



EARTHQUAKE ENGINEERING RESEARCH INSTITUTE NEWSLETTER

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EARTHQUAKE ENGINEERING RESEARCH INSTITUTE

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News of the Institute

2004 Annual Meeting Highlights

At EERI's 56th Annual Meeting last month in Los Angeles, more than 300 enthusiastic participants took part in a program packed with excellent presentations dealing with earthquake engineering and science since the Northridge earthquake, subsequent mitigation initiatives, and new directions in research. The meeting provided a forum for various perspectives on the thorny legal issues that surfaced in dealing with the losses caused by the Northridge earthquake. Jumping to the present, preliminary information was conveyed on reconnaissance investigations of the December 2003 earthquakes in Bam, Iran, and San Simeon, California (see the insert in this *Newsletter* on the latter).

During the awards luncheon on Thursday, the Shah Family Innovation Prize was awarded to Paul VanderMarck (see below). EERI President Tom O'Rourke recognized this year's new honorary members Robert Olson and J. Carl Stepp, and bestowed the George Housner medal on Dan Shapiro. Professor Kenneth Stokoe gave the inaugural 2004 Distinguished Lecture, "The Increasing Role of Stress Wave Measurements in Geotechnical Earthquake Engineering." During the business luncheon on Friday, EERI Secretary/Treasurer Ron Mayes made the annual presentation on EERI's financial condition (see page 4). Additional award recipients included Roger Borchardt for the 2002 Outstanding *Earthquake Spectra* Paper (see page 12 of the February *Newsletter*) and Tom Tobin for the Alquist Medal. The April *Newsletter* will have more information on these awards.

The Friday evening banquet speaker, Catherine Mulholland, enchanted the group with her witty and informative talk on her grandfather, "William Mulholland: An Engineer in Earthquake Country." Mulholland, a self-taught hydraulic engineer, built the monumental Los Angeles water project. The controversial 240-mile aqueduct that transports water from the Owens River Valley in the

continued on page 2

Paul VanderMarck Receives 2003 Shah Family Innovation Prize

Selecting from a field of strong candidates, the Shah Family Innovation Prize Selection Committee awarded the 2003 prize to Paul VanderMarck, Executive Vice President for Products at Risk Management Solutions Inc., in recognition of his outstanding entrepreneurship and leadership in development of models for catastrophe risk management. His professional contributions have helped improve the standards



Shah Prize Committee Chair Bob Hanson with prize recipient Paul VanderMarck.

of practice for the estimation and management of risks from earthquakes and other catastrophic perils. From currently accepted knowledge of earthquake engineering and science, he has created new models that are being used by

continued on page 9

Annual Meeting

continued from page 1

Sierra Nevada Range changed the destiny of Los Angeles and is ranked among the great engineering feats of the early 20th century. The 1906 San Francisco earthquake struck during the aqueduct's planning phase. Mulholland was about 60 years ahead of his time in appreciating seismic threats. Aware that the project would cross both the San Andreas and Inyo faults, the planners provided reservoirs on the city side of the danger zone, in case the aqueduct

needed to be repaired. Within ten years of its completion in 1913, Mulholland advocated the building of more reservoirs south of the San Andreas fault, to ensure the rapidly growing city's water supply.

The week ended with field trips on Saturday to the Cathedral of the Angels, the Walt Disney Concert Hall, the downtown historic core, and City Hall, then a visit on Sunday behind the scenes at the J. Paul Getty Museum.

EERI extends thanks to organizing committee co-chairs Marshall Lew

and Andrew Adelman, and committee members Mark Benthien, David Breiholz, Nick Delli Quadri, Terry Dooley, Ron Eguchi, Melvyn Green, Henry Huang, Steve Ikkanda, Mark Legg, LeVal Lund, Armen Martirosyan, Alan Merson, Farzad Naeim, Robert Nigbor and Paul Somerville. Thanks also go to Jim Treadaway and Mark Davis, who led the two-part City Hall tour, as well as Debra Laefer, who organized and led the Getty Museum field trip. Annual Meeting sponsor Kinometrics provided valuable leadership with financial support of networking events.

Annual Meeting Photos *(photographers: Marshall Lew, James Godfrey, and Thalia Anagnos)*



Meet the Mentors Icebreaker.



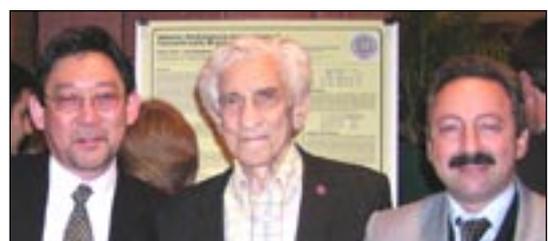
Attendees checking in at registration table.



Treasurer Ron Mayes and Board member Mary Comerio.



Board member John Aho, organizing committee member Dave Breiholz, and John McKee Coil.



Organizing committee member Ron Eguchi, Honorary Member David Leeds, and Board member Farzad Naeim.

More Annual Meeting Photos



Audience during a technical session.



Enthusiastic poster session attendees.



Elliott Goodwin discusses his poster on performance of hospital piping systems.



Bill Holmes (left), Rich Eisner, and Linda Bourque (foreground) chat during a poster session.



Mike Mahoney hosts FEMA exhibit. EERI display in background.



President Tom O'Rourke congratulates members of the University of British Columbia's new student chapter.



Organizing committee members Marshall Lew (co-chair) and F. Naeim with banquet speaker Catherine Mulholland.



Inside the Walt Disney Concert Hall.

News of the Institute

Treasurer's Report: Fiscal Year 2003

The data to the right, taken from the audited financial statement of the Institute, summarize the financial status of EERI on December 31, 2003. On the negative side, regular membership is dropping. EERI encourages all members to help the Institute expand its mission by promoting membership among colleagues. The good news is that the number of student and young professional members has increased, which bodes well for EERI's future. The number of subscribing members has dropped, which may be a reflection of the corporate merger trend.

Dues were only 28% of EERI's total income of \$1.77 million, while grants were 61%, an indication of the importance of FEMA and NSF in supporting EERI's mission.

Revenues were less than expenses by \$15,000 last year. If a two-year running window is considered, EERI essentially broke even, as revenues exceeded expenses by \$14,000 in 2002. The 2004 budget is projected to break even. Some upbeat news is that EERI's office space will soon expand by 30% while rent will decrease by 15% — an indication of the current condition of the market for commercial rental space.

Members deserve a pat on the back for contributing \$38,000 to the Endowment Fund in 2003. By earning \$127,000 on its investments in 2003, the fund recovered significantly from its losses over the previous two years, putting its balance back up above \$1 million. A look at the direct and indirect benefits of membership shows that members receive \$614 in value, over three times the amount of their annual dues of \$200. EERI remains in solid financial shape.

Ronald L. Mayes
EERI Secretary/Treasurer

2003 Summary of Revenues and Expenses

Association Revenues (\$1,000s)

Meetings	\$105
Publications	33
Membership and Spectra Dues	500
Support	44
Interest and Other Income (G & A)	14

SUBTOTAL ASSOCIATION REVENUES \$ 696

Grant Revenues (\$1,000s)

\$ 1,077

TOTAL REVENUES \$ 1,773

Association Expenses (\$1,000s)

Meetings	\$101
Publications	128
Journal	262
Membership	100
Support Programs	81
Association Expenses	39

SUBTOTAL ASSOCIATION EXPENSES \$ 711

Grant Expenses (\$1,000s)

\$ 1,077

TOTAL EXPENSES \$ 1,788

TOTAL REVENUES (UNDER) EXPENSES

(\$ 15)

Summary of Endowment Fund Balance from Inception to 12/31/03

Net Revenues (\$1,000s)	\$ 2,031
Net Expenses (\$1,000s)	1,007

TOTAL REVENUES OVER EXPENSES

\$ 1,024

2003 Direct Benefits of Membership

	2003 Expenses (\$1,000s)	Per Member
General Administration	\$39	\$16
Membership Services	100	42
Newsletter	43	17
Journal (2622 subscribers)	262	100
Support Programs	89	38
TOTAL	\$ 533	\$213

2003 Indirect Benefits of Membership

FEMA	\$236	\$100
Learning from EQs (NSF)	532	224
Endowment Fund	73	31
Other Programs	309	46
TOTAL	\$1,150	\$401

TOTAL DIRECT & INDIRECT BENEFITS

1,683 \$ 614

2003 Membership Report

<u>Individual Members</u>	2003	2002
Regular Members	1,668	1,746
7NCEE Regular Members (6 months)		161
Student Members	396	347
Retired Members	67	65
Honorary Members	21	19
Affiliate Members	50	55
SSA	110	127
Young Professional	105	78
SUBTOTAL	2,417	2,598
<u>Institutional Members</u>		
Subscribing Members	30	38
Institutional Members	34	31
SUBTOTAL	64	69
TOTAL MEMBERSHIP	2,481	2,667

2004 Budget for Revenues and Expenses**Revenues (\$1,000s)**

Meetings	\$94
Publications	30
Membership and Spectra Dues	522
Endowment Programs	121
Support Programs	79
Grants	1,174
Interest and Other Income (G & A)	7
TOTAL REVENUES	\$2,027

Expenses (\$1,000s)

Meetings	\$102
Publications	114
Journal	223
Membership	91
Endowment Programs	121
Support Programs	151
Association Expenses	51
Grants	1,174
TOTAL EXPENSES	\$2,027

REVENUES OVER EXPENSES **\$0**

News of the Profession**NSF Travel Grants Available for 4IWSC**

The National Science Foundation will provide limited travel support to help U.S.-based graduate students attend the Fourth International Workshop on Structural Control. Applicants will be evaluated on their academic background and their plans for participation in working group activities.

The purpose of this support is to help outstanding new researchers from diverse backgrounds participate in the fields of structural control and monitoring. Individual grants will be at a minimum level of \$500. To apply, complete the application form on the workshop web site www.civil.columbia.edu/4IWSC. The deadline is March 31, 2004.

Job Opportunity**Risk Management Solutions**

Risk Management Solutions (RMS), a provider of products and services for the quantification and management of natural hazard risks, is seeking candidates for a geologist/seismologist for the Newark, California, office. The position includes assisting in development of probabilistic seismic hazard models, particularly with respect to ground motion characterization, and analyzing loss estimates for financial portfolios using GIS, DB, and RMS proprietary tools to validate integrated seismic risk models. Applicants should possess an advanced degree in geophysics or engineering seismology related to earthquakes and the quantification of their effects. Experience with probabilistic risk models and loss estimation is desirable. For more information, visit www.rms.com/aboutrms/career/JobDetail_04-028.asp.

News of the Institute

President's Progress Report for EERI

by Tom O'Rourke, EERI President
(excerpted and edited from the 2004 Annual Meeting Notebook. For an unabridged version, visit www.eeri.org/home/progress_report.html.)

Gathering in Los Angeles gives us the opportunity to reassess our progress since the Northridge earthquake and to consider the vision and goals of EERI that were articulated by the Board of Directors in 2001:

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 in the United States for information on the reduction of earthquake risk 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 EERI members and others, and
- Forging a consensus and speaking with a common voice to public forums and legislative bodies on behalf of the diverse risk reduction community.

Summary of EERI's Five-Year Goals for 2001-2005 (for an annotated version, visit www.eeri.org/home/5yearplan.html):

1. Strengthen EERI's position as the primary advocate of earthquake safety and risk reduction.
2. Identify and support seismic advocates at all levels of society and in

all the disciplines.

3. Galvanize a cadre of seismic risk-reduction experts with lessons that are learned in earthquakes.

4. Generate support for all forms of pre-earthquake and post-earthquake mitigation.

5. Achieve financial independence.

Progress has been made in all areas, and I will illustrate this progress by reporting on activities related to NEHRP Reauthorization, Learning from Earthquakes, EERI's international activities program, the World Housing Encyclopedia, *Earthquake Spectra*, and EERI Endowment projects.

NEHRP Reauthorization

The National Earthquake Hazard Reduction Program (NEHRP) is the backbone for protecting citizens from the effects of earthquakes and for seismic risk reduction in the United States. That is why EERI has been engaged in advocating and advancing the reauthorization of NEHRP. During this last year, the advocacy and interaction with members of Congress reached a level unparalleled in the history of the Institute. It also produced results.

EERI involvement with NEHRP reauthorization last year began in February 2003 at the NEHRP Roundtable Forum convened by the NRC Disaster Roundtable in Washington, DC. Several EERI members made presentations at this forum, which was important in communicating NEHRP accomplishments to congressional staff. After the forum, the NEHRP Coalition was revitalized under joint chairs Chris Poland, representing EERI, and Brian Pallasch, representing the American Society of Civil Engineers (ASCE).

The NEHRP Coalition is an advocacy group, representing EERI, ASCE, American Geophysical Union, American Institute of Architects, American Society of Public Administrators,

Applied Technology Council, National Fire Protection Agency, Portland Cement Association, Seismological Society of America, World Institute for Disaster Risk Management, and others. The NEHRP Coalition organized several congressional staff briefings throughout the second and early third quarters.

Testimony was held before the Subcommittee on Basic Research of the House of Representatives Committee on Science in May 2003. For the text of testimony by EERI members and federal agency representatives, visit <http://www.eeri.org/news/nehrrp/index.html>.

During congressional staff briefings and during and after the NEHRP testimony, the EERI Research and Outreach Plan, *Securing Society Against Catastrophic Earthquake Losses*, was a resource of exceptional value. It demonstrates that the earthquake community has a vision and viable plan for R&D. It was very helpful in gaining credibility with key congressional staff and elected representatives.

Through the third quarter of 2003, EERI worked with its partners in the NEHRP Coalition to develop an authorization bill with the Subcommittee on Basic Research, which is the originating body for this legislation. EERI was instrumental in crafting the bill and in obtaining increased levels of funding for NEHRP. In the fourth quarter of 2003, the House of Representatives passed HR 2608, reauthorizing NEHRP (www.eeri.org/news/nehrrp/nehrrp.pdf). An excellent report (Report 108-246) that explains the bill may be found at thomas.loc.gov/. HR 2608 authorizes increased funding from the current total of about \$110 M/year to over \$196 M/year over a three-year period during which the increase would be phased in. This represents a nearly 80% increase in total authorized support. The bill calls for the lead agency to change from DHS/FEMA to NIST, and for a strength-

Progress Report

continued from page 6

ened external advisory board.

The Senate was not able to attend to the NEHRP reauthorization bill in the last legislative session due to an extremely busy schedule, but will take up the bill in the current session. The NEHRP Coalition organized a briefing of the staff of the Senate Committee on Commerce, Science, and Transportation on January 23, 2004, in Washington, DC. On the basis of this briefing, we are optimistic that there will be positive action from the Senate early in the legislative session.

In pursuing NEHRP reauthorization, EERI has strengthened its relationships with all NEHRP agencies. I met personally with Ardent Bement, Director of NIST, in September 2003, and am convinced that NIST will be able to provide the appropriate leadership for NEHRP, provided that the authorized funding is appropriated. Authorization and appropriation of the requisite funding for a strong and viable NEHRP are primary goals of EERI in the forthcoming year.

Learning from Earthquakes

The Learning from Earthquakes Program, funded by NSF, has been quite active during the past year. A reconnaissance team has just returned from Bam, Iran, and will be working with Iranian colleagues to produce a *Newsletter* insert and a more extensive report over the next few months. Reconnaissance activity after the December 22 earthquake in San Simeon, California, was coordinated through an FTP site and professors at Cal Poly. (See insert enclosed in this *Newsletter*.)

A reconnaissance trip to document recovery and rebuilding in Gujarat, India, was conducted, identifying important lessons, particularly for seismic risk areas with infrequent but high-consequence events, such as mid-America or the northeast. A re-

port on the findings from this trip is in preparation.

In addition, there are a number of ongoing activities underway in the LFE program:

- Two *Beyond Reconnaissance Grants* have been funded documenting reconstruction in Colima, Mexico, and identifying data collection issues and the usefulness of such data in identifying damage to RC and masonry structures in the Molise, Italy, earthquake. Both reports are expected in the second quarter of 2005.
- A new LFE web site has been developed that includes PDF files of all preliminary and *Newsletter* reports for earthquakes investigated by EERI members. Plans are underway to begin posting short, streaming video files as well (both on training and from reconnaissance trips).
- The IT Committee has appointed a subcommittee of EERI members to investigate the use of remote sensing technology in post-earthquake reconnaissance. This technology was used after both the Algeria and Iran earthquakes.
- An oversight committee was created to follow up on preliminary recommendations on the collection and management of earthquake data. Task forces will address the collection of damage data, the collection of secondary data, inventory data, and repository development. Progress also continues on developing an electronic post-earthquake data collection system.
- EERI has also been participating in a set of exercises with the NEHRP agencies to test the Plan to Coordinate NEHRP Post-Earthquake Investigations. This has been an opportunity for EERI to work through its immediate post-earthquake procedures, both with the California Clearinghouse and with the NEHRP agencies.

- Stronger links have been forged between the LFE program and the World Housing Encyclopedia, sharing information across the two web sites, and encouraging a specific focus on housing performance in recent reconnaissance activities.

Earthquake Spectra

The Institute enjoys integrated publication of the online and hard copy editions of *Spectra* on the Online Journal Publication Services (OJPS) platform of the American Institute of Physics (AIP) (ojps.aip.org/EarthquakeSpectra/). *Spectra* is now listed in the prestigious *Science Citation Expanded® Index* and on the Web of Science maintained by the Institute for Scientific Information.

International Program

EERI organized and chartered a new International Activities Committee (IAC) in 2002. Membership includes earthquake experts from a variety of countries and engineering disciplines. The high-priority international 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 organization of seminars and conferences.

In January 2004, Kenji Ishihara, president of the Japanese Association for Earthquake Engineering (JAEE) and I, as EERI's representative, signed a cooperative agreement during the 11th International Conference on Soil Dynamics and Earthquake Engineering in Berkeley, California (see page 1 of the February 2004 *Newsletter*). Craig Comartin, EERI President-Elect, will serve as U.S. co-chair of the special committee being organized to guide collaboration and implementation of this agreement with our Japanese

Progress Report

continued from page 7

colleagues. One of the first orders of business will be participation in the *International Symposium on Earthquake Engineering Commemorating the 1995 Hanshin-Awaji Earthquake Disaster* in Tokyo and Kobe, Japan, January 11-16, 2005.

Our international activities have been extended to student chapters. The first international student chapter has been established at the University of British Columbia, Vancouver, BC, Canada.

World Housing Encyclopedia

The World Housing Encyclopedia (WHE) is a Web-based, searchable database and information resource on seismic construction and housing practices around the world (www.world-housing.net). The database continues to grow, with 103 reports now available online from 34 countries. Reports from Japan, Romania, Slovenia, Argentina, Portugal, Turkey, and Algeria were added in 2003.

One of the new 2003 project activities was the development of online tutorials related to various construction practices. The first tutorial addresses adobe construction and techniques for improving the performance of this vulnerable construction type in earthquakes. It can be viewed at www.world-housing.net/tutorials/adobetutorial/adobetutorial.asp. The adobe tutorial has been translated into Spanish. There are plans to develop similar tutorials for each major construction type represented in the encyclopedia, including confined masonry, unreinforced brick masonry, stone masonry, nonductile reinforced concrete frames, and wood.

The WHE took a major step in its transition from an Endowment Fund-sponsored project to an EERI activity in January 2003. In March 2003, a new editorial board was estab-

lished to replace the management committee that guided initial development of the project from 2000 to 2002. The new editorial board (25 members in total from 19 countries) is led by Svetlana Brzev as the editor-in-chief (to continue until August 2004) and Marjorie Greene as managing editor. It is served by six associate editors drawn from major geographic regions throughout the world: Dina D'Ayala (Europe), Sudhir Jain (Asia), Marcial Blondet (Latin America), Mauro Sassu and Mohammed Farsi (Africa), Craig Comartin (North America and Oceania), and by four at-large editors: Farzad Naeim, Shel Cherry, Jelena Pantelic, and Laura Samant.

Endowment Projects

The EERI Endowment Committee is sponsoring a project to develop guidelines that can be used across the United States to create scenarios for planning purposes and enhancing awareness of seismic risk at the community level. The EERI endowment is supporting both the development of the generic guidelines and the seismic scenario for Seattle.

Funds from the EERI/FEMA Cooperative Agreement are underwriting the development of the scenario. In this way, the local community benefits from EERI assistance, and work in the local community is leveraged into generic guidelines that aid communities nationwide in similar undertakings. The project is drawing to a conclusion and is expected to produce the scenario and guidelines in the coming year under the excellent guidance of Bill Iwan, Endowment Committee representative, and Don Ballantyne, EERI Board contact.

Another Endowment project that leverages funds from EERI's Cooperative Agreement with FEMA explores the contributions and extensions of earthquake engineering. The purpose of this study is to show how investments in earthquake engineering have resulted in technical ad-

vances 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 bridge and building repair and restoration; ATC-20 protocol for the inspection of buildings applied after the World Trade Center (WTC) disaster; guidelines for hardening telecommunication equipment following the WTC disaster, based on earthquake studies; and seismic monitoring of nuclear tests.

Such a document is critical for pointing out the value and far-ranging consequences of earthquake engineering research and implementation for federal agencies, Congress, and state and local governments. The document will also address future directions of earthquake engineering and its potential to contribute to multihazards, civil infrastructure, and homeland security. A workshop associated with this project was held in June 2003, and the resulting report is in preparation. The Steering Committee consists of Bill Iwan, Chris Rojahn, Kathleen Tierney, Tom Holzer, and me.

Two additional Endowment projects in the coming year will provide support for (1) the Northern California Chapter in developing earthquake mitigation projects in conjunction with Quake '06, and (2) "Small Grants for Developing Countries," which will build capacity and leadership in developing countries in support of local risk reduction programs. Thanks are extended to Farzad Naeim and Rich Eisner, former and current chairs of this committee.

I encourage you to visit the EERI web site, www.eeri.org. There you will learn about many other EERI programs, including EERI student and regional chapter activities, the fellowship programs sponsored by

Progress Report

continued from page 8

the EERI/FEMA Cooperative Agreement, all publications, A/V materials, and advocacy materials to help you play an active role in the reauthorization process.

The Institute is a very active organization, dedicated to high-quality service and products for its members. It is also dedicated to seismic risk reduction and vigorous advocacy to reduce such risks. We encourage all members to participate actively in these activities.

News of the Profession

NSF Director Resigns

Rita R. Colwell, director of the National Science Foundation (NSF), has resigned her position, effective February 21. Arden Bement, current director of the National Institute of Standards and Technology, will replace her on an interim basis.

Colwell will assume the position of chairman of Canon U.S. Life Sciences, and will also serve as distinguished university professor at the University of Maryland and on the faculty of the Johns Hopkins Bloomberg School of Public Health.

During her tenure, NSF received the highest achievement ratings of any federal agency in performance on the President's Management Agenda and was named a "model" agency by the White House. She oversaw the growth of the NSF budget from \$3.4 billion in 1998 to \$5.58 billion last year. Colwell promoted innovative collaborations across traditional disciplines. She called for expanded opportunities for minorities and women and created a program to place promising science and engineering graduate students directly in K-12 classrooms.

Obituary

Franz Sauter 1933-2003

Considered the founding father of earthquake engineering in Central America and mentor to a whole generation of civil engineers, Franz Sauter passed away at his home October 6, 2003. Through his involvement in academia and industry, Sauter was able to raise awareness of sound construction practices, helping set regulatory standards, promoting education of engineers and construction foremen alike, and bringing earthquake engineering to the forefront in Costa Rica and neighboring countries.

Sauter served as president of Costa Rica's Civil Engineering Society for several years, and later as a mem-

ber of the World Seismic Safety Initiative. His studies on earthquake insurance in 1974 later led to the enactment of the first seismic code in Costa Rica.

An impressive array of buildings, bridges, highways, and industrial sites that withstood powerful earthquakes in Central America in the last 25 years are evidence of his successful approach to earthquake-resistant design. The consulting firm he founded and led for 39 years, Franz Sauter y Asociados, continues to engineer large projects in the region.

Sauter was a prolific writer in history and philosophy, and his book *Searching into the Middle Ages* is among the 100 books representing Costa Rica in Egypt's Library of Alexandria.

Sauter is survived by his wife Marie-los, five sons, and 18 grandchildren.

VanderMarck

continued from page 1

the insurance and reinsurance industries worldwide to improve the management of catastrophic risk. He assumes responsibility for the development of a wide product line that includes models related to natural hazards such as earthquakes, hurricanes, extreme winds, and floods. He has been at the forefront of changes to the culture and business practices of large financial institutions around the world.

VanderMarck rose from his entry-level civil engineer position to his current executive position in a remarkable 12-year career. As a young engineer he inspired others around him with his quest for excellence. He helped foster an environment that encourages consultation among stakeholders in order to improve the implementation of best practices in risk management. He developed and implemented innovative frameworks and processes that enabled ideas and methods to get

into practice. His success in raising awareness among insurance and financial professionals on earthquake risk and other natural risks through the promotion of new loss estimation models demonstrates strong entrepreneurial skills. He forged partnerships between leading insurance organizations and professionals in several developing countries in Asia and Latin America. These have improved the practice of earthquake engineering, risk assessment, and risk management in these countries.

Endowed by a generous gift from the Hareh Shah family, the \$10,000 Shah Family Innovation Prize is awarded annually to younger professionals and academics for creativity, innovation, and entrepreneurial spirit in the field of earthquake risk mitigation and management.

For more information about the prize and the names of past recipients and members of the 2003 Selection Committee, visit http://www.eeri.org/home/honors_shah_innovation.html.

PLEASE POST IMMEDIATELY



EARTHQUAKE ENGINEERING RESEARCH INSTITUTE

**2004-2005 EERI/FEMA
GRADUATE FELLOWSHIP IN
EARTHQUAKE HAZARD REDUCTION**

EERI is pleased to announce the availability of a Graduate Fellowship for the 2004-2005 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), 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

**Deadline for receipt of all application materials at EERI is MAY 17, 2004.
Announcement of the award will be made on JUNE 21, 2004.**

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**.

MARCH

5-6. Asia Conf. on EQ Eng, Manila, Philippines. Info: www.aseponline.org/ACEE.htm (10/03)

17-19. Int'l Conf. on Managing Seismic Risk for Developing Countries, Bhopal, India. Info: www.dmibpl.org/ (2/04)

19-21. New Zealand Society of EQ Eng. Annual Conf., Rotorua, New Zealand. Info: secretary@nzsee.org.nz (1/04)

22-25. Performance-Based EQ Eng. and Seismic Retrofit of Structures, Brooklyn, NY. Info: sections.asce.org/metropolitan/tech_groups/infrastructure.html (12/03)

APRIL

1-3. Shlemon Specialty Conf. in Eng. Geology, El Paso, TX. Info: www.haneberg.com/fissure/ (2/04)

13-17. 5th Int'l Conf. on Case Histories in Geotech. Eng., New York, NY. Info: www.umn.edu/~eqconf/5thCHConf (1/03, 3/03)

MAY

3-5. 4th Annual Disaster-Resistant California Conf., Sacramento, CA. Info: www.drc.ca.gov (12/03)

7. 2004 L.A. Tall Buildings Conf., Los Angeles, CA. Info: www.TallBuildings.org (12/03)

16-19. Basin and Range Province Seismic Hazard Summit II, Reno, NV. Info: www.nbmng.unr.edu (12/03)

16-19. Third UCLA Conf. on Public Health and Disasters, Torrance, CA. Info: www.ph.ucla.edu/cphd/conference.html (12/03)

17. SMIP04 Seminar on Utilization of Strong-Motion Data, Sacramento, CA. Info:

www.conservation.ca.gov/cgs/smp/seminar.htm (3/04)

20-21. NEES Annual Meeting, San Diego, CA. Info: www.nees.org (11/03)

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

JUNE

7-10. SEM X Int'l Cong. on Experimental and Applied Mechanics, Costa Mesa, CA. Info: www.sem.org (10/03)

10-11. 4th Int'l Workshop on Structural Control, Columbia Univ., NY. Info: www.civil.columbia.edu/4IWSC (11/03)

20-23. 14th World Conf. on Disaster Management, Toronto, Canada. Info: www.wcdm.org/ (11/03)

JULY

6-9. Int'l Symp. Network & Center-Based Research for Smart Structures Tech. & EQ Eng., Osaka, Japan. Info: mahua@rch.eng.osaka-u.ac.jp (12/03)

12-15. 3rd European Conf. on Structural Control, Vienna, Austria. Info: www.samco.org/3ecsc (10/03)

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

26-28. ASCE Specialty Conf. on Probabilistic Mechanics and Structural Reliability, Albuquerque, NM. Info: www.esc.sandia.gov/PMCconferenceinfo.html (12/03)

AUGUST

1-6. 13th World Conference on EQ Eng. (13WCEE), Vancouver, British Columbia, Canada. Info: www.13wcee.com (7/02, 3/03)

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

SEPTEMBER

14-17. NDE/NDT for Highways and Bridges 2004, Buffalo NY. Info: www.asnt.org/events/events.htm (12/03)

26-30. 2004 National EQ Conf., St. Louis, MO. Info: www.earthquakeconference.org/ (3/04)

29-Oct. 1. Annual Conf. on Deep Foundations, Vancouver, B.C., Canada. Info: www.dfi.org (12/03)

OCTOBER

25-Nov. 5. 7th Workshop on 3-D Modelling of Seismic Waves, Trieste, Italy. Info: agenda.ictp.trieste.it/smr.php?1586 (2/04)

DECEMBER

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

2005

JANUARY

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

FEBRUARY

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

2006

APRIL

17-21. 8th U.S. Nat'l Conf. on EQ Eng. (8NCEE) and EERI Annual Meeting, San Francisco, CA. (8/03)

News of the Profession

Job Opportunity

George Washington University School of Engineering, Washington, D.C.: The Applied Science Department of Engineering Management and Systems Engineering seeks an assistant professor in engineering management, with emphasis in the areas of crisis, emergency, or risk management, who is able to contribute to the research areas of the Department's Institute for Crisis Emergency and Risk Management. Review of applications will begin March 6, 2004, and continue until the position is filled. For application requirements, visit www.eeri.org/news/career_opportunities.html.

News of the Institute

New Subscribing Membership Levels and Benefits

EERI Subscribing Membership is an opportunity for companies to publicly demonstrate their support for EERI's mission of earthquake risk reduction. After reviewing in detail the interests and recommendations that were made at a recent meeting with Subscribing Members, the EERI Board of Directors took a number of actions to meet their needs and also contribute to the enhanced vitality of the Institute.

Following are the new benefits Subscribing Members will now have:

- Exclusive opportunities to meet with members of EERI reconnaissance teams.
- Preferential access to students seeking employment.
- The ability to contribute directly to programs of their choice through the reorganization of the Institute's Endowment program.

Subscribing Members recently had an opportunity to meet with members of the Bam, Iran, reconnaissance team in informal settings in northern and southern California.

Beginning in the second quarter, EERI will put in place a new program designed to benefit younger members—those just entering profession-

al practice—by posting their resumes on the EERI web site. Although the entire membership will be notified by e-mail after the resumes are posted, Subscribing Members will be informed by e-mail of their availability a week earlier than other members.

The Board decided to distinguish its organizational members by creating three new membership levels above the basic Subscribing Membership level: **Gold** (\$10,000), **Silver** (\$5,000), and **Bronze** (\$3,000). These dollar amounts include the base 2004 dues of \$2,400.

Subscribing Members at these special levels will be identified in all EERI listings and publications, such as the Membership Roster, *Earthquake Spectra*, conference and workshop proceedings, and the Institute's web site. Subscribing Members at these three new levels will have the option of directing their additional support (over and above the basic Subscribing Member dues) to Institute programs in which they are interested. To recognize and expedite contributions to specific programs, the Board has reorganized the Endowment Fund into four separate funds that will be described in the April *Newsletter*.

EERI is very pleased to announce that Degenkolb Engineers, John A. Martin & Associates (JAMA), and Kinemetrics, Inc., have already elected to participate at the Gold level. JAMA will be recognized at the Gold level for two years thanks to their contributions in setting up and maintaining the World Housing Encyclopedia web site.

The benefits that Subscribing Members currently receive will continue. To see a list of those benefits, visit www.eeri.org/membership.html.

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 2004! All address changes and renewals must be received in the EERI office by March 31, 2004, to ensure that they will be included in the *EERI Membership Roster 2004*. You may renew with a VISA or MasterCard on EERI's web site www.eeri.org, by fax (510/451-5411), or e-mail (eeeri@eeeri.org). If you send an e-mail message with only an address change, please put "Roster" in the subject line.



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