

**EARTHQUAKE ENGINEERING  
RESEARCH INSTITUTE**

**NEWSLETTER**

Editor Stephanie King  
Associate Editors Sarah Nathe  
Gerald Brady  
Editorial Assistant Eloise Gilland

ISSN 0270-8337

Reproduction with attribution is permitted.

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](mailto:eeri@eeri.org)  
Web site: <http://www.eeri.org>

## News of the Institute

### Check Your Address on Web Site

EERI's Year 2000 Roster is now in production. Database Manager Xena van de Walle requests that members visit the members-only portion of the web site ([www.eeri.org/Member/](http://www.eeri.org/Member/)) to proofread address information for accuracy.

The Institute converted to a new database this year, and many members have changed addresses as well, so Xena would greatly appreciate help from the membership in ensuring that each record is correct. Changes can be submitted using the web-based change form, or they can be e-mailed to [xena@eeri.org](mailto:xena@eeri.org).

Changes received by July 31, 2000 will be included in the new roster.

## News of the Institute

### Bruce Bolt Receives Housner Medal

Bruce A. Bolt, Professor Emeritus of Geology and Geophysics at the University of California at Berkeley, was this year's recipient of EERI's highest honor, the George W. Housner Medal. Bolt was honored for his sustained efforts to reduce earthquake losses through his distinguished career as a scholar, writer, mentor, and tireless advocate, and for his enduring contributions to the Institute.



*Bruce A. Bolt*

Over the years, Bolt has been a member of many boards convened for the purpose of improving seismic safety, including those sponsored by the U.S. Bureau of Reclamation, the California Division of Dam Safety, The World Bank, Pacific Gas & Electric Co., Bay Area Rapid Transit, and the Aswan High Dam of Egypt.

He has worked on many postearthquake investigations and has written six and edited eight textbooks on earthquakes and other aspects of geological science, including the popular *Earthquakes*, now in its fourth edition. Bolt has been an EERI member since 1966. In 1998 he was selected as the Institute's Distinguished Lecturer. In his lecture on "Estimating Seismic Ground Motion," he called for a more representative earthquake records database. He also stressed the need for improvement in seismologists' and engineers' understanding of underlying seismological and estimation theories, to enable them to make rational ground motion estimates.

After completion of a Ph.D. in elastic wave theory at the University of Sydney in his native Australia, Bolt

won a Fulbright scholarship to Lamont Geological Observatory at Columbia University in 1960, and to Cambridge University (U.K.) in 1961. There, a chance meeting with the late Perry Byerly, Professor of Seismology at U.C. Berkeley, led to an invitation to a chair in seismology in 1963. He was the Director of the University of California Seismographic Stations for 28 years.

After the 1971 San Fernando earthquake, Bolt served on the Veterans Administration Seismic Safety Advisory Panel until 1975. He was a member of the California Governor's Earthquake Council (1972-74), the California Seismic Safety Commission (serving as Chair 1984-86), President of the California Academy of Sciences (its Medallist in 1989), and President of the Seismological Society of America (1974-75). He was elected to the National Academy of Engineering in 1978. He was instrumental in establishing the California Earthquake Safety Foundation, served as its first chair, and in 1995 received its Alfred Alquist Medal for his contributions to earthquake safety in California.

### It's a Boy

EERI extends its best wishes to Stephanie King, EERI *Newsletter* Editor, and Chris Rojahn on the birth of their third child, Spencer Chase King Rojahn, on Tuesday, June 13, at 9:30 p.m. The baby weighed a healthy 8 lb. 15.2 oz and measured 21.5 inches.

## Erratum

### **Earthquake Spectra Outstanding Paper**

The photo of the authors of the 1998 *Earthquake Spectra* Outstanding Paper (June Newsletter, page 6) was inadvertently flipped during the printing process. The caption, therefore, listed the authors right to left, instead of left to right. As the photo appears, the authors are (left to right): J. Eduardo Carballo, C. Allin Cornell, Paolo Bazzurro, and Nilesh Shome. EERI apologizes for any confusion this may have caused.

---

## Call for Abstracts

### **International Tsunami Symposium 2001**

The International Tsunami Symposium 2001 (ITS 2001) will be held August 7-10, 2001 in Seattle, Washington. The primary aim of the symposium is to bring together from all over the world scientists, engineers, and emergency managers specializing in tsunami research and mitigation. They will exchange current information on technical advances and discuss progress in the science. The scope covers all aspects of tsunami phenomena such as tsunami generation, propagation and seismic focus; tsunami prediction and simulations; tsunami disasters and mitigation; instrumentation and observations; tsunami warning and preparedness; and tsunami databases. Abstracts should be e-mailed or submitted on-line by September 1, 2000. See the web site [www.pmel.noaa.gov/its2001](http://www.pmel.noaa.gov/its2001) for complete instructions. For more information contact E. N. Bernard, NOAA/PMEL, 7600 Sand Point Way N.E., Seattle, WA 98115-6349; phone: 206/526-6800; fax: 206/526-4576; e-mail: [bernard@pmel.noaa.gov](mailto:bernard@pmel.noaa.gov).

## Publications

### **Video Series on the Safety of Dams**

The federal Interagency Committee on Dam Safety, the Federal Emergency Management Agency, and the U.S. Bureau of Reclamation have produced a series of videotapes on dam safety featuring distinguished experts in the field. The tapes are suitable for viewing by dam safety professionals, water project owners and managers, regulators, students, and the public.

*Ground Improvement for Dam Safety*, featuring EERI member James K. Mitchell, is the latest addition to the video series. Tape 1, *Methods, Applications, Selection, and Design*, examines the types of dam safety projects and problems that might be addressed by in-situ ground improvements. The methods of deep densification, grouting, mixing, and drainage are described in detail, with an explanation of how they work and how they are evaluated. Considerations in the selection and design of suitable methods are also addressed.

Tape 2, *Case Histories and Lessons Learned*, illustrates the application of different ground improvement methods at three projects: Nigeria's Jebba Hydroelectric Development, Jackson Lake Dam, Wyoming, and the Mormon Island Auxiliary Dam, near Sacramento, California. These case histories illustrate what was done at the site of a major new dam, the replacement of an existing dam following its removal and foundation improvements, and ground improvement required to improve seismic stability of an embankment and its foundation.

Previously released tapes in the series include *Seepage and Piping* by Ralph Peck, *Dam Foundations* by Don U. Deere, and *Filters and Sinkholes* and *Rapid Drawdown Stability* by John Lowe III. The next video in the series, *Behavior of Embankment Dams During Earthquakes*, featuring EERI member I.M. Idriss, is scheduled for release in late summer 2000.

The videos are distributed by the Association of Dam Safety Officials, 450 Old Vine Street, 2nd Floor, Lexington, KY 40507-1544; phone: 606/257-5140; fax: 606/323-1958; e-mail: [info@damsafety.org](mailto:info@damsafety.org). The cost is \$20 per set with domestic shipping included. For more information on video content, contact Francis McClean, U.S. Bureau of Reclamation, by phone at 303/445-3091 or e-mail at [fmclean@do.usbr.gov](mailto:fmclean@do.usbr.gov).

---

## Announcements

### **Eastern Section SSA Meeting**

The Eastern Section, Seismological Society of America (SSA) Annual Meeting will be held September 24-26, 2000 in Atlanta, Georgia. The meeting is organized by the School of Earth and Atmospheric Science, Georgia Institute of Technology, and co-sponsored by the Mid-America Earthquake Center. Papers on all aspects of earthquakes, tectonics, seismic hazards, public relations concerning earthquakes, and

earthquake engineering are invited, especially those with applications to eastern North America. The deadline for abstracts and pre-registration is August 21, 2000.

Full details are available on the SSA web site at [www.seismosoc.org](http://www.seismosoc.org). For more information, contact the meeting convener Tim Long (phone: 404/894-2860, e-mail: [tim.long@eas.gatech.edu](mailto:tim.long@eas.gatech.edu)).

## News of the Institute

### 2000 Annual Meeting Highlights

EERI extends kudos to the organizing committee for doing an excellent job of planning EERI's 52<sup>nd</sup> Annual Meeting, held last month in St. Louis. The committee consisted of Jim Beavers (chair), Dan Abrams, Reginald DesRoches, Nathan Gould, Phil Gould, Bob Herrmann, Steve McCaskie, Shahram Pezeshk, Ted Pruess, Michael Roark, and Edward Wang. Special thanks go to Geotechnology, Inc.; EQE International, Inc.; Sverdrup Civil; Kinemetrics, Inc.; and Modejeski and Masters, Inc. for their generous contributions in helping to sponsor the Annual Meeting. Their support helped to ensure its success.

*Continued on page 4*



*James Lee Witt presents keynote talk on "Current FEMA Initiatives in Earthquake Mitigation Implementation."*



*Members of the organizing committee affiliated with the Mid-America Earthquake Center and the EERI New Madrid Regional Chapter: Phil Gould, Jim Beavers (chair), Dan Abrams, and Steve McCaskie.*



*EERI Past President Frank McClure engages in conversation at Meet the Mentors Icebreaker.*



*Craig Comartin presents 1999 Treasurer's Report*



*1998-99 Graduate Fellow Judy Liu accepts NEHRP shirt from Mike Mahoney of FEMA.*



*Mahsoud Zadeh of K2 Technologies, Inc., receives a perpetual plaque as a new Subscribing Member from President Chris Arnold.*

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

## 2000 Annual Meeting

*continued from page 3*

The St. Louis Post-Dispatch covered the first day of the meeting with an article that appeared on the cover page of the "Metro" section. It noted that because of soil conditions and natural barriers, an earthquake on the New Madrid fault would affect lifelines throughout the Midwest. The article also pointed out that in St. Louis County, enforcement of seismic provisions in the building code has been problematic.

In his keynote address, FEMA Director James Lee Witt described at length FEMA's Disaster-Resistant University initiative. He went on to link the strategic framework of Project Impact to the "seismic safety enterprise zones" he spoke about at the start of his tenure in 1993, demonstrating his strong and continuing commitment to earthquake hazard mitigation.

The debate between Chris Poland and Dan Abrams on the proposition that "research has not served well the needs of engineering practice" was one of the real high points of the conference. Poland asserted that it takes too long for research to affect practice, and that there is a lack of coordination between the research-oriented agencies and the design professionals that write the standards and guidelines. Speaking against the proposition, Abrams countered with examples of how research has profoundly affected engineering practice by solving problems and providing new design ideas as well as construction and analysis techniques. The debate ended in a tie.

Some of the awards given at the Annual Meeting have been covered in this and last month's *Newsletters*. Next month's issue will cover the EERI Distinguished Lecture, the student paper award recipients, and the Alquist Award.

## Announcements

### SMiRT 16 Conference

The 16th International Conference on Structural Mechanics in Reactor Technology (SMiRT 16) will be held in Washington, DC on August 12-17, 2001. EERI, along with several other organizations, is a co-sponsor of the conference. The biennial SMiRT conference is recognized as the leading international forum that addresses the role of structural mechanics in nuclear plant safety.

There are 14 topic divisions for the conference, including: Computational Mechanics; Fracture Mechanics; Analysis and Design for Dynamic and Extreme Loads; Seismic Analysis, Design, and Qualification; Structural Reliability and Probabilistic Safety Assessment; and Severe Accident Management and Structural Evaluation.

The deadline for abstracts is June 30, 2000, but interested authors should contact the conference secretariat to see if late abstracts will be accepted.

Conference and abstract information is available on the web site

[www.engr.ncsu.edu/SMiRT\\_16](http://www.engr.ncsu.edu/SMiRT_16) or from the SMiRT 16 Secretariat, North Carolina State University, Campus Box 7908, Raleigh, NC 27695-7908, phone: 919/515-5277, fax: 919/515-5301, e-mail: [SMiRT\\_16@ncsu.edu](mailto:SMiRT_16@ncsu.edu).

## News of the Profession

### Strong Earthquake Strikes Turkey

A strong earthquake with a preliminary magnitude of 5.9 shook central Turkey on June 6, 2000, killing at least three people, injuring more than 80 others and sending thousands into the streets in panic.

The quake's epicenter was in Cerkes, in Cankiri province, a rural area about 60 miles north of Ankara. Roughly 4,000 homes were damaged and at least one school collapsed.

Cankiri lies close to the North Anatolian fault, the source of two strong earthquakes that destroyed parts of northwestern Turkey last August and November, killing more than 18,000.

## News of the Institute

### Endowment Donors

EERI has received the following donations to the Endowment Fund.

#### \$1000-\$2000

Bruce C. Olsen

#### \$500-\$999

Conrad Paulson

#### \$200-\$499

Anestis S. Veletsos

#### \$100-\$199

James H. Collins

Cynthia A. Hoover

Frederick Krimgold

Julio Kuroiwa

Franklin Lew

Frank E. McClure

Ugo Morelli

Hidemi Nakashima

#### Other Amounts

Jorma K. Arros

Jacobo Bielak

Gregg E. Brandow

Michael Davister

Ricardo Dobry

Henri Gavin

Mark Grigorian

John F. Hall

William T. Holmes

Takayoshi Ito

David D. Jackson

James LaFave

Peter L. Lee

Frank J. Linhart

Barry S. Milstone

Bozidar S. Pavicevic

Victor M. Pavon

Jane Pruess

Eugenio Retamal

James E. Roberts

Richard Dale Ross

Otto W. Steinhardt

Craig W. Tillman

Miha Tomazevic

Yi-Ben Tsai

Hiroyuki Yamanouchi

## News of the Profession

### Devastating Earthquake Strikes Sumatra

A powerful earthquake and numerous aftershocks struck the Indonesian Island of Sumatra on June 4, 2000. The main shock, with an initial Richter magnitude of 7.9, hit at about 11:30 p.m. local time, when most residents were asleep. More than 400 aftershocks have been recorded.



*Residential damage in Bengkulu, Sumatra Island (AP Photo/Charles Dharapak).*

The worst-affected area is the Bengkulu province on Sumatra's west coast. The earthquake's epicenter was beneath the Indian Ocean, approximately 60 miles from Bengkulu, off the west coast of Sumatra. Bengkulu province has a population of about 1.4 million people, with about 260,000 living in Bengkulu town. The earthquake was felt as far away as Jakarta (310 miles southeast of the epicenter) and Singapore.

Many buildings in Bengkulu town have been damaged, including the provincial governor's office and the local parliamentary building. Electrical systems, water supplies, public transportation, and communication systems have all been heavily damaged in the area. Rescue efforts have been hampered by damage to lifelines, the closure of the airport, and heavy rains and flooding that have occurred after the earthquake.

So far, at least 120 people have died and about 1,300 have been injured. Witnesses reported widespread panic in Bengkulu and said hospitals were overwhelmed with injured people. Doctors in Bengkulu were struggling with a shortage of beds, medicine, and blood, and were treating victims in hospital parking lots. In addition to the damage in Bengkulu, 90 percent of the houses on the tiny island of Enggano, which is located close to the epicenter and has a population of 1,500, collapsed in the earthquake.

Indonesia's islands are often hit by earthquakes. At least 34 people died last month when a magnitude 6.5 earthquake hit central Sulawesi and some neighboring islands. The worst earthquake to hit Indonesia in the last decade was in December 1992, when a magnitude 7.0 event and a subsequent tsunami killed about 2,500 people on a string of eastern islands, including Flores Island.



*Residential damage on Enggano Island (photo: BBC News web site).*

## Announcements

### Urban Design in Kocaeli Earthquake Area

The ITU Environment and Urbanism Research Center in Istanbul, Turkey is organizing a workshop on the urban design issues of communities located in areas stricken by the Kocaeli earthquake. It will be held August 14-26, 2000 in Istanbul. By gathering many experienced lecturers from different countries, this workshop aims to provide the main principles of planning and design of an "earthquake-resistant" environment. By having workshop participants of diverse backgrounds and origins, an interdisciplinary study will be developed. The workshop organizers hope that the analysis and planning of the Kocaeli area as a case study will provide a realistic experience for the participants that can be transferred to other earthquake stricken areas of the world.

The main themes of the workshop lectures will be: analysis of the problem, limitations and potentials of the area; appropriate building types and technologies; and planning and design of new settlements. Depending on the participants' background and experience, new discussion topics can be added to the program. The workshop is open to all professionals and students of urban planning, urban design, environmental sciences, and civil engineering. The cost of the workshop is \$450 and covers lectures, nine days of accommodation at a university hostel, lunches, refreshments and receptions.

For more information, contact: Azime Tezer, ITU Environment & Urbanism Research Center, Taskýsla/Taksim, Istanbul, Turkey; phone: 90-212-2492834; fax: 90-212-2517831; e-mail: [tezera@itu.edu.tr](mailto:tezera@itu.edu.tr), web site: [www.itu.edu.tr/cevse](http://www.itu.edu.tr/cevse).

**News of the Institute**

**Treasurer's Report –  
Fiscal Year 1999**

The data to the right, taken from the audited financial statement, summarize the financial status of EERI as of December 31, 1999.

In 1999 EERI's revenues were \$36,000 above expenses, primarily because of the heavy earthquake activity in late 1999. The reconnaissance tasks at the end of the year were overwhelming, and we had not anticipated all the events that occurred, resulting in collecting more grant overhead than budgeted. The Endowment Investment Fund had earned \$100,00 by the end of 1999. The investment income on all of the assets continues to be good.

Sales from publications, slide sets, and CD ROMs are slightly down. In 2000, we forecast growth in this area. The staff and Board continue to work on development of new revenue-producing products and publications.

Although membership is slightly down from 1998, it continues to grow in the area of Student Membership. Subscribing Members have doubled in the past few years. There will be a continued effort to expand membership, particularly Subscribing Members. We also hope to expand internationally in the coming year, in addition to encouraging overall development within our membership and our publications.

On the whole, EERI remains in solid financial health with net assets of \$1,013,000, an 8% increase over 1998, which is consistent with the goals of the Board of Directors. The conservative budget for 2000 does not reflect income from interest and investments.

Craig D. Comartin  
Secretary/Treasurer, 1994-1999

**1999 Summary of Revenues and Expenses**

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

Meetings	\$153
Publications	73
Membership and Spectra Dues	432
Endowment Programs	216
Grants	723
General & Administrative	35

TOTAL REVENUES \$1,632

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

Meetings and Technical Seminars	\$141
Publications	171
Journal	159
Membership	108
Endowment Programs	116
Support Programs	17
Association Expenses	61
Grants	723

TOTAL EXPENSES \$1,496

**NET REVENUES OVER EXPENSES \$136**

General & Administrative	36
Endowment Revenues	100

**Current Distribution of Net Assets 1999**

**Endowment Fund (\$1,000s)**

Beginning Fund Balance 01/01/99	\$700
Program Expenses	-65
Investment Income	110
Contributions	54

ENDOWMENT FUND TOTAL \$799

**General Fund (\$1,000s)**

Beginning Operating Reserve 01/01/99	\$178
Net Revenues over Expenses	36

GENERAL FUND TOTAL \$214

**TOTAL NET ASSETS \$1,013**

## 1999 Membership Report

<u>Individual Members</u>	1999	1998
Regular Members	2,050	2,110
Student Members	336	282
Retired Members	61	68
Honorary Members	17	16
Affiliate Members	51	36
SUBTOTAL	2,515	2,512
<u>Institutional Members</u>		
Subscribing Members	50	38
Institutional Members	37	40
SUBTOTAL	87	78
<b>TOTAL MEMBERSHIP</b>	<b>2,602</b>	<b>2,590</b>

## 2000 Budget for Revenues and Expenses

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

Meetings	\$251
Publications	102
Membership and Spectra Dues	442
Endowment Programs	175
Grants	315
Interest and Other Income (G & A)	35
TOTAL REVENUES	\$1,320

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

Meetings and Technical Seminars	\$266
Publications	148
Journal	162
Membership	103
Endowment Programs	175
Support Programs	23
Association Expenses	183
Grants	315
TOTAL EXPENSES	\$1,375

**REVENUES OVER EXPENSES                    \$-55**

## Announcements

### National Earthquake Risk Management Conference

The National Earthquake Risk Management Conference will be held September 17-22, 2000, in Seattle, Washington. Sponsored by the Western States Seismic Policy Council (WSSPC), FEMA, USGS, and the Cascadia Region Earthquake Workgroup, the theme of the conference is *Understanding the Hazards and Managing the Risks*. Leading experts in several fields will participate in panel discussions and interactions with the audience in the following six plenary sessions: Lessons Learned, Real-Time Warnings, Policy Strategies, Successful Mitigation Strategies, Building Codes and Standards for the 21st Century, and Public Policy. The conference is geared for local, state, and federal emergency managers and earthquake program managers; state and federal geoscientists and engineers; insurance industry regulators, commissioners, and company representatives; business recovery and financial services managers; and policymakers. For more information, contact WSSPC, 121 Second St., 4th Floor, San Francisco, CA 94105; phone: 415/974-6435; fax: 415/974-1747; e-mail: [wsspc@wsspc.org](mailto:wsspc@wsspc.org); web site: [www.wsspc.org](http://www.wsspc.org).

### IAEM Annual Conference

The 48th Annual Conference of the International Association of Emergency Managers (IAEM) will be held November 4-7, 2000, in Austin, Texas. General sessions will focus on general management and administration, planning, response, and recovery. For more information, contact IAEM, 111 Park Place, Falls Church, VA 22046-4513; phone: 703/538-1795; fax: 703/241-5603; e-mail: [iaem@aol.com](mailto:iaem@aol.com).

## News of the Institute

# Summary Minutes of the March 3, 2000 Meeting of the Board of Directors

**Preliminaries:** The meeting was called to order by President C. Arnold at 8:40 a.m. on Wednesday, March 3, 2000. Directors present included T. Anagnos, M. Green, Secretary/Treasurer candidate R. Mayes, D. Mileti, T. O'Rourke, President-Elect C. Poland and P. Somerville. Also present were Executive Director S. Tubbesing and Administrative Secretary X. van de Walle.

ATC Liaison C. Comartin arrived at 8:40 a.m. and departed at 1:00 p.m. BSSC Liaison J. Nicoletti arrived at 3:30 p.m. and departed at 4:30 p.m. Director N. Abrahamson was not present.

**Welcome new Directors:** President Arnold extended a special welcome to the newly elected Directors M. Green and D. Mileti, and to President-Elect C. Poland.

**Election of Officers:** The Board unanimously elected R. Mayes to the office of Secretary/Treasurer, and Director O'Rourke to the office of Vice President.

**Committee chair and Board contact appointments:** The Board reviewed the current list of Administrative and Technical Committees and Liaisons. Recent appointments include I. Buckle, Chair of the Experimental Research Committee, and P. Somerville, Chair of the Research Policy Committee. The Existing Buildings Committee has no chair at this time

**Web Master replacement:** B. Koester recently submitted his resignation as Web Master. The Information Technology Committee concluded that an in-house staff member should handle the routine posting and web development. An out-

side consultant (perhaps Koester) could be retained to handle more sophisticated web developments. The Board expressed its support for this course of action.

**2001 Annual Meeting Organizing Committee:** The 2001 Annual Meeting will be held February 7 – 10, 2001 in Monterey, California. The Board decided that this would be an excellent opportunity to involve new and younger members and will invite several younger members to serve on the organizing committee. The Board suggested the theme of "Acceptable Risk."

**President's Report**  
**New Board member orientation — Board procedures, expectations and responsibilities:** President Arnold summarized the powers and duties of the Board of Directors as stipulated in Article IV of EERI's Bylaws.

**Secretary/Treasurer's Report**  
**Overview of EERI budgeting process:** For the benefit of the new Directors, former Secretary/Treasurer Comartin summarized EERI's budgeting process and reviewed the major accounting categories. As a nonprofit organization, EERI uses fund accounting for financial documentation. EERI is heavily dependent on grants, but also has nearly \$800,000 in the Endowment Fund and is in good financial health.

The combined balance sheet as of December 31, 1999 shows the Institute's opening fund balance of \$177,580 increased by excess revenue over expenses of \$35,825. EERI's total liability balance of \$313,052 combined with the total fund balance equaled \$526,457. The Endowment Program's opening fund balance of \$699,809 increased by excess revenue over expenses of \$99,812. The Endowment Program's total liability balance of \$158,582 combined with the total fund balance equaled \$958,203. The combination of association, technical and endow-

ment programs totaled \$1,530,803.

The Investment Funds Report showed \$83,702 in the General Administrative Short-Term Fund, \$91,833 in the General Administrative Long-Term Fund, and \$801,121 in the Endowment Fund. The Innovation Prize Investment Fund totaled \$157,832. The Institute's interest-bearing checking account showed a balance of \$171,151. (A Shah Family contribution of \$80,000 on December 28, 1999, resulted in a checking account balance at year's end that was higher than usual.) With the combined invested funds in both General Administrative Funds, this account totaled \$175,535.

The Grants Status Summary showed that of \$1,775,637 in active grants, \$1,575,495 had been expended as of December 31, 1999. Director O'Rourke moved that the Board accept Comartin's Treasurer's Report. The motion was seconded and passed unanimously.

**Year 2000 Budget:** Secretary/Treasurer R. Mayes reviewed the revised year 2000 budget and graphs of 1999 revenue and expenses. Mayes explained that the budget projects a loss of \$55,000, which will be offset by the excess 1999 revenue.

**Executive Committee Update**  
**George Brown Foundation:** A foundation is being formed to support the translation of earthquake engineering materials into Spanish. EERI expressed willingness to help with this effort.

**Membership:** The Board reviewed the membership report provided by X. van de Walle. The membership renewal rate is similar to the 1999 renewal rate for the same period. Seventy-five EERI members have paid for limited SSA memberships, and eighty-eight SSA members have paid for a limited EERI membership. Recent membership promotions included mailings to the Taiwan and Turkey Briefing attend-



ees and an exhibit booth in New Zealand at the 12WCEE.

**Endowment Report:** The Board reviewed the report provided by M. Greene, Special Projects Manager. Projects for 1999 are in final stages. The video, *Resisting the Forces of Earthquakes*, is complete, and the office is beginning to receive orders. The white paper, *Financial Management of Earthquake Risk*, is nearly complete.

Projects for 2000 include Seismic Vulnerability of the World's Housing, and a collaborative project with the Public Agency Risk Management Association (PARMA) on Local Government Risk Management.

The Board appointed Professor E. Rathje of the University of Texas as a new member of the Endowment Committee.

**Development Committee Report:** Contributions totaling \$54,350 were made to the Endowment Fund during 1999. This amount is the highest of any year since the inception of the fund in 1994.

#### **Publications Policy Committee Report**

**Monograph update:** Yashinsky and Karshenas have produced a draft of their Bridge monograph, which was forwarded to reviewers. A draft of the Energy Dissipation monograph has also been distributed to reviewers. Somerville and Naeim are editing their draft on Earthquake Records and Design, in response to review suggestions by Monographs Committee Chair Holmes. McGuire is finishing the last chapter of his Seismic Hazard and Risk Analysis monograph. Earlier chapters have already been reviewed. O'Rourke promised a draft from Idriss of revisions to Ground Motions and Soil Liquefaction. These monographs will be published in hard copy and likely on CD-ROM.

**LFE Proposal status:** The Learning from Earthquakes proposal was

submitted to NSF in January. We are expecting NSF to act on it quickly, knowing that LFE funds have been depleted. The proposal reflects a significantly larger role in coordinating postearthquake investigations of other groups and a larger role for information dissemination via the web.

**6ICSZ:** Plans are moving along well for this conference, scheduled for November 12-15, 2000, in Palm Springs, California. The next committee meeting is scheduled for mid-March. The second announcement and call for abstracts was distributed last fall, and EERI received about 300 abstracts electronically. The meeting departs from previous conferences in that it will all be conducted in general session, and the papers will almost all be presented as posters. S. King and M. McLaren are working on bringing in exhibitors for this event, which the planning committee expects will generate revenues to offset conference costs.

**Articles of Incorporation Amendment:** The auditors informed Financial Manager S. Hollenbeck that, in their opinion, EERI should be exempt from property tax. Upon contacting the Alameda County Assessor's office, Hollenbeck was told that the Articles of Incorporation would need to be amended, with more specific language contained in Article 6, Dissolution of the Corporation. The assets must be "irrevocably dedicated," instead of distributed. The Internal Revenue code number "Section 501 (c) (3)" must be explicitly referred to, and the assets must be distributed among scientific or educational institutions "meeting the requirements for exemption provided by Section 214 of the Revenue and Taxation Code." The Board voted to approve these changes and put them before the membership for approval. They would not alter the intent of the current Article 6.

#### **Advanced National Seismic System**

**(ANSS) appropriation:** The Board approved a motion by Director O'Rourke that EERI draft a letter of endorsement for a Congressional appropriation for the ANSS, which will fund 7,000 new seismic monitoring instruments.

**Finalities:** The Board set the following meeting dates for 2000, all beginning at 8:30 a.m.: Wednesday, May 31 in St. Louis; Friday, September 15 in Oakland; and Friday, December 8 in Oakland. The February 2001 meeting will be Wednesday, February 7 in Monterey, California. President Arnold adjourned the meeting at 5:20 p.m. on Friday, March 3, 2000.

---

### **News of the Institute**

## **Isenberg Visits University of Buffalo Student Chapter**

The University of Buffalo EERI Student Chapter hosted Jeremy Isenberg from Weidlinger Associates on March 28-29 as part of the Visiting Professionals Program.

During his two-day visit, Isenberg presented three lectures: "Learning from Earthquakes — Major Lessons for U.S. Bridges," which included damage from several large recent earthquakes; "New York City Bridges: Seismic Role in Rehabilitation," which focused on the seismic retrofit of major long-span bridges in New York City; and "Parkfield Pipeline Project," which described an experimental project in California to capture the behavior of buried pipelines during seismic events.

While at the University of Buffalo, Isenberg also visited the MCEER Information Service, was given a tour of the Structural Engineering and Earthquake Simulation Laboratory, and had the opportunity to meet individually with many students and faculty.

## Publications

### New Publications on the Safety of Dams

The Association of State Dam Safety Officials (ASDSO) has announced the availability of two new publications. The first is *Tailings Dams 2000*, which contains the Proceedings of the joint ASDSO/USCOLD Tailings Dams 2000 Conference, held March 28-30, 2000, in Las Vegas, Nevada. This 482-page soft-cover book is a compendium of 35 technical papers from the conference, which featured 14 sessions on various topics, including seismic issues; reclamation; design, construction, and operation; stakeholder's perspectives; in-situ testing and site assessment; instrumentation and monitoring; and risk-based management. The cost is \$36 for ASDSO members and \$40 for non-members. The second publication is *2000 West Region Annual Conference Proceedings*. This 318-page soft-cover book includes 30 technical papers presented at the conference held May 15-17, 2000, in Portland, Oregon. Conference sessions addressed risk-based dam safety assessment, geotechnical case studies, hydraulic investigations, innovative ideas, rehabilitation case studies, and seismic issues in the Pacific Northwest. The cost is \$27 for ASDSO members and \$30 for non-members. Contact Sarah Mayfield (phone: 859/257-5140, fax: 859/323-1958, e-mail: [smayfield@damsafety.org](mailto:smayfield@damsafety.org)) for more information, or see the web site [www.damsafety.org](http://www.damsafety.org).

### Recent Earthquakes and Seismic Risk

*Implications of Recent Earthquakes on Seismic Risk* is the title of a new book edited by A.S. Elnashai (EERI member) and S. Antoniou. The volume contains contributions

from several internationally renowned earthquake engineers on lessons learned from recent earthquakes. In particular, studies of the 1995 Kobe earthquake and the 1999 earthquakes in Turkey, Taiwan, and Greece are included. The editors of the volume hope that through assimilation of the lessons learned and dissemination of this information, future earthquakes will not exact such a heavy toll.

Topics of the papers include: Observations from Two Recent Earthquakes in Turkey and Greece; Damage to Bridges in the Turkey and Taiwan Earthquakes; Vulnerability Functions for Japanese Buildings; Using Real Accelerograms for Seismic Design; Response of Hollow Bridge Piers; Transparent Nonlinear Method for Seismic Performance Evaluation; Load-Carrying Capacity of Beam-to-Column Connections Limited by Fracture.

The 236-page volume is published by the Imperial College Press and distributed by World Scientific Publishing. The cost of the book is \$62 or £38, plus shipping and handling. It can be ordered from the World Scientific Publishing web site at [www.worldscientific.com](http://www.worldscientific.com).

## News of the Profession

### TriNet ShakeMap Version 2 Available

The TriNet ShakeMap Working Group announces the activation of Version 2 of ShakeMap (V2). Many of the revisions are transparent to the user, but the web site has been redesigned to be simpler, more intuitive, and allow faster access. One of the many enhancements to V2 is the use of the new CDMG Preliminary Statewide Site Conditions Map. Another new feature is that an ASCII representation of the instrumental intensity map is now available through e-mail. Visit [www-socal.wr.usgs.gov/mailling-lists.html](http://www-socal.wr.usgs.gov/mailling-lists.html) to see an example ASCII map and to sign up for automatic postearthquake delivery. The V2 source code and documentation will soon be available for distribution to qualified seismic network operators. The TriNet ShakeMap Working Group hopes to work with these networks to create a single, nationwide ShakeMap package for ease of implementation and upgrade. The new official ShakeMap web address is [www.trinet.org/shake](http://www.trinet.org/shake).

## Obituary

### George E. Brandow

George E. Brandow, a former EERI member and a prominent structural engineer who helped shape the skyline of Los Angeles, passed away on June 4. Brandow graduated from USC in 1936 with a B.S. in Civil Engineering. In 1945 he partnered with Roy G. Johnston to start Brandow & Johnston, a consulting structural engineering firm destined to engineer more than 20,000 projects. The most notable were the Los Angeles Sports Arena, the TransAmerica Tower, the campus of the University of California at Irvine, the campus of Pepper-

dine University, the Getty Museum in Malibu, and the Bradley International Terminal at LAX.

Brandow demonstrated commitment and leadership through years of service with the Structural Engineers Association of California (Director 1947-48), the American Society of Civil Engineers (National Director 1963-65), the American Institute of Consulting Engineers (President 1969), the University of Southern California (Trustee 1969-86), the Los Angeles Music Center Operating Company (President of the Board of Directors 1972-80), and as a member of the San Marino City Council (1976-82).

## 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**.

### 2000

#### JULY

23-24. UCB Short Course on Seismic Isolation, Los Angeles, CA. Info: [www.unex.berkeley.edu](http://www.unex.berkeley.edu) (6/00)

24-26. ASCE Probabilistic Mechanics and Structural Reliability Conference, Notre Dame, IN. Info: [www.nd.edu/~pmc2000](http://www.nd.edu/~pmc2000) (6/99)

24-26. Structural Stability Research Council Annual Meeting, Memphis, TN. Info: [www.ce.ufl.edu/~inssrc/ssrc.html](http://www.ce.ufl.edu/~inssrc/ssrc.html) (8/99)

31-August 4. IAG Symposium, Banff, Alberta, Canada. Info: [www.acs.ucalgary.ca/~sideris/GGG2000/GGG2000.html](http://www.acs.ucalgary.ca/~sideris/GGG2000/GGG2000.html) (4/00)

#### AUGUST

**14-26. Workshop on Design in Kocaeli EQ Area, Istanbul, Turkey.** See page 5. (7/00)

16-19. SEAOC 2000 Annual Meeting, Vancouver, British Columbia. Info: [www.seaonc.org/2000convention.html](http://www.seaonc.org/2000convention.html) (2/00)

17-21. 5th Int. Symp. on Environmental Geotechnology and Global Sustainable Development, Minas Gerais, Brazil. Info: [www.5iseggsd.eng.ufmg.br](http://www.5iseggsd.eng.ufmg.br) (2/99)

21-23. 9th U.S.-Japan Workshop on Structural Design and Construction, Vancouver, British Columbia. Info: [www.atcouncil.org](http://www.atcouncil.org) (6/00)

21-24. STESSA 2000 Conference, Montreal, Canada. Info: [tremblay@struc.polymtl.ca](mailto:tremblay@struc.polymtl.ca) (3/99)

#### SEPTEMBER

5-8. Post-Earthquake Highway Response and Recovery Seminar, St. Louis, MO. Info: [www.fhwa](http://www.fhwa).

[dot/odiv/quake.htm](#) (5/00)

13-14. HAZUS Bay Area Users Group Meeting, Cupertino, CA. Info: [www.hazus.org](http://www.hazus.org) (6/00)

13-15. IBHS Annual Congress, Newport, RI. Info: [www.ibhs.org](http://www.ibhs.org) (6/00)

17-22. WSSPC Natural Hazards Conference, Seattle, WA. Info: [www.wsspc.org](http://www.wsspc.org). See page 7. (2/00, 7/00)

18-20. Symposium on Automation and Robotics in Construction, Taipei, Taiwan. Info: [www.ce.ntu.edu.tw/~isarc17](http://www.ce.ntu.edu.tw/~isarc17) (5/00)

18-21. 16th Congress of the International Association of Bridge and Structural Engineering, Lucerne, Switzerland. Info: [www.iabse.ethz.ch](http://www.iabse.ethz.ch) (1/99)

21-24. 43rd Association of Engineering Geologists Annual Meeting, San Jose, CA. Info: [www.aegweb.org](http://www.aegweb.org) (3/00)

**24-26. Eastern SSA Meeting, Atlanta, GA.** See page 2. (7/00)

25-26. 3rd International Conference on Ground Improvement Techniques, Singapore. Info: fax +65-235-3530, [cipremie@signet.com.sg](mailto:cipremie@signet.com.sg) (7/99)

25-October 6. Workshop on 3-D Modeling of Waves, Trieste, Italy. Info: [www.ictp.trieste.it](http://www.ictp.trieste.it) (5/00)

#### OCTOBER

5-7. Deep Foundations Institute International Conference and Exposition, New York, NY. Info: [www.dfi.org](http://www.dfi.org) (11/99)

11-13. Risk 2000 Conference, Bologna, Italy. Info: [www.wessex.ac.uk](http://www.wessex.ac.uk) (1/00)

#### NOVEMBER

**4-7. IAEM Annual Conference, Austin, TX.** See page 7. (7/00)

7. Kabori Symposium, Kyoto, Japan. Info: [suzuki@zeisei.dpri.kyoto-u.ac.jp](mailto:suzuki@zeisei.dpri.kyoto-u.ac.jp) or [wdiwan@caltech.edu](mailto:wdiwan@caltech.edu) (3/00)

7-9. 5th International Conference on Corporate Earthquake Programs, San Jose, CA. Info: Steven Vukazich, [vukazich@email.sjsu.edu](mailto:vukazich@email.sjsu.edu) (11/99)

12-15. 6th International Conf. on Seismic Zonation, Palm Springs, CA. Info: EERI office, [eeri@eeri.org](mailto:eeri@eeri.org), [www.eeri.org](http://www.eeri.org) (6/98, 12/99)

15-16. AEES Annual Conference, Hobart, Tasmania. Info: [www.aees.org.au/News/2000\\_AGM.html](http://www.aees.org.au/News/2000_AGM.html) (6/00)

#### DECEMBER

13-15. ASD 2000, Hong Kong. Info: [ceylxu@polyu.edu.hk](mailto:ceylxu@polyu.edu.hk) (3/00)

### 2001

#### JANUARY

7-12. Conference on Computer Methods and Advances in Geomechanics, Tucson, AZ. Info: [intermix.engr.arizona.edu/~epd/#IACMAG](http://intermix.engr.arizona.edu/~epd/#IACMAG) (11/99)

#### FEBRUARY

7-10. 2001 EERI Annual Meeting, Monterey, CA. Info: [www.eeri.org](http://www.eeri.org) (2/00)

#### MARCH

19-22. International Symposium on Deformation Measurements, Anaheim, CA. Info: [www.pasadena.wr.usgs.gov/scign/fig/](http://www.pasadena.wr.usgs.gov/scign/fig/) (3/00)

21-23. Safety, Risk, and Reliability - Trends in Engineering, Malta. Info: [malta.2001@iabse.ethz.ch](mailto:malta.2001@iabse.ethz.ch), web site: [www.iabse.ethz.ch/conferences/malta](http://www.iabse.ethz.ch/conferences/malta) (11/99)

26-31. 4th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, San Diego, CA. Info: [www.umr.edu/~conted/conf8767.html](http://www.umr.edu/~conted/conf8767.html), e-mail: [prakash@novell.civil.umr.edu](mailto:prakash@novell.civil.umr.edu) (6/99, 2/00, 6/00)

#### AUGUST

**7-10. International Tsunami Symposium**, Seattle, WA. See page 2. (7/00)

**12-17. SMiRT Conference**, Washington, DC. See page 4. (7/00)

### 2002

#### JULY

21-25. 7th National Conference on Earthquake Engineering, Boston, MA. Info: [www.eeri.org](http://www.eeri.org) (9/99)

## More Annual Meeting Photos

Annual Meeting photographer: Sarah K. Nathe

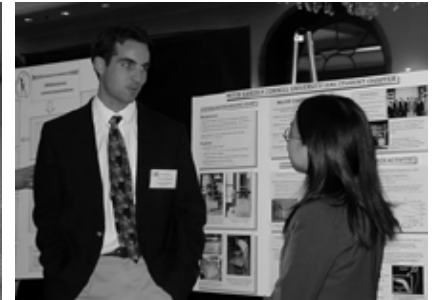
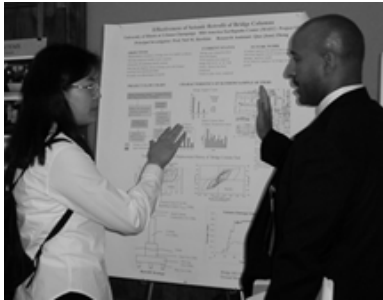


Chris Poland, Paul Somerville (moderator), and Dan Abrams after the debate on the proposition: Research has not served well the needs of engineering practice.



Student Activities Chair Eric Williamson presents a student chapter certificate to Georgia Tech's faculty advisor, Reginald DesRoches.

Poster sessions stimulate discussion.



### EARTHQUAKE ENGINEERING RESEARCH INSTITUTE

PRESIDENT  
Christopher Arnold

PRESIDENT-ELECT  
Chris D. Poland

VICE PRESIDENT  
Thomas D. O'Rourke

SECRETARY-TREASURER  
Ronald L. Mayes

BOARD OF DIRECTORS  
Norman Abrahamson  
Thalia Anagnos  
Christopher Arnold  
Melvyn Green  
Ronald L. Mayes  
Dennis Mileti  
Thomas D. O'Rourke  
Chris D. Poland  
Paul G. Somerville

EXECUTIVE DIRECTOR  
Susan K. Tubbesing

EARTHQUAKE ENGINEERING  
RESEARCH INSTITUTE  
499 14th Street, Suite 320  
Oakland, CA 94612-1934  
RETURN POSTAGE GUARANTEED

FIRST CLASS  
Postage Paid at  
Berkeley, CA  
Permit No. 204