EARTHQUAKE ENGINEERING RESEARCH INSTITUTE

NEWSLETTER

Editor Thalia Anagnos
Associate Editors Sarah Nathe
Gerald Brady
Editorial Assistant Eloise Gilland

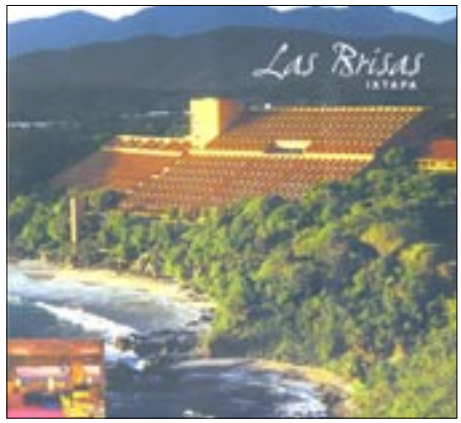
Earthquake Engineering
Research Institute
499 14th Street, Suite 320
Oakland, California 94612-1934
Phone: 510/451-0905
Fax: 510/451-5411
E-mail: eeri@eeri.org
Web site: http://www.eeri.org

ISSN 0270-8337

News of the Institute

EERI's 57th Annual Meeting Like No Other

Be sure to mark your calendar for February 2-6, 2005, to join your colleagues in Ixtapa, Mexico — you won't want to miss this EERI Annual Meeting! It will be unlike any of the previous 56. In addition to providing an outstanding technical program, the exciting format will allow for lots of free time to enjoy the unique venue, see the sights, and get your feet in the water.



The Las Brisas Hotel sits on a secluded bay and boasts 423 rooms with spectacular views of the sea. The hotel's web site is ***www.brisas.com.mx.***

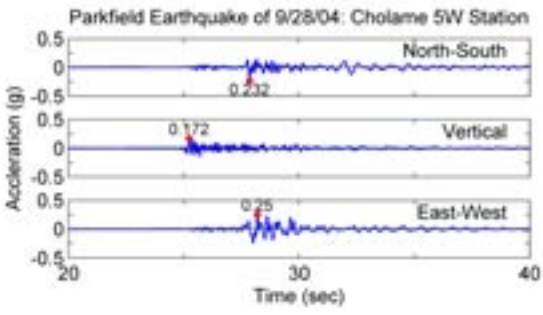
Almost two years ago, a cooperative agreement was established between EERI and its Mexican counterpart, SMIS (Sociedad Mexicana de Ingeniería Sísmica). The location of the 2005 Annual Meeting was chosen to celebrate that cooperation. Our Mexican colleagues have been fully integrated into the planning of the technical and social aspects of the program. There will be several informal opportunities to mingle and share common interests. Mexican students will present posters alongside their U.S. counterparts. The meeting will observe the 20th anniversary of the great 1985 Mexico City earthquake,

continued on page 8

Learning from Earthquakes

Anticipated Earthquake Hits Parkfield

The long-anticipated Parkfield (central California) earthquake occurred at 10:15 a.m. PDT on September 28, 2004, with a magnitude 6.0 and a hypocenter at 35° 49' N, 120° 22' W, and a depth of 8 km or 5 miles. From this point on the San Andreas fault, about 7 miles SW of the town of Parkfield, it ruptured primarily northwest along the fault. Strong shaking during this event lasted for about 10 seconds.



Ground accelerations recorded at the Cholame 5W Station during the Parkfield earthquake (Data from CISN/CSMIP).

This quake caused no injuries and minimal property damage, but is of great interest to American geologists. In 1984, the U.S. Geological Survey (USGS) predicted that a magnitude 6 earthquake would occur on the stretch of the San Andreas fault near Parkfield within five years of 1988. The prediction was based on a sequence of

continued on page 2

Parkfield Earthquake

continued from page 1

six similar earthquakes that occurred every 22 years (on average): in 1857, 1881, 1901, 1922, 1934, and 1966. Although the 2004 Parkfield earthquake struck over a decade later than predicted, its magnitude and behavior fulfilled the prediction. In anticipation, scientists from the California Strong Motion Instrumentation Program (CSMIP) of the California Geological Survey and the USGS placed a large and varied suite of instruments along the Parkfield segment of the San Andreas fault. The previous two earthquakes ruptured in the opposite direction from NW to SE along this section.

Nonstructural damage to a home office. The San Andreas fault runs through the backyard of this house (photo: Goel).

According to CSMIP seismologist and EERI member Tony Shakal, this single event has produced more near-source ground motion, within 15 km of the epicenter, than all previous California earthquakes combined. Because of this dense array of recording stations, it is the first time that scientists have seen an earthquake rupture with this level of detail. Shakal indicated that the near-field ground shaking shows much more variability than anticipated, from moderate to very steep gradients of peak ground shaking within short distances. At the present time, there is no simple explanation for this variation. Seismologists and geologists are beginning to work on understanding the source of the variability. Sorting it out will move the whole science and engineering base forward, as this knowledge can be taken into account in near-fault design force levels. On the positive side, the level of shaking in this earthquake was less than anticipated farther from the fault.

The following web sites have links to much of the data:

California Integrated Seismic Network (CISN): **www.cisn.org/special/evt.04.09.28/**;

Northern California Earthquake Data Center: **quake.geo.berkeley.edu/2004parkfield.html**.

Two engineering professors and EERI members from Cal Poly, Rakesh Goel and Charles Chadwell, went to the field immediately after the earthquake and prepared a report, which is on the EERI web site at **www.eeri.org/lfe/usa_centralcalifornia.html**.

Consistent with a moderate-sized earthquake in California, the damage that they observed, overall, was primarily nonstructural. The Parkfield area is rural and sparsely populated, with approximately 37 local inhabitants. The area's building stock consists primarily of low-rise, single-family timber construction with wood and stucco facades. Goel and Chadwell also investigated two bridges, one of which crosses the San Andreas fault. This bridge had apparently undergone a recent retrofit and performed adequately.

A preliminary report on the Parkfield earthquake will be an insert in a future *Newsletter*.

Damage to timber canopy outside the same house. Built in the 1950s, it had undergone renovations and upgrades (photo: Chadwell).

Faculty Position

Stanford University

Stanford University's Department of Civil and Environmental Engineering invites applications for a tenure-track faculty position at the assistant professor or untenured associate professor level in structural and geotechnical engineering with emphasis on infrastructure reliability and risk. Of particular interest are individuals who will pursue pioneering research that will contribute towards a new departmental initiative on engineering for a sustainable built environment. The department seeks candidates with a background in one or more of the following areas: probability and stochastic methods, random vibrations, modeling and simulation of natural and man-made hazards, life cycle analysis, infrastructure systems' risk and reliability, damage assessment, health monitoring, and advanced materials. The overall innovation and promise of the candidate's research are of higher priority than the specific research area. For information about the program and the department, as well as the position announcement, visit **cee.stanford.edu/**.

News of the Institute

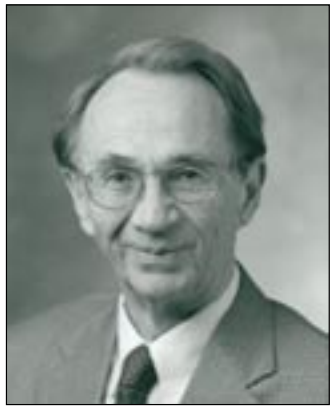
Cornell Selected as Second Joyner Lecturer

EERI member C. Allin Cornell has been chosen as the second William B. Joyner Memorial Lecturer. EERI and the Seismological Society of America (SSA) are cosponsoring the lecture, which will be delivered on February 3, 2005, at the EERI Annual Meeting in Ixtapa, Mexico (see page 1 for more information), and at the April 2005 SSA annual meeting in Incline Village, Nevada.

Cornell is a professor of civil and environmental engineering at Stanford University and a former president of SSA. Cornell received his B.A. in architecture in 1960, and an M.S. in 1961 and a Ph.D. in 1964 in civil engineering (structures), all from Stanford University. From 1964 to 1983, he was on the faculty of the Massachusetts Institute of Technology, progressing from assistant to full professor, before returning to Stanford.

In 2003, he was the recipient of EERI's highest honor, the George W. Housner Medal, awarded for his distinguished career in advancing understanding of earthquake hazards and reducing earthquake risk. His publications on probabilistic modeling of earthquake processes form the basis for earthquake forecasting that have been widely applied in California and around the world, and are now incorporated in modern building codes. Cornell has made fundamental contributions to structural engineering by integrating seismic hazard analysis, building vulnerability, and failure probability into the design process. These numerous contributions have greatly increased public earthquake safety.

His early research led to probabilistic seismic hazard analysis (PSHA) and to the first probability-based load-factor building design codes. Later work and practice included seminal contributions to seismic probabilistic risk assessment of



C. Allin Cornell

nuclear power plants and advancements in theory and application of PSHA. The systematic study and practice of structural safety has taken him deeply into the relevant loading phenomena, where most of the uncertainty lies, and then to the load-structure interface, and finally into structural behavior in the strongly nonlinear domain.

Cornell was EERI's Distinguished Lecturer in 1999. His topic was "The Evolution of the Seismological-Engineering Interface." In that lecture, he described how the ideal seismological-engineering interface should reflect all that is known about both sides; it should be both site and structure specific. The practicing seismologist recognizes that many locations and sizes of threatening earthquakes are possible, and that each can produce a wide range of amplitudes and wave forms. At the same time, the engineer is requesting a more and more complete characterization of the nature, range, and likelihoods of future ground motions at a given site.

The William B. Joyner Memorial Fund was established to memorialize seismologist Bill Joyner, in recognition of his efforts to increase public safety by bridging the gap between earthquake seismology and earthquake engineering. The selection of a lecturer is made on the basis of outstanding earth science contributions to earthquake engineering or outstanding earthquake engineering contributions to earth science research, together with demonstrated skills of communication at the interface of earthquake science and earthquake engineering.

An EERI member for 28 years, Joyner had directed the U.S. Geological Survey (USGS) National Strong-Motion Program. He was awarded the Department of the Interior's highest honor — the Distinguished Service Award — in 2000. In 1967, he wrote a substantial part of the "Proposal for a Ten-Year National Earthquake Hazards Program," which was largely responsible for the highly regarded USGS program in earthquake hazard reduction. Joyner died in 2001.

Faculty Position

Lehigh University

The Departments of Civil and Environmental Engineering and of Art & Architecture at Lehigh University in Bethlehem, Pennsylvania, are jointly seeking candidates for the Fazlur Rahman Khan Chair, a tenure-track faculty chair. Focusing at the intersection of structural engineering and architecture, the successful candidate will teach undergraduate and graduate students in both departments.

In addition, he or she will conduct research, lead research teams, and mentor graduate students in structural engineering and related fields. Applicants should hold a Ph.D. in civil engineering or architectural engineering with a specialization in structures and well-established research credentials.

For application information, visit **www.khanchair.lehigh.edu/**. Applications will be evaluated on a rolling basis.

News of the Profession

Minnesota and Buffalo NEES Facilities Celebrate Opening

More than 250 people turned out to celebrate the grand opening of the Multi-Axial Subassemblage Testing (MAST) Laboratory at the University of Minnesota (UMN) on September 21. MAST is one of 15 sites that the National Science Foundation's (NSF) George E. Brown, Jr., Network for Earthquake Engineering Simulation (NEES) comprises. Featured speakers at the event included UMN President Bob Bruininks, NSF Program Director Joy Pauschke, and Dan Byers, staff director of the House Science Committee Subcommittee on Research. Visitors included American Society of Civil Engineers President-Elect Dennis Martenson, dozens of local engineers, and researchers from Colorado, Iowa, and Missouri.

Catherine French describes the lab to visitors.

"NEES will be a new way of doing research for the earthquake engineering community," said Joy Pauschke. She cited the NEES network's collaborative approach and its ability to retrieve the results of past tests through a curated data repository as two advances over past research. Byers, who is responsible for coordinating House legislation that appropriates funding for NSF, including NEES, was enthusiastic about seeing the MAST Laboratory and the NEES project as a whole launched after years of planning and construction nationwide. "NEES has really been a model of various MRE programs," he said. Bruininks said having a NEES facility at the UMN will put the university on the cutting edge of structural engineering research. "Research at the facility will contribute new ideas and stimulate changes to building codes across the country," he said.

MAST crosshead and strong wall.

MAST can be used for multidirectional testing of large-scale structural subassemblages, including portions of bridges and buildings. With its massive crosshead and powerful actuators, MAST can apply more than 880,000 pounds of force horizontally and 1.3 million pounds of force vertically on test structures up to 25 feet tall. Its unique features include its sophisticated six-degree-of-freedom controller, developed by EERI Subscribing Member MTS Systems Corp., that enables seamless multidirectional loading, and its large capacity both in terms of the size of specimen that can be tested and the loads and deformations that it can apply to the test specimen. Like other NEES sites, MAST will be open to researchers from both academia and industry.

Pauschke applauded the leadership of the UMN team in helping develop collaborations between the NEES sites, all of which were open by October 1. MAST was a collaborative effort among faculty in the departments of civil engineering, electrical and computer engineering, and computer science and engineering at UMN. The research team included Catherine French, Jerome Hajjar, Carol Shield, Arturo Schultz, Robert Dexter, Douglas Ernie, and David H.-C. Du.

Two NEES projects are slated for testing in the MAST Laboratory this year. The first involves the investigation of the effect of multidirectional loading on nonrectangular shear walls. This project is a collaborative effort by Catherine French (UMN), Sri Sritharan (Iowa State), Ricardo Lopez (UPR-Mayaguez), and Suzanne Nakaki (Nakaki-Barshaw Group, Inc.). The second project involves the investigation of highly damage-tolerant and intelligent slab-column frame systems, which work through a combination of advanced materials and embedded wireless sensors. This project is a collaborative effort by Gustavo Parra-Montesinos and James Lynch from the University of Michigan, and Carol Shield (UMN).

MAST Laboratory staff observe video and sensor data on lab video wall while conducting an experiment.

The University at Buffalo (UB) celebrated its grand opening on September 24 with a forum program and dual shake table demonstrations. The events were webcast live and are archived at **nees.buffalo.edu**. The grand opening, officiated by Mark Karwan, dean of the School of Engineering and Applied Sciences, kicked off a month-long series of events around the inauguration of UB's 14th president, John B. Simpson, who addressed the crowd.

Following a morning forum entitled "Visions of Leaders: Structural and Geotechnical Earthquake Engineering Research Needs for the Mitigation of Earthquake Risks for the Next Decade," co-sponsored by the Multidisciplinary Center for Earthquake Engineering Research and attended by more than 70 engineers and scientists from around the country, about 300 faculty, students, staff, alumni, corporate partners, and legislative leaders gathered for the inauguration of the facility in the Ketter Hall expansion.

A. Galip Ulsoy, division director of NSF's Civil and Mechanical Systems, told the audience: "Knowledge is our strongest insurance for preparedness. The equipment site here at the UB Network for Earthquake Engineering Simulation provides truly world-class facilities with dual relocatable shake tables and high-performance actuators. We expect NEES to lead to a new age in earthquake engineering, and we look forward to the active participation, and indeed the leadership, of the UB students, faculty, and staff in this exciting venture."

Audience members were informed that they were sitting on top of an 18-inch-thick heavy reinforced concrete slab where laboratory specimens will be tested, and next to a 10-foot-thick post-tension reinforced concrete strongwall. Attendees were treated to two demonstrations that served to inaugurate each of the new shake-tables, which easily can be repositioned within the lab for real-time seismic testing of structures up to 120 feet in length and 30 feet in height.

Life-sized living room on University at Buffalo shake table after severe shaking.

The shake tables' versatility will enable researchers to conduct real-time dynamic hybrid testing, which is being developed by UB researchers and which sets new standards in earthquake engineering research. The facility will provide a more complete picture of how powerful earthquakes affect very large structures, including bridges and buildings, without having to test an entire structure.

The first demonstration showed a reduced scale model of a five-story building that was subjected to the ground motions of a simulated earthquake registering between magnitude five and six. To demonstrate the difference between motions experienced by structures that are protected and unprotected with earthquake engineering technologies, the building was fitted with fluid viscous dampers (shock absorbers) that would protect it when it moved in one direction but not in the other. Video cameras that are part of a telepresence system captured and streamed images of details of the shaking building on a screen simultaneously with the experiment.

The second shake table demonstrated in both protected and unprotected directions how the first simulated quake would have impacted an apartment on the second floor of the building. A life-sized living room furnished with couches, bookshelves, a table, and a decorative light fixture demonstrated minimal damage in the protected direction, but in the unprotected direction, books dropped off shelves, and a tall bookshelf swayed precariously before landing on top of one of the couches, dangerously close to one of the life-sized "inhabitants."

The demonstrations featured earthquake protective devices, such as those developed by the New York firms Taylor Devices (an EERI Subscribing Member) and Enidine Corp., highlighting the contributions that UB's earthquake engineering research has made to economic development both locally and nationwide.

The UB facility also features a geotechnical biaxial laminar box, one of the tallest such laminar boxes in the world, for combined geotechnical and structural studies.

Students learn about the biaxial laminar box from Prof. Thevanayagam and Tom Albrechcinski, site operations manager.

News of the Institute

Summary Minutes of the June 3, 2004, Board of Directors Meeting

President Thomas O'Rourke called the meeting to order at 8:35 a.m. Also present were President-Elect Craig Comartin, Vice President Mary Comerio, Directors John Aho, Donald Ballantyne, Farzad Naeim, Sarah Nathe, Executive Director Susan Tubbesing, and Administrative Assistant Valarie Austin. Ron Mayes joined the meeting by conference call to deliver the Treasurer's Report. Bruce Clark was absent. Robert Reitherman and Roger Borcherdt were present during a portion of the meeting.

Revenue and expense report: Mayes reviewed the Report of Revenue and Expenses as of April 30, 2004. The combined balance sheet showed an opening fund balance of $126,654, which was augmented by $314,276 in excess revenues over expenses.

EERI's total liabilities of $131,748 combined with the total fund balance of $440,930 equaled $572,678. The Endowment Program's opening balance of $680,723 was decreased by $15,882 in expenses, for a total fund balance of $664,841. Total liabilities in the amount of $329,306 combined with the total fund balance of $664,841 equaled $994,147. The balance of the combined association, endowment, and technical programs equaled $1,566,826.

The Investment Funds Report showed a balance of $315,919 in the General Administrative Short-Term Investment Fund and $36,359 in the Long-Term Investment Fund. The Endowment Fund balance totaled $664,841, the Friedman Family Investment Fund totaled $158,612, and the Shah Family Innovation Prize totaled $170,694. The balance in the interest-bearing checking account was $37,506. The combined funds in both the General Administrative checking and investment accounts totaled $391,830. The Grants Status Summary showed that of $2,686,531 in active grants, $1,880,290 has been expended, leaving a balance of $806,241.

Investment report: Mayes reported that he met with Bob Clelland to review the Institute's investment portfolio. The Board indicated that it is in basic agreement with changing the investment portfolio to reflect a more conservative position in the market but does not believe that an attempt to employ a timing strategy to enter and exit the market is a wise course of action. The Board indicated that expenditures should be made conservatively during the next year.

President's report: O'Rourke reported that the Executive Committee had considered Josh Marrow's recommendation to reduce student fees from $30 to $20. At the present time, student members receive all the benefits of regular members except for voting privileges. The Board approved a motion reducing student dues to $20. Student members will not receive other publications unless the costs are underwritten by outside funding sources. Annual dues for students wishing to receive hard copies will be $30.

NEHRP reauthorization and ANSS: USGS and ANSS supporters were pleased with the Institute's efforts in urging Congress to support the "Dear Colleague" letter written by Representatives Nick Smith and Zoe Lofgren that strongly lobbied for increased funding for ANSS. The NEHRP Reauthorization bill stalled in the Senate. It's clear that a NEHRP champion is needed in the Senate; the California senators have been difficult to involve.

JAEE request and 2005 plans: JAEE has requested EERI's participation in the International Symposium on Earthquake Engineering (ISEE) in Kobe, Japan, in January 2005, the 10th anniversary observance of the Kobe earthquake. Tubbesing will write a proposal to submit to NSF for travel support funds to send people to the ISEE and to the First International Conference on Disaster Reduction, sponsored by ISSS, scheduled immediately after the ISEE.

NEES update: The Board expressed concern over inadequate funding for the NEES research program and other NSF research activities. The severity of the economic problem at NSF has become apparent during the past several months, and the prospects for continued full support of the LFE program and other earthquake research programs are now much less certain.

Executive Director's report: Tubbesing stated that progress is being made in appointing chairs and members to the international bilateral committees. Chia-Ming Uang has agreed to serve as EERI's representative on the ANSS Advisory Committee.

Federal agency issues and implications: Tubbesing relayed her concern about the stability of long-range federal funding for Institute programs. LFE is conducting a mid-course workshop to examine what has been accomplished and set the course for the second half of the NSF/LFE funding period. It is also clear that earthquakes are not being ranked high on FEMA's list of priorities, and possible cutbacks in the future should be anticipated.

2006 planning update and special issue of *Spectra:* Planning for the 2006 National Conference is proceeding well by means of frequent conference calls. The Board supported a suggestion that a special issue of *Spectra* in observance of the 1906 earthquake be developed in time for the 2006 Anniversary Conference in April 2006.

Membership status: Membership

has decreased somewhat from 2003, except in the institutional and young professional membership categories. The staff will analyze and categorize nonrenewing regular and subscribing members for the last ten years and plot the numbers on a graph for the Board's examination at the next meeting.

Oral History Committee: Robert Reitherman and Roger Borcherdt joined the meeting at this point. The Oral History Committee recommends that EERI accept AIP's proposal to provide publishing services for the *Connections* series in a digital as well as paper format for past and future volumes. They estimate that the added cost of publishing in a "paper and digital" format versus "paper only" would be about $3,300 annually. The Board discussed this issue at a later point in the meeting.

***Spectra* format and guideline decisions:** To control the cost of *Spectra* and streamline the editorial production process, the Board adopted the following recommendations:

- a maximum page limit of 250 pages per issue beginning with issues after January 2005, except when the issues are sponsored issues;
- greater selectivity in accepting papers to avoid large publication queues;
- page charges of $50 per page beginning in September 2004 for papers in excess of 18 pages unless the manuscript has been in the review process for longer than 12 months (with some caveats);
- continuing efforts to streamline the peer review process;
- announcement of the changes in the *Newsletter* and on the web site;
- monitoring of the effect and success of these changes, which will be modified as necessary.

Bam *Spectra* issue: The Board discussed and took a position in disagreement with the regulations promulgated by the Office of Foreign Assets Control (OFAC) that in essence prohibit co-authorship of articles by American citizens and Iranians, stating: "The Board disagrees with the ruling of OFAC as infringing on the right of free expression, but because of its concern for the threat of legal action against the authors of articles for the *Spectra* issue on the Bam earthquake, recommends publishing the issue in compliance with the ruling. The Board also sanctions an editorial to be included in the Bam earthquake issue explaining its position on this matter to be prepared by the editor-in-chief of *Earthquake Spectra*."

Small Grants Project: The Small Grants to Developing Countries Project has awarded $2,500 to Sudhir Jain to train local earthquake professionals residing in developing countries who will, in turn, train other individuals working in the field about effective mitigation measures to reduce seismic risk.

Consideration of the Oral History Committee's recommendation: The Board discussed the recommendations made by Reitherman and Borcherdt on behalf of the Oral History Committee. O'Rourke will inform them that the Board will first address some broader issues and ask the Publications Policy Committee to evaluate the full spectrum of EERI publications: what should be on the AIP platform and what resources should be devoted to this. A conference call will be conducted with AIP to discuss this and the possibility of a hub that would also accommodate the National Conference proceedings.

Publications reproduction in developing countries: The Board took under advisement a request from Sudhir Jain to reprint Chopra's monograph and distribute it in India. They agreed that it would be prudent to develop policy guidelines to maximize the objectives of the Institute, in creating greater life safety and awareness of global risks. The Board agreed to give authorization only to professional organizations in developing countries, under conditions where no harm will be done to the Institute and where no single organization will receive a competitive advantage. The Board unanimously approved a motion to inform Jain that it agreed to work with him in developing a protocol using the Chopra monograph as a test case, to help the Board formulate a policy for the possible reprinting and distribution of monographs by other developing countries.

Review of EERI activities and directions: The Board discussed the future direction of EERI activities. Tubbesing and O'Rourke will meet with Friedman to discuss outstanding development issues. A new Board Membership Committee, chaired by Ballantyne with Aho and Clark as members, has been charged with developing a comprehensive membership campaign to attract a broad range of potential new members.

News of the Membership

Saiidi Starts New Position at UNR

EERI member M. Saiid Saiidi was recently selected as the director of a newly established Office of Undergraduate Research Programs at the University of Nevada, Reno.

As a component of the Office of Vice President for Research, Saiidi's new office plans to streamline, promote, and expand undergraduate research opportunities for all students, while enhancing the visibility of undergraduate research through a variety of activities.

Saiidi will split his time between the new position and his position as a professor of civil and environmental engineering.

Annual Meeting

continued from page 1

which strengthened ties between the earthquake engineering communities of the two countries. The technical program will be as excellent as ever — more than 25 speakers from the multidisciplinary earthquake fields will address the ways in which the lessons from that event have changed our perspective on how to mitigate losses from earthquakes.

A Learning from Earthquakes training program for field reconnaissance will take place all day Wednesday, February 2, before the Wednesday evening opening reception.

The first session on Thursday will be an interesting panel discussion on "20 Years after Mexico City: Old Issues, New Issues, and Accomplishments." The second session will look at the influence of the 1985 event on U.S. and Mexican design ground motion maps.

Thursday will also feature the Second Annual William B. Joyner Memorial Lecture, co-sponsored by the Seismological Society of America, to be given by EERI member C. Allin Cornell of Stanford University (see page 3 for more information). On Friday, the 14th Annual EERI Distinguished Lecture will be presented by Professor Jack Moehle, director of the Pacific Earthquake Engineering Research Center.

Other stimulating sessions will cover approaches to earthquake prediction and early warning, U.S.-Mexico collaboration following the 1985 event, major building design issues, developments in performance-based design in both countries, and urban risk.

Remember when making your travel arrangements that the meeting will last until Sunday afternoon (February 6), with sessions spread over four days instead of the customary three, to provide free time each afternoon for attendees to enjoy the pleasures of Ixtapa and Zihuatanejo. The yellow insert in this *Newsletter* contains a meeting registration form and a Las Brisas Ixtapa Hotel reservation form. The hotel requires a deposit of two nights' room rate ($149 per night single/double occupancy) and seven days' advance notice for cancellations.

EERI's travel agent, Samia of Bay Travel, has agreed to assist our members in making airline reservations (phone 408/253-8615, fax 408/255-6967, e-mail **baytravel @sbcglobal.net)**. She is working with several airlines to get the best possible rates. At a minimum, she will be able to obtain a 10% savings. We hope to see all of you there, so please make your arrangements early, as we expect fares to rise as winter approaches.

Watch for further details to come in the brochure to be mailed in November. Registration information is also on the EERI web site (**www.eeri.org**).

News of the Profession

Congress Approves EQ/Wind Legislation

A joint U.S. House of Representatives and Senate Committee gave unanimous approval on October 8 to legislation (H.R. 2608) to mitigate damage from earthquakes and windstorms. The President is expected to sign the bill into law.

The final version combined language from the original H.R. 2608, the National Earthquake Hazards Reduction Program (NEHRP) Re-authorization Act of 2003, introduced by Research Subcommittee Chairman Nick Smith (R-MI) and Rep. Brian Baird (D-WA), and language from H.R. 3980, the National Windstorm Impact Reduction Act of 2004, which was introduced by Rep. Randy Neugebauer (R-TX) and Rep. Dennis Moore (D-KS). H.R. 2608 authorizes $900 million over nine years for NEHRP, a federal program involving four agencies that is designed to help prevent loss of lives and damage in earthquakes by developing better ways to prevent structures from collapsing. Congress established NEHRP in 1976.

The bill's major NEHRP provisions include: (1) shifting lead responsibility for NEHRP from the Federal Emergency Management Agency (FEMA) to the National Institute of Standards and Technology (NIST); (2) establishment of an external Advisory Committee to provide suggestions for improvements in NEHRP; (3) reauthorization of funds for completion of the Advanced National Seismic System, an integrated seismic monitoring network; and (4) significant funding increases for NIST, reflecting the call for increased emphasis on promoting the adoption into practice of hazard reduction applications.

The bill's major wind provisions create a program, modeled on NEHRP, to provide a focused, federal effort to mitigate windstorm damage. The bill directs the White House Office of Science and Technology Policy to establish an interagency working group to plan, manage, and coordinate program activities to improve the understanding of windstorms and their impacts. The group would include representatives of the National Science Foundation, FEMA, NIST, and the National Oceanic and Atmospheric Administration.

The legislation has been endorsed by the Wind Hazard Reduction Coalition, which includes the American Society of Civil Engineers, the National Fire Protection Association, the American Association for Wind Engineering, the International Code Council, and the Manufactured Housing Institute.

News of the Institute

New Madrid Chapter Hosts IEBC Seminar

The New Madrid Chapter of EERI, in conjunction with other regional engineering and architecture groups, hosted a seminar on the International Existing Building Code (IEBC). The four-hour seminar, held at St. Louis City Hall, was well attended by architects, engineers, and developers.

Nathan Gould discusses IEBC.

Speakers presented topics related to the classification of architectural, structural, mechanical, electrical, and plumbing work; the treatment of historic structures; relocated or moved structures; and the implementation of the IEBC seismic requirements.

In addition to discussions of the architectural and engineering aspects of the new IEBC, representatives of local governments presented their perspectives on the implementation of the code within their local jurisdictions.

News of the Profession

Controversy Over "Drop, Cover, and Hold"

Recently a controversial e-mail titled "Triangle of Life" has been making its rounds again on the Internet. This e-mail, from Doug Copp, rescue chief and disaster manager of American Rescue Team International (a private company not affiliated with the U.S. Government or other agency), challenges the earthquake safety advice "drop, cover, and hold" and instead promotes a protective measure called the "triangle of life." This theory states that going underneath objects during an earthquake (as in children being told to get under their desks at school) is dangerous and could be fatal should the building collapse. It also says, "If an earthquake happens while you are watching television and you cannot easily escape by getting out the door or window, then lie down and curl up in the fetal position next to a sofa or large chair."

Many people in the community are confused by Copp's e-mail, and you may find yourself questioned by friends and family as to which safety advice is correct. There are a number of resources to help you respond in an informed way, should questions arise. Both the American Red Cross and the California Governor's Office of Emergency Services (OES) have written letters discrediting the "triangle of life" theory in the United States. An official response from Rocky Lopes, manager of community disaster education at the American Red Cross, is posted at **www2.bpaonline.org/Emergencyprep/arc-on-doug-copp.html**. According to Lopes' letter, research has shown that "drop, cover, and hold" saves lives in the United States, and the Red Cross continues to endorse this advice. In a September 7, 2004, memo, Richard Eisner, coastal regional administrator of OES, states, "The key to injury prevention is making sure buildings are safe, contents are secured, and occupants are trained to duck, cover, and hold." ("Drop" may be better understood by all speakers of English as a second language.)

One useful resource for discussing disasters is *Talking About Disaster: Guide for Standard Messages* (2004), available from **www.disastereducation.org/guide.html**.

Publication

Seismic Design Guide for Metal Building Systems

The International Code Council and the Metal Building Manufacturers Association have published the *Seismic Design Guide for Metal Building Systems* to help engineers, building officials, and plan checkers ensure metal building designs comply with the seismic provisions of the 2000 *International Building Code* (*IBC*). Using realistic design examples, this new resource illustrates acceptable approaches for dealing with the seismic design issues commonly encountered in metal building systems, including:

- determination of seismic design forces;
- design of frames, columns, bracing, and other elements of the systems to resist lateral forces;
- determination and distribution of seismic design forces for a metal building with a concrete deck mezzanine (a rigid diaphragm); and
- determination of seismic design forces and detailing for a metal building with hardwalls.

The design recommendations are based on the 2000 *IBC*, the American Institute of Steel Construction (AISC) *Seismic Provisions for Steel Buildings*, and standard industry practices. Primarily focused on allowable stress design (ASD), the guide also addresses load-and-resistance-factor design (LRFD) when appropriate. In addition, the guide provides the technical background for recent code changes that impact seismic design.

EERI members Robert Bachman, Richard Drake, and Martin Johnson were co-authors of this comprehensive resource. To purchase a copy, visit **www.iccsafe.org** (product #9650S00) or call 1-800-786-4452. Price: $62 (ICC members), $69 (nonmembers).

Faculty Position

Pennsylvania State University

The Department of Geosciences at Penn State University seeks applications for a tenure-track faculty position in solid earth geosciences at the assistant professor level. The department is interested in individuals who creatively combine observational, theoretical, experimental, and analytical techniques to address problems in lithospheric deformation, and who are poised to take advantage of emerging opportunities and new initiatives in the solid earth geosciences.

Applicants should demonstrate the potential for developing an internationally recognized research and teaching program. Review of applications will begin December 1, 2004. For more information on the department and a copy of the position announcement, visit **www.geosc.psu.edu**.

Publication

AISC Moment Connection Guide

The second edition of the American Institute of Steel Construction's (AISC) *Design Guide 4: Extended End-Plate Moment Connection*s is now available. The updated guide makes use of yield line theory in a new design philosophy for extended end-plate moment connections in wind and seismic applications, which allows such connections to be designed using 50 ksi steel.

Design Guide 4 is available both as an electronic download (free to AISC members or $60 to nonmembers) or as a printed book ($30 to AISC members or $60 to nonmembers). For more information, visit **www.aisc.org/bookstore**.

Call for Abstracts

Disaster-Resistant California Conference

A call for abstracts has been issued for the Disaster-Resistant California Conference, to be held May 15-18, 2005, in Sacramento, California. It will promote partnerships and collaboration in an effort to reduce the vulnerabilities of communities to natural and human-caused disasters.

This conference brings together emergency management professionals, local and state government representatives, private business partners, service providers, manufacturers, and academicians to share ideas, technology, and resources for the purpose of reducing the negative consequences of disasters. The conference is multidisciplinary and seeks to integrate the various disciplines involved in disaster mitigation so that a holistic approach can be fostered and developed.

Focusing on the importance of disaster-resistant communities, the conference's presentations, displays, and demonstrations will emphasize successful systems, technologies, and strategies to implement hazard mitigation measures and programs. There will continue to be a diverse representation of vendors and exhibitors from the public and private sectors on site to showcase the latest development in emergency management products.

Please submit one-page abstracts (250 words maximum) by November 19, 2004, via e-mail, in MS Word format, to Dr. Guna Selvaduray at **sjsu_cdm@email.sjsu.edu**. For information on conference topics and registration, visit **www.sjsu.edu/cdm/drc05**.

News of the Profession

California Quake Safety Bill Passes

An earthquake safety bill prompted by the 2003 San Simeon earthquake has been signed into law by California Governor Arnold Schwarzenegger. The Jennifer Lynn Myrick Memorial Law, named after 20-year-old Jenna Myrick, will enforce a seismic safety measure that was enacted in 1992 but had not been rigorously enforced. The new law puts an enforcement mechanism in place.

Myrick and her co-worker, Marilyn Zafuto, 55, died in Paso Robles when the 19th century, unreinforced masonry building they were in collapsed. The new law has been championed by Myrick's family.

The 1992 law required all unreinforced masonry buildings to be labeled in a conspicuous place, stating that the building is unsafe in the event of an earthquake. However, the bill was written without clearly explaining who would enforce the law. There was no such sign in the historic Acorn building, which collapsed on Myrick and Zafuto.

The new law requires local building inspectors to enforce the requirement. Property owners would be subject to an administrative fine of $250 if they don't post a sign within 15 days of notification, and an additional $1,000 if the sign is not posted within another 30 days. Out of concern that this bill might prompt frivolous lawsuits, the bill's language was changed so that property owners can be taken to court to comply with the law, but cannot be sued for monetary compensation.

There are about 9,000 buildings in California's seismic zone 4, which includes the San Andreas fault and runs from Los Angeles to San Francisco, that would be affected by the law.

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**.

NOVEMBER

5-11. 52nd Annual IAEM Conf., Dallas, TX. Info: **www.iaem.com** (9/04)

15-19. Committee on Safety of Nuclear Installations Workshop on Seismic Input Motions, Tsukuba, Japan. Info: **www.nea.fr/html/nsd/workshops/SEIS2004/index.html** (4/04)

28-Dec. 3. Coping with Risks Due to Natural Hazards in the 21st Century, Monte Verità, Switzerland. Info: **www.csf.ethz.ch/services/registration/** (8/04)

DECEMBER

8-20. 4th Int'l Conf. on Dam Engr., Nanjing, China. Info: **www.dam04.com** (1/04)

2005

JANUARY

6-12. 2nd Consequence-Based Eng. (CBE) Institute, College Station, TX. Info: **cbe.civil.tamu.edu/** (10/04)

9-13. TRB Annual Meeting, Washington, DC. Info: **www.trb.org** (8/04)

13-16. Int'l Symp. on EQ Eng., Japan. (2/04)

18-20. 1st Int'l Conf. on Urban Disaster Reduction, Kobe, Japan. Info: **www.eeri.org/news/meetings.html** (7/04)

31-Feb 3. IMAC XXIII, Orlando, FL. Info: **www.sem.org** (6/04)

FEBRUARY

2-6. EERI Annual Meeting, Ixtapa, Mexico. Info: **www.eeri.org. See page 1.** (4/04, 7/04, 9/04, 10/04, 11/04)

19-22. Int'l Assoc. for Bridge Struc. Eng. Conf., New Delhi, India. Info: **www.iabse.org** (11/03)

APRIL

6-9. North American Steel Construction Conference, Montreal, Canada. Info: **www.aisc.org/nascc** (8/04)

MAY

1-4. UCLA Conf. on Public Health & Disasters, Woodland Hills, CA. Info: www.cphd.ucla.edu/ (11/04)

15-18. Disaster-Resistant CA Conf., Sacramento, CA. See page 10. (11/04)

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)

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. See page 11. (11/04)

AUGUST

21-24. Pipelines 2005, Houston, TX. Info: **www.asce.org/conferences/pipelines2005/** (8/04)

22-24. ConMat'05, Vancouver, BC, Canada. Info: **www.civil.ubc.ca/conmat05/** (7/04)

SEPTEMBER

14-16. IABSE Structures & Extreme Events, Lisbon, Portugal. Info: **www.iabse.org/lisbon** (7/04)

20-23. 3rd Int'l Structural Eng. & Const. Conf., Shunan, Japan. Info: **www.tokuyama.ac.jp/tcss1/ISEC_03/** (4/04)

OCTOBER

16-19. Council on Tall Bldgs. & Urban Habitat, New York, NY. Info: **www.ctbuh.org** (9/04)

2006

APRIL

18-21. 8th U.S. Nat'l Conf. on EQ Eng. (8NCEE), EERI Annual Meeting, SSA Annual Meeting, Disaster Resistant California, San Francisco, CA. Info: **www.eeri.org** (5/04)

AUGUST

14-17. 5th Int'l Conf. on Behavior of Steel Structures in Seismic Areas (STESSA), Tokyo, Japan. E-mail: **wada@serc.titech.ac.jp** (9/04)

Call for Abstracts

World Conference on Disaster Management

The Canadian Centre for Emergency Preparedness is calling for presentations for the 15th World Conference on Disaster Management (WCDM) to be held in Toronto, Canada, July 10-13, 2005. WCDM will address issues common to all aspects of disaster and emergency management. The conference program includes speakers from many parts of the world and provides excellent opportunities for training and networking among those in the fields of emergency planning and management, emergency response, disaster management research, emergency communications, business continuity, risk management, security, IT, HR, environmental protection, and community planning.

Presentations should fall into one or more of the following categories:

- lessons learned from events,
- emerging trends in disaster management,
- the human element in disaster management,
- technical issues and threats,
- disaster management principles and practices, and
- research and development.

Presentation abstracts are due by December 4, 2004. For more information, visit **www.wcdm.org**.

News of the Institute

Co-Authorship with Iranian Authors: A First Amendment Issue

"… no law abridging the freedom of speech, or of the press…" U.S. Constitution, Amendment I (1791)

"[The First Amendment] leaves [no] room for government restraint on the press." Justices Douglas and Black, U.S. Supreme Court, The Pentagon Papers Case (1971)

EERI finds itself in an unusual position as it develops the special issue of *Earthquake Spectra* on the 2003 Bam, Iran, earthquake. Because of trade sanctions against Iran, the U.S. government regulates how, what type, and how much information can be exchanged between the two countries. These regulations are promulgated by the Office of Foreign Assets Control (OFAC) of the U.S. Treasury Department, and up until April 2004, they included a ban on peer review and copyediting for papers submitted by authors from sanctioned countries to professional journals published in the United States. (Technically, a license would be required from OFAC to provide such a "service"— e.g., peer review — to someone in a sanctioned country.)

Other professional associations, specifically the IEEE, entered into a dialogue with OFAC and convinced them to allow peer reviews without a license. Although it lifted the peer review ban, OFAC pronounced that joint authorship (U.S. authors with sanctioned-country authors) would still be a sanctioned activity.

Some professional associations, led by the American Chemical Society and the Association of American Publishers (AAP) (of which EERI is a member), have filed a lawsuit on the grounds that having to apply for a license for this kind of authorship violates the first amendment right of free expression. As stated by Marc Brodsky, the chairman of the AAP Professional and Scholarly Division and the executive director of the American Institute of Physics, "Our most basic liberties are violated when we, as publishers, have either to ask the government for permission to publish or risk serious criminal and civil penalties if we do not obtain permission" (*Chemical and Engineering News Online*, September 27, 2004, **pubs.acs.org/cen/news/8239/8239publishing.html**).

Substantial penalties and criminal prosecution may be associated with knowing violation of these OFAC rulings. EERI could obtain a license for joint authorship if we were to ask. However, the Board and Farzad Naeim, *Earthquake Spectra* editor, believe that the requirement that we ask for such a license is itself unconstitutional on its face as a clear violation of the first amendment; therefore, EERI will not ask for one. However, because we are not willing to subject the editors, the Board, or the U.S. authors associated with the special issue to the possibility of fines and criminal prosecution, the Board has decided on an alternative to publishing jointly authored papers: most topics have been divided up between Iranian and U.S. colleagues, and separate papers will be prepared. In a few cases, there may be two articles on one topic, one authored by Iranians and one by U.S. authors. The Bam special issue will begin with a preface that strongly but logically protests imposition of censorship and prior-restraints by OFAC.

For further details concerning this situation and OFAC's rulings, visit the Association of American Publishers web site at **www.publishers.org**.

EARTHQUAKE ENGINEERING
RESEARCH INSTITUTE
499 14th Street, Suite 320
Oakland, CA 94612-1934
ADDRESS SERVICE REQUESTED

PRSRT FIRST CLASS
U.S. POSTAGE PAID
Sundance Press
85719