

## 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>

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### EARTHQUAKE ENGINEERING RESEARCH INSTITUTE

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### News of the Institute

## 2003 Annual Meeting Highlights

At EERI's 55<sup>th</sup> Annual Meeting last month in Portland, Oregon, more than 300 enthusiastic participants became better informed about the challenges for policies and programs in regions similar to the Pacific Northwest, where severe earthquakes occur over an extended time horizon. EERI extends thanks to organizing committee co-chairs Carol Hasenberg and Chris Thompson, and committee members William Elliot, Mike Hagerty, Chris Jonientz-Trisler, Leon Kempner, Jared Lewis, Mike Reed, and Yumei Wang. Annual Meeting sponsors Degenkolb Engineers, DPR Construction, and Kinemetrics provided valuable leadership with their financial support of networking events throughout the four-day gathering.

The experiences and imparted information about many aspects of planning and implementation of seismic risk reduction were relevant for communities worldwide. Raymond Miller's presentation on the development of improved seismic codes in Oregon and John Robertson's discussion of streamlining the building permit process in the city of Vancouver, British Columbia, are two examples.

The meeting also provided a forum for Craig Wingo, S. Shyam-Sunder, John Filson, and Priscilla Nelson, representing FEMA, NIST, USGS, and NSF, respectively, to discuss the National Earthquake Hazards Reduction Program, the backbone of federal support to reduce the U.S. earthquake risk. It is scheduled for congressional reauthorization this year. In addition, attendees learned about activities of the George E. Brown, Jr., Network for Earthquake Engineering Simulation sponsored by NSF. This program will substantially expand and improve earthquake engineering research through a network of advanced experimental facilities within the United States and worldwide, linked by telecommunications and information technology.

During the awards luncheon on Thursday, Dan Shapiro received the Alquist Award, and Josh Marrow received the Shah Family Innovation Prize. EERI President Tom O'Rourke recognized this year's new Honorary Members Paul Jennings and Ugo Morelli (see page 3), and bestowed C. Allin Cornell with the George Housner Medal (see page 1 of the February *Newsletter*). He also introduced the 2003 Distinguished Lecturer Bill Petak. During the business luncheon on Friday, J. Carl Stepp and Ivan Wong represented the many authors of the 2001 *Earthquake Spectra* Outstanding Paper, "Probabilistic Seismic Hazard Analyses for Fault Displacement and Ground Motions at Yucca Mountain, Nevada." The April *Newsletter* will have more information on many of these award recipients.

*continued on page 2*



*Bill Petak receives Distinguished Lecturer Award from Tom O'Rourke.*



*Shah Prize Committee Chair Bob Hanson (center) with awardee Josh Marrow and special recognition award recipient Patricia Grossi.*

## Annual Meeting *continued from page 1*



*A thunderbird seizes a whale.*

A Friday evening highlight was banquet guest speaker Ruth Ludwin of the Pacific Northwest Seismograph Network, whose topic was "Searching for Native Stories about Cascadia Subduction Earthquakes." Ludwin described evidence of a magnitude 8 to 9 earthquake that occurred on January 26, 1700, triggering a tsunami that reached Japan early in the morning of January 27. Datable oral stories among tribes along the Washington and Oregon coasts correspond to this 1700 winter date.

These stories often explain the event by telling how a colossal thunderbird seized a whale in its talons and "carried the weighty animal to its nest in the lofty mountains, and there was the final and terrible contest fought.

There were a shaking, jumping up and trembling of the earth beneath, and a rolling up of the great waters."

The week ended on a beautiful, clear, sunny day with a walking tour of seismic upgrades: the Pioneer Courthouse, the Portland Art Museum, the Portland City Hall, and the Smith Memorial Center at Portland State University.



*Student Activites Chair E. Williamson (left) with student paper winner Amit Kanvinde.*



*Jack Moehle and Amy Kwong discuss her poster on pushover analysis.*



*Past President Chris Poland and Anil Chopra in exhibit area.*



*Enthusiastic poster session attendees.*

**See page 12 for more Annual Meeting photos.**

## Announcements

### CSMIP Project Opportunity

The California Strong-Motion Instrumentation Program (CSMIP) of the California Geological Survey plans to fund three data interpretation projects for the analysis and utilization of strong-motion data. These projects will improve the understanding of strong ground shaking and the response of structures, and to increase the utilization of strong-motion data in improving post-earthquake response, and seismic design codes and practices.

Projects will have a duration of 12 months and maximum budget levels of \$50,000, \$100,000, and \$50,000 for the investigation categories of Ground Response, Building Response, and Lifeline Structure Response, respectively. Responses to the Request for Qualifications (RFQ) are due on March 10, 2003. To receive a copy of the RFQ, please send your name and mailing address to Moh Huang at [mhuang@consrv.ca.gov](mailto:mhuang@consrv.ca.gov) or call 916/322-3105.

## Announcements

### AISC Steel Solutions Center

Engineers, architects, contractors, and developers can contact the AISC Steel Solutions Center by calling toll-free 866/ASK-AISC (275-2472). They also can e-mail [solutions@aisc.org](mailto:solutions@aisc.org) or visit AISC's web site at [www.aisc.org](http://www.aisc.org). The Steel Solutions Center offers technical assistance, conceptual solutions, and tools such as spreadsheets and handy reference sheets for designing in structural steel.

Steel Solutions Center staff members have access to a wide variety of technical information and project data to help on any structural steel issue. Additionally, they can quickly obtain information from other technical associations, members of AISC's technical committees, and other leading industry experts.

### Seismic Instrument Exhibition in China

The China Seismological Bureau (CSB) will hold the International Seismic Instrument and Emergency Rescue Equipment Exhibition May 19-21, 2003, in Beijing. China has experienced increased seismic risk with the rapid development of the Chinese economy and expanding urbanization in recent years. To advance disaster prevention and reduction efforts, China will invest about US\$400 million to import advanced equipment and technology systems (including software) in the next five years. In this exhibition, exhibitors will have the opportunity to engage in discussion with users and enter the Chinese market. The deadline to apply for exhibit space is March 21, 2003. For more information, visit [www.exh.dizhen.ac.cn](http://www.exh.dizhen.ac.cn) or contact He Qin, CSB, phone 86-10-68589224; fax 86-10-68597907; e-mail [iseree@eq-csi.ac.cn](mailto:iseree@eq-csi.ac.cn).

## News of the Institute

### Jennings and Morelli Named EERI Honorary Members

The EERI Board of Directors voted to name Paul C. Jennings and Ugo Morelli as honorary members of the Institute. Honorary membership is awarded to recognize members who have made sustained and outstanding contributions either in the field of earthquake engineering or to EERI and the pursuit of its objectives.



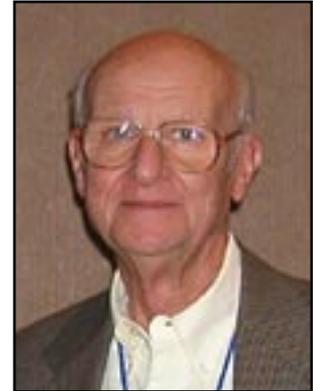
*Paul C. Jennings*

**Paul C. Jennings** is Professor Emeritus of civil engineering and applied mechanics at the California Institute of Technology in Pasadena. He received honorary membership for his service to EERI, which he served as president (1981-82) and as a member of many committees, and for his service to the earthquake engineering profession through education, research, and practice. He has been on the Caltech faculty for

37 years, beginning in 1966, and has also served as consultant on the design of many major projects.

He has received many awards during an exceptional career, having served as president of the Seismological Society of America, co-editor of the engineering volume of the National Academy of Science report on the 1964 Alaska earthquake, editor of a report on the San Fernando earthquake of 1971, and a member of the Governor's Board of Inquiry on the Loma Prieta earthquake. Jennings is the author of many technical papers on earthquake engineering and dynamics of structures, including the 1997 *Spectra* Outstanding Paper entitled "Enduring Lessons and Opportunities Lost from the San Fernando Earthquake of February 9, 1971."

**Ugo Morelli** received honorary membership for his many years of service as a policy manager in the Federal Emergency Management Agency (FEMA), where he was a leading proponent of the National Earthquake Hazards Reduction Program, and for his tireless support in developing a mutually beneficial relationship between FEMA and EERI. With his retirement from FEMA this year, he is now eligible for EERI



*Ugo Morelli*

membership. His career in natural hazards mitigation began in 1971 with the Office of Emergency Planning, a precursor to FEMA, shortly after the San Fernando earthquake.

In 1981, he became the manager of a program that published many engineering resource documents on the seismic safety of new buildings. The technology embodied in these documents has been extensively adopted by the major model building codes. During the last 19 years, Morelli has concentrated on a \$40 million federal program dealing with the seismic safety of existing buildings in both the private and public sectors. Among its dozens of publications are books that have or will become national standards.

## News of the Institute

### Endowment Fund Donors

EERI would like to thank the donors to the Endowment Fund listed below and acknowledge their contributions, which were received in January. EERI's Endowment supports those innovative projects that ensure the Institute's continuing leadership in the earthquake engineering professions.

#### **\$1000**

Chris D. Poland

#### **\$201-\$500**

Forrest T. Braun  
Ugo Morelli  
Conrad Paulson

#### **\$100-200**

Rawan Nelson  
Shamsher Prakash  
Robert V. Whitman  
Donald G. Anderson  
Jacob Grossman  
Sheldon Cherry

C. Terry Dooley  
Michael Valley  
Patricia A. Bolton  
Lori Dengler  
Melvyn Green  
Paul C. Jennings  
Leslie Robertson

Hassan Sughayer  
Donald Wells  
Kaya Tuncer  
David J. Leeds

**Other Amounts**  
Joseph Kallaby

Darell J. Lawver  
Robert Y. C. Chew  
Nesrin Basoz  
John A. Egan  
Richard Dale Ross  
William A. Nash  
Stanley W. Ryter

## News of the Institute

### Treasurer's Report: Fiscal Year 2002

The data to the right, taken from the audited financial statement of the Institute, summarize the financial status of EERI on December 31, 2002. Expenses for 2002 were less than anticipated, making for a successful outcome of revenues exceeding expenses by \$14,000. The 2003 budget is projected to break even.

Members contributed more than \$35,000 to the Endowment Fund in 2002. While the fund is conservatively managed with 30% invested in bonds and 70% in mutual funds, it fared poorly last year, as did the rest of the stock market. Since the Endowment's inception in 1993, \$1,769,000 has been raised, while program expenses have been \$934,000, leaving \$835,000 remaining. The Board's goal is for the Endowment to reach the \$2 million level in order to provide \$100,000 to projects annually. Projected expenses for 2003 are \$183,000.

A look at the direct and indirect benefits of membership shows that members receive almost \$400 in value, more than twice the amount of their annual dues of \$190. In 2002, dues were 24% of EERI's total income of \$1.95 million, while grants were 43%, an indication of the importance of FEMA and NSF in supporting EERI's mission. In 2003, grants are projected to comprise 59% of total income.

The number of members increased by 6% in 2002 partly because non-members who attended the 7NCEE received a half-year membership for their registration fee, higher than for members. The Institute is hopeful that they will retain their membership and that the stock market tide will soon turn. EERI remains in solid financial shape.

*Ronald L. Mayes*  
EERI Secretary/Treasurer

#### 2002 Summary of Revenues and Expenses

##### Revenues (\$1,000s)

Meetings	\$489
Publications	26
Membership and Spectra Dues	512
Interest and Other Income (G & A)	4

TOTAL REVENUES \$ 1,031

##### Expenses (\$1,000s)

Meetings	\$474
Publications	187
Journal	167
Membership	97
Support Programs	17
Association Expenses	75

TOTAL EXPENSES \$ 1,017

**REVENUES OVER EXPENSES \$ 14**

#### 2002 Endowment Fund Summary of Expenses

Expenses (\$1,000s) \$174

#### 2002 Grant Fund Summary of Revenues and Expenses

Revenues (\$1,000s) \$847  
Expenses (\$1,000s) \$847

#### 2002 Benefits of Membership

	2002 Expenses	Per Member
General Administration	\$48,838	\$19
Membership Services	96,704	37
Publications	109,763	42
Newsletter	50,768	20
Journal (2720 subscribers)	167,205	61
Support Programs	17,139	7
TOTAL	\$490,417	\$186

#### 2002 Indirect Benefits of Membership

FEMA	\$245,031	\$95
Learning from EQs (NSF)	580,484	224
Endowment Fund	176,655	68
TOTAL	\$1,002,170	\$387

**2002 Membership Report**

<u>Individual Members</u>	2001	2002
Regular Members	1,849	1,746
7NCEE Regular Members (6 months)		161
Student Members	353	347
Retired Members	73	65
Honorary Members	21	19
Affiliate Members	57	55
SSA	96	127
Young Professional (new category)		78
SUBTOTAL	2,449	2,598
<u>Institutional Members</u>		
Subscribing Members	41	38
Institutional Members	27	31
SUBTOTAL	68	69
<b>TOTAL MEMBERSHIP</b>	<b>2,517</b>	<b>2,667</b>

**2003 Budget for Revenues and Expenses****Revenues (\$1,000s)**

Meetings	\$123
Publications	30
Membership and Spectra Dues	531
Endowment Programs	151
Support Programs	74
Grants	1,315
Interest and Other Income (G & A)	4
<b>TOTAL REVENUES</b>	<b>\$2,228</b>

**Expenses (\$1,000s)**

Meetings and Technical Seminars	\$123
Publications	183
Journal	198
Membership	96
Endowment Programs	183
Support Programs	95
Association Expenses	35
Grants	1,315
<b>TOTAL EXPENSES</b>	<b>\$2,228</b>
<b>REVENUES OVER EXPENSES</b>	<b>\$0</b>

**News of the Membership****Be Sure You Have Renewed**

Has your membership lapsed? This issue may be the last *Newsletter* you receive if you have NOT renewed your EERI membership for 2003! All address changes and renewals must be received in the EERI office by April 11, 2003, to ensure that they will be included in the *EERI Membership Roster 2003*. You may renew with a VISA or MasterCard on EERI's web site [www.eeri.org](http://www.eeri.org), by fax (510/451-5411), or e-mail ([eeeri@eeeri.org](mailto:eeeri@eeeri.org)). If you send an e-mail message with only an address change, please put "Roster" in the subject line.

**Publications****Training Slides for ATC-20**

The Applied Technology Council (ATC) has announced a new CD-ROM containing the ATC-20 *Training Slide Set for Postearthquake Safety Evaluation of Buildings*. Developed jointly by the Federal Emergency Management Agency and ATC, the slide set is an updated version of the material previously available in the ATC-20-T *Training Manual*.

The ATC-20 *Training Slide Set* consists of 230 slides, in Microsoft PowerPoint format, containing photographs, schematic drawings, and textual information as well as lecture notes to assist the trainer in making the presentation. The slide set may also be of general use for education of the public and professionals about the earthquake performance characteristics of buildings and post-earthquake safety evaluation issues. The cost is \$35 plus applicable tax and shipping. Copies of the ATC-20 *Training Slide Set* can be obtained from ATC: phone 650/595-1542, e-mail [ATC@ATCouncil.org](mailto:ATC@ATCouncil.org).

## News of the Institute

# President's Progress Report for the New EERI

by Tom O'Rourke, EERI President  
(excerpted and partially edited from  
the 2003 Annual Meeting notebook)

Gathering in Portland, Oregon, for the 55<sup>th</sup> EERI Annual Meeting gives us the opportunity to review the vision, role, and five-year goals of the Institute that were articulated by the Board of Directors just before the 2001 Annual Meeting:

### EERI Vision:

A world in which potential earthquake losses are understood and steps have been taken to reduce them to an acceptable level.

### EERI's Role:

EERI is recognized as the authoritative source for earthquake risk reduction information in the United States and, in partnership with other nations, will develop earthquake risk-reduction information worldwide.

EERI will fulfill its role through the following activities.

- Fostering a sense of shared commitment among the diverse communities dedicated to earthquake risk reduction
- Encouraging research
- Facilitating the exchange of information between members and others
- Forging a consensus and speaking with a common voice to public forums and legislative bodies on behalf of the diverse risk-reduction community

### EERI's Five-Year Goals for 2001-2005:

**1. Strengthen EERI's position as the primary advocate of earthquake safety and risk reduction** throughout the United States, and in partnership with others through

out the world, by actively building a better understanding of earthquake loss potential and the range of mitigation options that exist in pre- and post-earthquake environments in a variety of cultures, in a manner consistent with and in support of professional practice.

**2. Identify and support seismic advocates at all levels of society and in all the disciplines.** Substantially expand the number of engineers and other design professionals, earth scientists, public policy officials, risk managers, and social scientists, representing all affected communities involved in research and other professional activities that contribute to reduced earthquake risk in the United States and abroad.

**3. Galvanize a cadre of seismic risk-reduction experts with lessons that are learned in earthquakes.** Establish EERI as the U.S. leader in post-earthquake investigations through coordination of public and private efforts, early reporting, and advocating for complete documentation and follow-on research.

**4. Generate support from government decision makers and the private sector for all forms of pre- and post-earthquake mitigation options** to ensure adequate levels of seismic safety in all newly constructed facilities and to improve the safety of existing buildings, bridges, and lifelines.

**5. Achieve financial independence.** Develop a strategy and implement a plan by 2005 to make EERI financially self-sufficient by 2010, and to endow the programs outlined in this plan for the long term.

Progress has been made in all areas, and I will illustrate here this progress by reporting on activities related to the EERI Research and Outreach Plan, online access to *Spectra* and other publications, the international program, the World Housing Encyclopedia, regional chapters, and EERI Endowment

projects. I am grateful to Paul Somerville, Chris Poland, Sergio Alcocer, Roger Borchardt, Svetlana Brzev, Charlie Scawthorn, and Susan Tubbesing for providing materials used in this progress update. It is my intention to report on progress in other areas not covered in this report at next year's Annual Meeting in downtown Los Angeles. My objective is to update members on programs across the spectrum of EERI activities at the two Annual Meetings within my term as president.

### EERI Research and Outreach Plan

EERI has been deeply concerned about the eroding levels of funding available for earthquake engineering research. Without exception, requests to expand the NEHRP funding levels, set nearly 25 years ago in 1977, have failed to capture sufficient long-term attention, even though the cost of earthquakes is soaring and our country's vulnerability to loss is steadily increasing. To focus attention on research needs for reducing seismic risk and to stimulate support for research at the federal, state, and local governmental levels, EERI — through its Research Policy Committee and with support from NSF — has developed a comprehensive Research and Outreach Plan for augmenting the NEHRP program. The Plan's goal is for the growth in earthquake losses in the United States to be arrested and brought to acceptable levels over the next 20 years. The cost for research needed to achieve this goal is estimated at \$370 million per year, almost four times the current level of spending, but still less than one-tenth the annual projected losses from earthquakes in the United States.

The Plan represents a milestone in EERI history. Its development marks the first time in the 55-year life of the Institute that a comprehensive, consensus plan has been organized to present and rank research needs in

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## Progress Report

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a balanced manner. The Plan was prepared by a volunteer panel of leading earth scientists, social scientists, and earthquake engineering researchers and professionals, consisting of (in alphabetical order) Ian Buckle, Ricardo Dobry, Ron Eguchi, Gregory Fenves, Steve French, Anke Kamrath, Ron Hamburger, Bill Lettis, Peter May, Keith Porter, Adam Rose, Paul Somerville, and Kathleen Tierney. The Institute is indebted to these people, especially Paul Somerville, who chaired the panel, for their unflagging dedication and hard work to put the Plan together. It has been reviewed by numerous professionals within and outside EERI, and has benefited from a detailed review by the Consortium of Universities for Earthquake Engineering Research (CUREE). Recommendations for improving the Plan from the social science community and CUREE have been especially helpful. Thanks are extended to CUREE representatives Andrew Whittaker, Bob Reitherman, Bill Holmes, Bruce Kutter, and Andre Filiatrault, who worked hard to improve the Plan.

Draft versions have been shared with representatives of NEHRP agencies and congressional staff. A final version of the Plan has been assembled and is currently being edited for publication. The Seismological Society of America (SSA), CUREE, and the Structural Engineers Association of California (SEAOC) have endorsed the Plan, and advanced draft versions have been circulated with key professional organizations for their endorsements. The Plan can be accessed at the EERI web site: [www.eeri.org/research/Researchplan01-03.pdf](http://www.eeri.org/research/Researchplan01-03.pdf). A full color, glossy publication of the Plan will be available before congressional hearings for NEHRP reauthorization in the second quarter of 2003. An implementation plan for

incorporating research results into practice and ensuring that the appropriate linkages exist between researchers and practicing professionals is being drawn up under the supervision of Chris Poland.

### Online Access to *Earthquake Spectra* and Other Publications

Most major scientific and engineering societies are now making digital online publication the publication of record and the publication standard. Also, the rapid growth in efforts such as CrossRef (143 publishers, 6000+ journals, and 5 million+ articles since its establishment in 2000) suggests that in the future, all publications of significance will be on major digital platforms such as that of the American Institute of Physics (AIP), with capabilities for "one-click" linking of references and keyword searching of major databases such as SpinWeb.

The EERI editorial staff, the *Spectra* Editorial Board, and the Publications Policy Committee have worked hard to ensure that EERI benefits from high-quality electronic publishing and is at the forefront of online access and cross-referencing services for its professional quarterly journal, *Earthquake Spectra*. Thanks are extended to Roger Borchardt, *Spectra* editor during the transition to electronic publishing, and Nancy Sutherland, *Spectra* managing editor at the EERI office. Significant recent milestones include the development and EERI Board adoption of recommendations concerning the integrated publication of the online and printed editions of *Spectra* on the Online Journal Publication Services (OJPS) platform of AIP: [ojps.aip.org/EarthquakeSpectra/](http://ojps.aip.org/EarthquakeSpectra/); the listing of *Spectra* (as EQS) in the prestigious *Science Citation Expanded® Index* and the *Web of Science* maintained by the Institute for Scientific Information; development of web site, manuscript submittal, and licensing procedures for the integrated publication of the online and printed edi-

tions; and completion of EERI editing of the keyword index file for all back issues of EQS to permit AIP to publish them online by April.

This integrated publication of the two editions of *Spectra* on the AIP platform is a major step forward in the digital archiving and dissemination of earthquake engineering information. Some of the many advantages are reduction of production costs through the implementation of integrated composition and formatting services for both editions; rapid search and retrieval capabilities of articles in *Spectra* and 80+ other journals through the use of the keyword-indexed SpinWeb database, after membership controls are implemented; one-click convenience to view the abstracts of articles in more than five million articles in 6,000+ journals published by 143 leading publishers through the use of CrossRef; color figures and photos at little additional cost in the online edition; and the first permanent digital archive for *Spectra* with the opportunity to archive additional associated information not appropriate for the hardcopy edition, such as additional photos, movies, and large tables.

The experience gained and procedures developed with respect to *Spectra* provide the opportunity to publish online editions of other EERI publications such as national conference proceedings and earthquake reconnaissance reports. In this way, the benefits of being digitally archived, linked, and readily accessible would apply for these publications also.

### International Program

A paper co-authored by Chris Poland and Sergio Alcocer entitled "International Visions and Goals for the Earthquake Engineering Research Institute" will appear in the next issue of *Spectra* and is available at the EERI web site.

International membership in EERI

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## Progress Report

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has grown continuously over the life of the Institute. In 1990, 16% of the membership was international. Today, about 20% of EERI members are from the international community, representing 54 countries and speaking nearly 30 languages.

In 2001, EERI demonstrated its commitment to international collaboration with the election of two international members as directors, Svetlana Brzev of Canada and Sergio Alcocer of Mexico. Both have brought a fresh, international view to the Institute and both have been active in initiating new international activities.

Based on the recommendations of Sergio Alcocer, EERI organized and chartered a new International Activities Committee (IAC) in mid-2002. Membership includes earthquake experts from a variety of countries and engineering disciplines. Their initial focus is to identify how EERI activities can be directly leveraged for international benefit. High-priority activities for EERI include cooperative agreements with sister organizations around the world, collaboration with the international community on the Learning from Earthquakes Program, cooperative memberships, expansion of EERI Mitigation Resource Center services to cover international issues, translations of key publications and text at web sites, and the organization of seminars and conferences.

In November 2002, EERI and the Mexican Society for Earthquake Engineering (SMIS) signed a cooperative agreement, the first to establish a formal linkage between EERI and the international community. It provides a model for agreements with other sister organizations. A joint reconnaissance team to investigate the impacts of the Tecomán, Colima, Mexico, earthquake of January 21, 2003, has launched this agreement

(see report inserted into this issue). The team consists of members of SMIS, Mexico's National Center for Prevention of Disasters (CENAPRED), and EERI. A similar agreement is currently being pursued with the new Japan Association for Earthquake Engineering (JAE). Preliminary meetings were held with JAE officers in Tokyo in December 2002.

### World Housing Encyclopedia

Over the past three years, EERI and the International Association for Earthquake Engineering (IAEE) have been developing the web-based Encyclopedia of Housing Construction Types in Seismically Prone Areas of the World. The purpose of the encyclopedia is to develop a comprehensive, global, searchable database of housing construction types. Svetlana Brzev was the key advocate on the Board behind this project and also served as the project manager. Each housing construction type has been described in a standard form using more than 60 different pieces of information, including architectural and structural features, socioeconomic data, seismic features, performance in past earthquakes, codes and construction practices, and known seismic strengthening techniques. Each listing includes images as well as text and numerical information. This project has been primarily a volunteer effort, bringing together a network of more than 180 prominent engineers and architects from 50 countries, providing them with an opportunity to communicate with each other, as reviewers and as users of the web site data.

The culmination of this major effort was the launching of the new web site [www.world-housing.net](http://www.world-housing.net) in June 2002. The database can be searched by country, continent, and 12 other parameters. A growing and important section of the web site is the section on General Resources, which is becoming a central place

for guidelines, manuals, and papers on both nonengineered and engineered construction. The site also contains links to many country-specific web sites with detailed information on the seismic risk in individual countries. The site currently has 3,000 to 4,000 unique visitors per month, including insurers, risk modelers, engineers, architects, and academics.

### Regional Chapters

EERI has expanded its network of regional chapters to include (in alphabetical order) the Alaska, Great Lakes, New Madrid, Northern California, and Southern California chapters. In addition, the following regional activities have taken place: in Seattle, Washington, an EERI Board seminar and a major Endowment project on developing guidelines for earthquake scenarios; in Boston, Massachusetts, the 7<sup>th</sup> National Conference on Earthquake Engineering; and in Portland, Oregon, this Annual Meeting. It is hoped that these activities will prepare the way for chapter development in the Northwest and the Northeast.

One of the most active chapters is the Northern California Chapter, which has organized the Quake '06 Campaign (Q06) to reduce significantly the earthquake risk in northern California by the 100th anniversary of the 1906 San Francisco earthquake: [www.quake06.org/](http://www.quake06.org/). This campaign is enthusiastically supported by EERI members, and thanks are extended to chapter leaders, including Charlie Scawthorn and Peter Yanev, for the creative and energetic approach they are taking to advocate seismic safety.

Q06 will develop and publicize materials advocating proactive seismic risk reduction with a press event every six months, on the anniversaries of the 1906 San Francisco and the 1989 Loma Prieta earthquakes. These dates take advantage of re-

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current press interest in earthquake-related information. The promotion of risk reduction is undertaken by EERI in partnership with Accountability Groups (AGs), which include risk holders such as school district administrators, transportation system operators, and water supply managers. Q06 raises the questions, gets the press to ask questions of the AGs, and provides the AGs with material to respond to press inquiries. In October 2002, a press conference was held at the San Francisco Stock Exchange to provide examples of seismic best practices being adopted by various agencies and businesses throughout the Bay Area. The press conference was widely covered by Bay Area media.

The Q06 Campaign will culminate in a major media event in April 2006. EERI will hold both its Annual Meeting and the 8<sup>th</sup> National Conference on Earthquake Engineering during the anniversary week of the 1906 earthquake. EERI is also coordinating other activities with SSA at that time.

### Endowment Projects

With support from FEMA through EERI's Cooperative Agreement, the EERI Endowment Committee is sponsoring a project to develop guidelines for earthquake scenarios that can be used across the United States to create scenarios for planning and enhancing awareness of seismic risk at the community level. The intent is to create generic guidelines that are geared to the practical and institutional constraints that actually occur during this process. The development of an actual earthquake scenario in Seattle, Washington, will be tracked and documented. In this way, the local community benefits from EERI assistance, and the work is leveraged into generic guidelines that aid communities nation-

wide in similar undertakings. The project receives excellent guidance from Bill Iwan, chair of the Endowment Committee during the project initiation, and Don Ballantyne, EERI Board contact for the study.

The EERI Endowment Committee has recommended a new project to explore the legacy of earthquake engineering. The purpose will be to show how investments in earthquake engineering have resulted in technical advances that apply beyond earthquakes to other hazards, civil infrastructure, applied information technology, and homeland security. Some of the many examples include passive and active building control for wind hazards, advanced GIS for lifeline systems and civil infrastructure management, fiber-reinforced polymers for repair and restoration of bridges and buildings, ATC-20 inspection-of-buildings protocol applied after the World Trade Center (WTC) disaster, the benefits following the WTC disaster of guidelines for hardening telecommunication equipment against earthquakes, and the seismic monitoring of nuclear tests. Such a document is critical for pointing out to federal agencies, congress, and state and local governments the value and far-ranging consequences of earthquake engineering research and implementation. The document will also address future directions of earthquake engineering and its potential for additional contributions. This document will be extremely valuable to justify continued and expanded support for the earthquake engineering community. A project workshop is scheduled for a two-day period during the last two weeks of June 2003. The steering committee consists of Bill Iwan, Chris Rojahn, Kathleen Tierney, Tom Holzer, and me.

I hope this selective progress report is helpful in providing an informative capsule view of EERI activities. Your institute is a very active organization that is dedicated to high-quality service and products for its members. It

is also dedicated to seismic risk reduction and has embarked on a program of vigorous advocacy to reduce such risks. The Annual Meeting is an opportunity to learn, engage colleagues, and increase your awareness of EERI activities. We hope it will be a time of positive interaction and renewed commitment to achieving seismic safety across the globe.

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## Call for Abstracts

### Special Session on Recent Earthquakes

Due to the recent occurrence of several catastrophic earthquakes, a special session entitled "Geotechnical Aspects of Alaska 2002, Italy 2002, Mexico 2003, Turkey 2003, and Other Recent Earthquakes" has been added to the Fifth International Conference on Case Histories in Geotechnical Engineering to be held in New York City, April 14-17, 2004. Abstracts on liquefaction, ground motion and amplification, ground failure, comparison with other recent earthquakes, and damage to geotechnical structures will be accepted until April 1, 2003. For more information visit [web.umn.edu/~eqconf/5thCHConf/specialsession.htm](http://web.umn.edu/~eqconf/5thCHConf/specialsession.htm).

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## Announcements

### CUSEC Meeting

The Central United States Earthquake Consortium will be holding its annual meeting in Nashville, Tennessee, March 25-26, 2003. The theme of the meeting is "Communicating the Earthquake Risk: Two Decades of Collaboration — the Ongoing Challenge." Discussions will include communicating risk, changing policy, building stronger communication within NEHRP, the Advanced National Seismic System, and university outreach efforts. Registration and program information is available at [www.cusec.org](http://www.cusec.org).

**PLEASE POST IMMEDIATELY**



**EARTHQUAKE ENGINEERING RESEARCH INSTITUTE**  
**2003-2004 EERI/FEMA**  
**GRADUATE FELLOWSHIP IN**  
**EARTHQUAKE HAZARD REDUCTION**

EERI is pleased to announce the availability of a Graduate Fellowship for the 2003-2004 academic year to support one full-time student in a discipline contributing to the science and practice of earthquake hazard mitigation.

The one-year fellowship, underwritten with funds provided by the Federal Emergency Management Agency, is designed to foster the participation of capable individuals in working toward goals and activities of the National Earthquake Hazards Reduction Program.

**AWARD**

The EERI/FEMA fellowship provides a nine-month stipend of \$12,000 with an additional \$8,000 for tuition, fees, and research expenses.

**CRITERIA**

Applicants must be enrolled in a graduate degree program at an accredited U.S. college or university and must hold U.S. citizenship or permanent resident status. All applications must include an academic transcript and a statement of educational and career goals.

Applications, together with a letter of nomination, shall be submitted to EERI by a faculty sponsor at the host institution. Two additional reference letters should be submitted directly to EERI. They should evaluate the applicant's recent academic performance and the candidate's potential to contribute to the field.

**TO APPLY**

Candidates may obtain application forms from their college or university departments, from EERI's web site ([www.eeri.org](http://www.eeri.org)), or upon request from:

Earthquake Engineering Research Institute  
499 14th Street, Suite 320  
Oakland, California 94612-1934  
(510) 451-0905      fax: (510) 451-5411      e-mail: [eeeri@eeeri.org](mailto:eeeri@eeeri.org)

**Deadline for receipt of all application materials at EERI is MAY 16, 2003.**  
**Announcement of the award will be made on JUNE 16, 2003.**

## CALENDAR

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

### 2003

#### MARCH

7-9. Pacific Earthquake Engineering Research (PEER) Center Annual Meeting, Palm Springs, CA. Info: [peer.berkeley.edu](http://peer.berkeley.edu) (2/03)

24-27. 7th US/Japan Workshop on Urban Earthquake Hazard Reduction, Maui, HI. Info: [www.eeri.org/titlepage.html](http://www.eeri.org/titlepage.html) (10/02)

**25-25. Central U.S. Earthquake Consortium Annual Meeting**, Nashville, TN. See page 9. (3/03)

#### APRIL

2-5. AISC North American Steel Construction Conference, Baltimore, MD. Info: [www.aisc.org/nascc](http://www.aisc.org/nascc) (2/03)

21-23. Disaster-Resistant California Conference, San Jose, CA. Info: [www.sjsu.edu/cdm/drc03](http://www.sjsu.edu/cdm/drc03) (9/02)

30-May 2. SSA-2003 Annual Conference, San Juan, Puerto Rico. Info: [civil.uprm.edu/ssa-2003](http://civil.uprm.edu/ssa-2003) (11/02)

#### MAY

9. 2003 Los Angeles Tall Buildings Council, Los Angeles, CA. Info: [gbrandow@bjase.com](mailto:gbrandow@bjase.com) (11/02)

12-14. 4th International Conference on Earthquake Engineering and Seismology, Tehran, Iran. Info: [iies@dena.iies.ac.ir](mailto:iies@dena.iies.ac.ir) (6/02)

**19-21. International Seismic Instrument and Emergency Rescue Equipment Exhibition**, Beijing, China. See page 2. (3/03)

**21-22. NEES Consortium First Annual Meeting**, Park City, UT. Info: [www.nees.org](http://www.nees.org). See page 12. (3/03)

26-30. 5th National Conference on Earthquake Engineering, Istanbul, Turkey. Info: [www.ins.itu.edu.tr/5udmk](http://www.ins.itu.edu.tr/5udmk) (8/02)

29-June 1. ASCE 2003 Structures Congress, Seattle, WA. Info: [www.asce.org/conferences/structures2003/](http://www.asce.org/conferences/structures2003/) (11/02)

#### JUNE

1-4. 9th North American Masonry Conference, Clemson, SC. Info: [www.masonrysociety.org/Conferences/9NAMCmain.html](http://www.masonrysociety.org/Conferences/9NAMCmain.html) (8/02)

9-12. 4th International Conference on the Behavior of Steel Structures in Seismic Areas, Naples, Italy. Info: [www.daps.unina.it/stessa/congres.htm](http://www.daps.unina.it/stessa/congres.htm) (6/02)

16-20. 21st Congress of the International Commission on Large Dams (ICOLD), Montreal, Canada. Info: [www.cigb-icold.org](http://www.cigb-icold.org) (2/03)

#### JULY

6-9. 9th International Conference on Applications of Statistics and Probability in Civil Engineering, San Francisco, CA. Info: [icasp9.berkeley.edu](http://icasp9.berkeley.edu) (6/02)

11-12. Park and Paulay Symposium, Christchurch, New Zealand. Info: [www.civil.canterbury.ac.nz](http://www.civil.canterbury.ac.nz) (1/03)

#### AUGUST

3-6. Extreme Loading Conference, Toronto, Ontario, Canada. Info: [www.extremeloading2003.com](http://www.extremeloading2003.com) (6/02)

10-13. 6th U.S. Conference and Workshop on Lifeline Earthquake Engineering (TCLEE), Long Beach, CA. Info: [www.asce.org/conferences/tclee2003/](http://www.asce.org/conferences/tclee2003/) (9/02)

#### SEPTEMBER

18-20. 2003 SEAOC Convention, Lake Tahoe, CA. E-mail: [thale@oshpd.state.ca.us](mailto:thale@oshpd.state.ca.us) (12/02)

22-24. 4th International Conference on Earthquake-Resistant Engineering Structures, Ancona, Italy. Info: [www.wessex.ac.uk/conferences/](http://www.wessex.ac.uk/conferences/)

**2003/eres03/** (8/02)

#### OCTOBER

6-10. 8th World Seminar on Seismic Isolation, Energy Dissipation, and Active Vibration Control of Structures, Yerevan, Armenia. Info: [www.aua.am](http://www.aua.am) (10/02)

22-24. 28th Annual Conference on Deep Foundations, Miami Beach FL. Info: [www.dfi.org/conferences.asp](http://www.dfi.org/conferences.asp) (1/03)

#### NOVEMBER

**19-22. 14th Mexican National Conference on Earthquake Engineering**, León-Guanajuato, México. Info: [www.smis.org.mx](http://www.smis.org.mx); E-mail: [Arturo.Tena-Colunga, atc@correo.azc.uam.mx](mailto:Arturo.Tena-Colunga_atc@correo.azc.uam.mx). (3/03)

#### DECEMBER

16-18. 9th East Asia Pacific Conference on Structural Engineering and Construction, Bali, Indonesia. Info: [www.si.itb.ac.id/easec9](http://www.si.itb.ac.id/easec9) (10/02)

#### 2004

##### APRIL

13-17. 5th International Conference on Case Histories in Geotechnical Engineering, New York, NY. Info: [www.umn.edu/~eqconf/5thCHConf](http://www.umn.edu/~eqconf/5thCHConf). See page 9. (8/02, 1/03, 3/03)

##### MAY

22-26. Structures 2004, Nashville, TN. Info: [www.asce.org/conferences/structures2004/](http://www.asce.org/conferences/structures2004/) (8/02)

##### JULY

18-23. Composite Construction in Steel and Concrete V, Kruger National Park, South Africa. Info: [www.engconfintl.org/4ab.html](http://www.engconfintl.org/4ab.html) (12/02)

##### AUGUST

1-6. 13th World Conference on Earthquake Engineering, Vancouver, British Columbia, Canada. Info: [www.13wcee.com](http://www.13wcee.com). See page 12. (7/02, 3/03)

8-11. MOVIC 04 Motion and Vibration Control Conference, Washington University, St. Louis, MO (11/02)

## News of the Profession

### NEES Consortium Open for Membership

On January 31, 2003, in Portland, Oregon, the consortium for the management of the George E. Brown, Jr., Network for Earthquake Engineering Simulation (NEES) was officially incorporated. NEES Consortium, Inc., is a non-profit corporation formed under a developmental award from the National Science Foundation (NSF) to provide leadership and management services during the 2004-2014 time span. The initial laboratory and information technology investment to create the NEES infrastructure is \$82 million, with annual funds for maintenance and operation and for research to follow. To join the consortium as an individual or an institution, use the online membership application at [www.nees.org](http://www.nees.org). Application fees and dues are waived in 2003. Those who apply by March 26, 2003, will be eligible to serve on and vote for the Board of Directors, serve on committees, and apply for a travel subsidy to the first annual meeting in Park City, Utah, May 21-22, 2003. The annual meeting will provide opportunities to explore visionary research possibilities over the next decade, find out about research funding plans from NSF, and help plan how NEES will be shared by the national earthquake engineering community.

The NEES equipment site (laboratory) system consists of shake tables, large-scale structural testing, large-scale geotechnical testing, a tsunami wave basin, mobile geotechnical and structural monitoring and experimentation, and experimentation and monitoring at sites with naturally occurring earthquakes and artificial shaking. Information technology resources will connect the equipment sites, provide remote users "telepresence" capabilities, and provide a data repository for experimental data.

## Call for Abstracts

### 13<sup>th</sup> World Conference on Earthquake Engineering

Authors are invited to submit abstracts (not to exceed 300 words) for oral, poster, or multimedia presentations at the 13<sup>th</sup> World Conference on Earthquake Engineering, which will convene in Vancouver, British Columbia, Canada, August 1-6, 2004. Abstracts are being solicited in ten major topic areas and eleven theme areas, such as seismic aspects of large dams, seismic structural design in regions of moderate seismicity, and indigenous earthquake-resistant technologies, as detailed on the conference web site [www.13WCEE.com](http://www.13WCEE.com). The official language of the conference is English. Abstracts are due by May 31, 2003. Manuscripts for accepted abstracts will be due by January 31, 2004.

## Annual Meeting Field Trip Photos

*Annual Meeting photographers: Thalia Anagnos and Anna Lang*



*Main entrance to seismically upgraded Portland City Hall.*



*Braced frame in student union building at Portland State University (PSU).*



*Tour group in the shake table lab in PSU's civil engineering building.*



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499 14th Street, Suite 320  
Oakland, CA 94612-1934  
**ADDRESS SERVICE REQUESTED**