

## Summer 1996

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CUREe is a California nonprofit corporation dedicated to the advancement of earthquake engineering. CUREe's member institutions are:



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**EXECUTIVE DIRECTOR:**

BOB REITHERMAN  
 (reitherm@nisee.ce.berkeley.edu)

**ADMINISTRATIVE SPECIALIST:**

PARSHAW VAZIRI  
 (parsh@nisee.ce.berkeley.edu)

**OFFICE ASSISTANT:**

WANDA REALEGEÑO  
 (curee@nisee.ce.berkeley.edu)

**NEWSLETTER EDITOR:**

PARSHAW VAZIRI

## MATCHING FUNDS OBTAINED FOR NEW CENTER

### EXECUTIVE DIRECTOR'S REMARKS

On August 31, The California Legislature passed SB 1864. This bill provides the matching funds necessary for the California-based entry to compete effectively in the NSF competition to establish centers for earthquake engineering. The University of California has also agreed to contribute funding.

CUREe can be proud that it "delivered" when it counted, working with its member universities to facilitate a consensus in support of a single unified proposal from the major earthquake engineering academic institutions in the state.

We also served a valuable role in working to secure passage of the bill, but credit in that department must be widely shared. Crucial to the bill's passage was the support of the Wilson Administration and key state agencies, including Business, Housing and Transportation (Dean Dunphey, Secretary), State and Consumer Services (Joanne Kozberg, Secretary), and Office of Emergency Services (Dr. Richard Andrews, Director).

Senator Alfred Alquist was the bill's sponsor, and it was intro-

duced through the initiative of the Seismic Safety Commission (Lloyd Cluff, chair; Dick McCarthy, Executive Director; Chris Lindstrom, Legislative Analyst).

Others who are due credit include: Prof. Jack Moehle, Director Designate of the Center; interim Institutional Board Chair Prof. Paul Jennings; Prof. George Housner, Prof. Joe Penzien, and the other members of the Governor's Board of Inquiry on the Loma Prieta Earthquake; Prof. Frieder Seible; Dr. Andrew Whittaker; CUREe Board members who made calls, wrote letters, and visited Sacramento legislators; SEAOC and its Executive Director, Allen Goldstein.

The universities' governmental relations offices were essential to the process, with the lead taken by Stephen Arditti of the UC State Governmental Relations office in Sacramento, and Chris Elms of his staff; Kristen Soares, USC; Brad Cohen, Stanford; Hall Daley, Caltech.

A brief description of the proposed center is provided on a separate enclosure.

-BOB REITHERMAN

## Erratum: CUREe-Kajima Joint Research Project on Methodologies for Evaluating Socio-Economic Consequences of Large Earthquakes

In the Spring 1996 issue of the *CUREe News*, we made a significant error in not crediting the full list of participants on this project. As its title indicates, and as is the case with CUREe-Kajima projects, they are truly joint efforts, and perhaps the project that best exemplifies this collaborative aspect is the one concerning which we made this error.

### Project Participants from CUREe Stanford University

Professor Anne Kiremidjian, Professor Kincho Law, Dr. Stephanie King, Nesrin Basoz, Ajay Singhal, Maya Belubekian

### University of California at Berkeley

Professor Jack Moehle, Robert Olson, Dr. Kenneth Goettel, John Eidinger, Dr. Gerald Horner

### University of California at Los Angeles

Professor Mladen Vucetic, Macan Doroudian, Veronica Iskandar

### Project Participants from Kajima Corporation

Dr. Kaoru Mizukoshi, Dr. Masamitsu Miyamura, Mr. Yoshikatsu Miura, Dr. Naoto Ohbo, Mr. Hiroshi Ishida, Mr. Akira Ishii, Mr. Takafumi Moroi, Mr. Jun Tagami, Dr. Shigeru Nagata, Mr. Masahiko Nakamura

## CUREe-Kajima Joint Research Program Announcement

The CUREe-Kajima Joint Oversight Committee is pleased to announce the beginning of Phase III of the CUREe-Kajima Joint Research Program on September 1, 1996. The two themes will be *Structural Design Implications of Near-Field Ground Motion*, and *Social, Economic and System Aspects of Earthquake Recovery and Reconstruction*.

The Recovery theme is a new research area that will be developed in two stages. Instead of funding research projects now, Year One will explore research options that can be

pursued in Years Two and Three. Year One will include the following: 1) an analysis of the potential for application of risk assessment tools to this area, 2) a review of other existing or new tools that can be applied, 3) an analysis of the Northridge and Kobe experience relative to this area, 4) development of a research plan for a new approach to this subject.

The research teams that have been selected for the two themes are:

### Structural Design Implications of Near-Field Ground Motion

Team leader  
Helmut Krawinkler

Team members  
Jim Anderson, Tom Heaton, John Wallace

### Social, Economic and System Aspects of Recovery and Reconstruction

Team leader  
Bob Reitherman

Team members  
Jim Beck, Anne Kiremidjian, George Mader

### CUREe-Kajima Research Program Joint Oversight Committee

Kajima Corporation  
Takuji Kobori, Yoichi Nogiri, Akira Endoh

CUREe  
Wilfred Iwan, Stephen Mahin, Haresh Shah

## EERI Annual Student Paper Competition

The Earthquake Engineering Research Institute has announced its Annual Student Paper Competition. The purpose of the competition is to promote involvement of students in earthquake engineering and the earthquake hazards research community.

Instructions for preparation of the manuscript can be found on EERI's web site at: <http://www.eeri.org>, or obtained from Professor Sharon Wood, Civil Engineering Department, University of Texas, Ferguson Structural Engineering Laboratory, 10100 Burnet Road, PRC 177, Austin, TX 78758. All papers must be received by November 1, 1996 at the Texas address.

Up to four student authors will be invited to the Annual Meeting of EERI in Austin,

Texas, February 12-15, 1997, and will receive travel support for this purpose. The winning papers will also be considered for publication in *Earthquake Spectra*. The top paper will be presented at the Annual Meeting.

## New Dynamic Testing Institute Formed in Southern Nevada

Bechtel and Bechtel Nevada (a partnership between Bechtel Nevada Corp., Johnson Controls Nevada Corp., Lockheed Martin Nevada Technologies Corp., SRI International, and the NADET Institute at MIT), have established a new nonprofit testing institute in Las Vegas known as the Nevada Testing Institute, or NeTI. NeTI will apply Nevada Test Site capabilities, infrastructure, physical character, and the remoteness of its location to advance the state of practice of civil, structural and seismic engineering.

SRI has been active in creating innovative uses of explosive technology for many years. This experience has led to the development of a new technique, known as RESCUE (Repeatable Earth Shaking by Controlled Underground Expansion), that converts high energy explosive energy to low pressure, long duration ground pulses.

NeTI intends to use and offers these motions for the evaluation or advancement of technologies relating earthquake and explosive-resistant structures, base isolation, passive damping, ground modification that strengthens foundations, and sensors and diagnostics that monitor the performance of structures under severe energetic forces, including earthquakes.

For further information contact:

Peter A. Mote, Director, Nevada Testing Institute, P.O. Box 19360, Las Vegas, NV 89132; tel: 702-895-0528; fax: 702-895-0512

### Reminder to NSF Researchers

Please remember to submit your NSF 98A forms (final project summary) after the completion of NSF projects. NSF will not process your future proposals if you were a P.I. or collaborator on an NSF-funded project with an outstanding 98A.



## EERC-CUREe Symposium in Honor of Vitelmo V. Bertero

*A symposium in a series co-sponsored by California Universities for Research in Earthquake Engineering honoring lifelong contributions to the understanding of earthquakes.*

A Symposium in Honor of Vitelmo Bertero, spotlighting his career and engineering achievements, will be held January 30 – February 1, 1997, at the Berkeley Marina Marriott Hotel.

Co-sponsors of the Symposium are the University of California at Berkeley, Earthquake Engineering Research Center (EERC) and California Universities for Research in Earthquake Engineering (CUREe). The Symposium begins Thursday evening, January 30, with a cocktail reception at the UC Berkeley Faculty Club, followed by two full days of presentations from experts in the fields of seismic and structural engineering from the U.S. and other countries.



Professor Bertero, a professor emeritus of civil engineering at UC Berkeley, has authored over 300 technical papers since his first work was published in 1958. Talks delivered at the Symposium will focus on topics central to Professor Bertero's career, such as the inelastic behavior of structures; seismic design and analysis of steel frames and reinforced concrete shear walls and frames; seismic codes and guidelines, such as those produced by SEAOC, ACI, ATC, and IABSE; and field reconnaissance of earthquakes.

### *Presentations by leaders from the US and other countries in the fields of:*

**Reinforced Concrete   Structural Steel   Design Methodologies   Lessons from Earthquakes**

#### REGISTRATION FORM

**please mail to: EERC, 1301 S. 46th Street, Richmond, CA 94804**

- |   |   |
|---|---|
| <input type="checkbox"/> \$275 pre-registration           | <input type="checkbox"/> \$325 registration             |
| <input type="checkbox"/> \$150 full-time student pre-reg. | <input type="checkbox"/> \$200 full-time student reg.   |
| <input type="checkbox"/> \$15 additional reception ticket | <input type="checkbox"/> \$60 additional banquet ticket |

\_\_\_\_\_ **Total:** make check payable to Regents of the University of California and write "Bertero Symposium" on check; mail to EERC; full refund if cancellation made by Jan. 6, 1997; 50% refund if cancelled after Jan. 6, 1997 and prior to Jan. 30, 1997. Pre-registration deadline Jan. 6, 1997. Includes hors d'oeuvres and no-host bar reception Jan. 30 at UC Berkeley Faculty Club; lunch, & refreshments Jan. 31 and Feb. 1, and banquet Jan. 31, at Berkeley Marina Marriott; copy of *Proceedings*.

name \_\_\_\_\_

address \_\_\_\_\_

phone \_\_\_\_\_ fax \_\_\_\_\_

**Hotel Reservations: "EERC/CUREe Conference" rates (\$89 single, \$99 double) if made by January 10, 1997 with the Berkeley Marina Marriott, (800) 228-9290.**



## Stanford-CUREe Symposium in Honor of Haresh C. Shah

*Risk Management and Mitigation for Natural Hazards*

*A symposium in a series co-sponsored by California Universities for Research in Earthquake Engineering honoring lifelong contributions to the understanding of earthquakes.*

**April 25-26, 1997**  
**Stanford, CA**

There will be a Banquet and Symposium honoring Haresh Shah upon his retirement from Stanford University. The Banquet will be held the evening of Friday April 25, 1997, and will also serve as a celebration of the reopening of the John A. Blume Earthquake Engineering Center.

The Symposium will open on Friday with technical presentations on the topic of *Risk Management and Mitigation for Natural Hazards*, and will conclude with a tour of the renovated Blume Center laboratories Saturday April 26.

For further information on the Banquet or Symposium, please contact:

Shah Symposium  
Department of Civil Engineering  
Stanford University  
Stanford, CA 94305-4020, USA  
Fax: 415-725-9755  
e-mail: [ShahSymp@ce.stanford.edu](mailto:ShahSymp@ce.stanford.edu)

**A registration form and tentative program will appear in the next issue of CUREe News.**



Professor Haresh C. Shah has been a pioneer in the fields of risk analysis, earthquake engineering and probabilistic methods for over 30 years. He has served Stanford University in many capacities, including Chairman of the Department of Civil Engineering and Founding Director of the John A. Blume Earthquake Engineering Center. Professor Shah has also served as CUREe's Treasurer and President. Professor Shah will retire from Stanford University in the Summer of 1997.

Professor Shah has authored or co-authored one book and over 250 technical papers and reports. He is a consultant to private organizations and to local, state and national government agencies. He has worked with UNESCO and several countries worldwide to develop building codes and earthquake design criteria.

# 1997 CUREe Calendar

*Order your copy of CUREe's 1997 Calendar today! The first copies roll off the press in early Fall and quantities are limited. CUREe members will receive a complimentary copy.*

*Each calendar features historic earthquake photos, lists dates of historic earthquakes, and includes dates for all the major events and conferences during 1997.*



1663 St. Lawrence, Canada, Earthquake		1812 New Madrid, Missouri Earthquake (#3 of 3 largest, 1811-1812)	
	13	14 EERI Annual Meeting, Austin, Texas	15
EERI Annual Meeting, Austin, Texas	EERI Annual Meeting, Austin, Texas	<b>Valentine's Day</b>	EERI Annual Meeting, Austin, Texas
	20	21	22

(cut along line)

## Order Form

The 1997 CUREe Calendar may be purchased for **\$11.50** (sales tax, shipping and handling are included.) Please send this order form along with a check or money order (sorry, no credit card orders) made out to "CUREe" to:

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1301 S. 46th Street, Bldg. 451  
Richmond, CA 94804-4698

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Phone #: \_\_\_\_\_

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## Publications

The **1997 CUREe Calendar** can be ordered for \$11.50. Place your order now using the form on page 5. CUREe members will receive a complimentary copy.

**The following SAC reports are now available. Contact the Applied Technology Council, 415-595-1542, for ordering information and cost:**

SAC 94-01: *Proceedings of the Invitational Workshop on Steel Seismic Issues, Los Angeles, September 1994.*

SAC 95-01: *Steel Moment Frame Advisory No. 3.*

SAC 95-02: *Interim Guidelines: Evaluation, Repair, Modification and Design of Welded Steel Moment Frame Structures (FEMA 267, August 1995)* is also available free. Contact FEMA at 800-480-2520.

SAC 95-03: *Characterization of Ground Motions During the Northridge Earthquake of January 17, 1994.* P. Somerville, R. Graves, and C. Saikia

SAC 95-04: *Analytical and Field Investigations of Buildings Affected by the Northridge Earthquake of January 17, 1994*, Part I and Part II. Contributions by A. Alali, J. Anderson, J. Beck, K. Benuska, D. Bonowitz, R. DiJulio, J. Dunlea, T. Eimani, M. Englehardt, F. Filippou, G. Hart, L. Ho, S. Huang, A. Husain, A. Jain, J. Kariotis, H. Kim, K. Kim, H. Krawinkler, C. Lee, C. Li, R. Lobo, B. May, F. Naeim, T. Paret, D. Polidori, A. Reinhorn, T. Sabol, A. Sadre, K. Sasaki, J. Stewart, C. Thiel, C. Uang, J. Uzarski, M. Vanik, M. Van Winkler, N. Youssef, and Q. Yu

SAC 95-05: *Parametric Analytical Investigations of Ground Motion and Structural Response, Northridge Earthquake of January 17, 1994.* Contributions by S. Campbell, M. Englehardt, J. Hall, G. Hart, L. Ho, S. Huang, A. Husain, W. Iwan, H. Kim, K. Kim, R. Lobo, T. Sabol, M. Skokan, J. Uzarski

SAC 95-06: *Surveys and Assessment of Damage to Buildings Affected by the Northridge Earthquake of January 17, 1994.* Contributions by D. Bonowitz, M. Durkin,

W. Gates, M. Morden, and N. Youssef

SAC 95-07: *Technical Report: Case Studies of Steel Moment Frame Building Performance in the Northridge Earthquake of January 17, 1994.* Contributions from J.C. Anderson, B.C. Gourley, M. Green, J.F. Hajjar, R.G. Johnston, R.T. Leon, D.P. O'Sullivan, J.E. Partridge

## Seismic Events

**CUREe Board of Directors meeting**  
November 1, 1996 - USC

**Bertero Symposium**  
January 31 - February 1, 1997  
Berkeley, CA

**Shah Symposium**  
April 25-26, 1997  
Stanford, CA

## New CUREe Member

George Mader (Stanford) was approved as a new member of CUREe at the August 2, 1996 Board of Directors' meeting.

### CUREe Board of Directors

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# CUREe

**1301 S. 46th Street**

**Building 451**

**Richmond, CA 94804-4698**

**tel: 510-231-9557 fax: 510-231-5664**

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SEPTEMBER 1, 1996

CUREe's offices are located in the Earthquake Simulator Laboratory Building at the UC Berkeley Earthquake Engineering Research Center.