will be an opportunity for scientists, engineers, professionals, program managers, and policy makers from all over the Middle East and North Africa to explore trends and achievements in remote sensing, to exchange ideas, and to present and discuss the most recent developments and applications. The conference is designed to meet the scientific, technical, and business needs of the remote sensing community.

The topics for technical papers include disaster monitoring, geological mapping, and mapping from space. The deadline for abstracts is June 30, 2005. Papers will be due August 4, 2005.

To submit an abstract and obtain more information, visit www.kuwaitremotesensing.com.
CALENDAR

Items that have appeared previously are severely abbreviated. The issue containing the first appearance, or the most informative, is indicated at the entry’s end. Items listed for the first time are shown in bold.

MAY
10. SMIP05 Seminar for Utilization of Strong-Motion Data, Los Angeles, CA. Info: www.conservation.ca.gov/cgs/smisip/seminar.htm (4/05)
30-June 1. ERES 2005, Skiathos, Greece. Info: www.wessex.ac.uk/conferences/2005/eres05 (7/04)

JUNE
7-9. SEM Annual Conf. on Experimental & Applied Mechanics & Concurrent Symposia, Portland, OR. Info: www.sem.org (10/04)
8-12. 10th Canadian Masonry Symposium, Banff, Alberta, Canada. Info: www.ucalgary.ca/~tenthcms See page 6. (4/05, 5/05)
20-22. 12th Int'l Conf. on Comp. Methods & Experimental Measurements (CMEM 2005), Malta. Info: www.wessex.ac.uk/conferences/2005/cmem05/ (10/04)

JULY
10-13. 15th World Conf. on Disaster Management, Toronto, Canada. Info: www.wcdm.org (11/04)
18-19. EERI Seismic Risk Seminars, San Francisco and Southern California. See page 4. (5/05)
24-30 INCEED 2005, Charlotte, NC. Info: www.iseg.giees.uncc.edu (2/05)

AUGUST
22-24. ConMat’05, Vancouver, BC, Canada. Info: www.civil.ubc.ca/conmat05/ (7/04)
26-27. 4th European Wkshp on Seis. Behavior of Irregular & Complex Structs., Thessaloniki, Greece. Info: tzav.civil.auth.gr/4ewics/ (2/05)
27-September 1. Int’l Conf. on EQ Eng. in 21st Century (EE-21C), Macedonia. Info: www.iziis.edu.mk/EE-21C (4/05)

SEPTEMBER
14-16. IABSE Structures & Extreme Events, Lisbon, Portugal. Info: www.iabse.org/lisbon (7/04)
25-29. Dam Safety 2005, New Orleans, LA. Info: info@damsafety.org (3/05)

OCTOBER
3-15. 8th Workshop Nonlinear Dynamics & EQ Prediction, Trieste, Italy. See page 6. (5/05)
18-21. Involving the Community in Disaster Risk Reduction Programs, Punto Fijo, Venezuela. Sponsor: Centro de Investigacion de Desastres y Universidad de Falcón. Info: Juan Murria, murrias@cantv.net (4/05)

NOVEMBER
16-19. IX Chilean Seismology & EQ Eng. Meeting, Concepcion, Chile. See page 6. (5/05)

2006
APRIL

AUGUST
14-17. 5th Int’l Conf. on Behavior of Steel Structs. in Seismic Areas (STESSA), Tokyo, Japan. Info: www.serc.titech.ac.jp/stessa2006 (2/05)

SEPTEMBER

News of the Institute

Endowment Donor Erratum

The $25,000 donation to the Endowment Fund, listed on page 8 of the April EERI Newsletter, was mistakenly attributed to David A. Friedman. EERI would like to thank ELEANOR Friedman for her $25,000 donation. We sincerely apologize for the error!
News of the Membership

Youd Elected to National Academy

T. Leslie Youd, an EERI member since 1974 and a professor emeritus in the Department of Civil Engineering at Brigham Young University, has been elected to the National Academy of Engineering. Election to the National Academy of Engineering is among the highest professional distinctions accorded an engineer.

Academy membership honors those who have made outstanding contributions to “engineering research, practice, or education, including, where appropriate, significant contributions to the engineering literature” and to the “pioneering of new and developing fields of technology, making major advancements in traditional fields of engineering, or developing innovative approaches to engineering education.”

Youd was recognized for his contributions to liquefaction hazard assessment, leadership in earthquake engineering, and service to the government and educational communities. Among his accomplishments are the development of techniques for mapping liquefaction hazards that are widely used in earthquake hazard evaluation today.

Youd has documented field conditions and soil properties at many liquefaction sites and was instrumental in placing monitors at field sites to assess the development of liquefaction during future earthquakes. He served a term on the EERI Board of Directors.

Announcement

HAZUS-MH EQ Vendor Training & Symposium

A HAZUS-MH (Multi-Hazards) Earthquake Vendor course will be offered June 28 to July 1, 2005, in Los Angeles, California. It is a key offering under FEMA’s Private Sector Initiative, a multi-year project to select, train, and authorize a core group of vendors who will take the lead in providing fee-based HAZUS-MH training, technical assistance, and software troubleshooting to a broad range of HAZUS-MH users.

Conducted by Jawhar Bouabid and Pushpendra Johari of PBS&J, the course is tailored to individuals with experience in geographic information systems and a technical background in earthquake hazards, building performance, and loss estimation methods. Students who successfully complete the course will be authorized by FEMA to provide HAZUS-MH Earthquake training, technical assistance, and software troubleshooting.

The day before the training, on June 27, a one-day symposium on Earthquake Risk Assessment and Modeling will also be held to highlight recent advances in earthquake risk assessment and modeling, including applications of HAZUS-MH Earthquake to support mitigation, preparedness, and response.

The symposium and training will be held at the Southern California Earthquake Center (SCEC, www.scec.org), located at the University of Southern California. SCEC is the organizer of the Southern California HAZUS Users Group (SoCalHUG) and has supported local governments by providing earthquake scenario input to HAZUS runs.

The PBS&J-FEMA registration fee for the 3.5-day course is $1,400. For more information on the course and the Private Sector Initiative, contact Tom Durham at TSDurham@pbsj.com, or visit www.fema.gov/hazus/hz_new.shtm#eqtrain.