



## NEWSLETTER

June 2000 Vol. 3 No. 3

### MAE Center Featured on *Good Morning America*



MAE Center Deputy Director Jim Beavers and ABC Science Editor Michael Guillen experience a simulated earthquake

On Friday, April 28, ABC's *Good Morning America* aired a four-minute segment on the Mid-America Earthquake Center and its research programs.

Filming began at the U.S. Army's Construction Engineering Research Laboratory (CERL) which featured MAE Center Deputy Director Jim Beavers and ABC Science Editor Michael Guillen discussing simple mitigation techniques for the average family home. The two then rode the CERL shake table under simulated 5.5 and 6.0 magnitude earthquakes. The table had been outfitted as a family den. Mannequins then replaced Jim and Michael as a simulated 6.5 event was run, first with the demonstration room mitigated, then with the room unmitigated. Damage in the



Mannequins during the simulated 6.5 magnitude earthquake

mitigated room was minimal; the mannequins did not survive the unmitigated event.

Filming then shifted to Newmark Laboratory where MAE Center Director Dan Abrams was interviewed about the MAE Center and earthquakes in Mid-America. "Actually the largest earthquake in the forty-eight states ever recorded happened in New Madrid, Missouri, in 1811 and 1812. There's an estimated \$20 billion dollar loss if the New Madrid earthquake happens again today," Abrams said, emphasizing the very real seismic threat to Mid-America. "And that's not only the loss to the seventeen states surrounding the zone, but also the whole country because of the interruption in the national transportation system." Filming at Newmark Laboratory also featured students at work on research projects.

On April 19, NBC *Dateline* along with the City of Urbana (a FEMA Project Impact city), the Insurance Institute for Information, Insurance Institute for Highway Safety, State Farm Insurance Companies, Institute for Business and Home Safety and CERL, through a partnership effort,



MAE Center Director Dan Abrams interviewed on *Good Morning America*

conducted a mitigation and nonmitigation demonstration of nonstructural components on the CERL shake table. Through the use of high-speed cameras, special lighting effects and auto crash dummies, results of this demonstration were more detailed than those of ABC's *Good Morning America* taping. NBC *Dateline* plans to air the segment later this year. When the MAE Center learns of the air date, an announcement will be posted on the web site.

For a link to ABC's article about the Mid-America Earthquake Center, "Shaking up the Heartland," and a Real Player Video Clip of the aired segment, visit the MAE Center web site at <http://mae.ce.uiuc.edu>.

## FROM THE DIRECTOR

### *Partnerships*

During the last week in May, the Central US Earthquake Consortium (CUSEC) hosted a workshop entitled the Central United States Partnership (CUSP): the Next Decade for Creating Safer Communities. The purpose of the workshop held at the Kentucky Dam Village State Park outside of Paducah was to explore possibilities for further developing CUSP by defining the partnership roles of present organizations in the areas of earthquake loss reduction. Under the leadership of CUSEC, three core institutions: the MAE Center, the Institute for Business and Home Safety and the CUSEC State Geologists are planning the partnership. Other charter members include the Federal Emergency Management Agency, the Department of Transportation, the Federal Highway Administration, the Association of Contingency Planners, the Disaster Recovery Business Alliance, the Extreme Information Infrastructure, the Institute of Gas Technology, the American Society of Civil Engineers, the US Geological Survey and the Mid-Continent Mapping Center. The workshop was successful at attracting over 70 people presently involved with the earthquake problem in Mid-America. Facilitators helped to identify the roles of each organization with respect to: (a) living with earthquakes, (b) learning from earthquakes and (c) building for earthquakes.

The collective thought of emergency planners, geologists, businessmen, design professionals, transportation planners, building code officials, representatives of federal agencies (FEMA, USGS, FHWA, Corps of Engineers) and academic researchers helped to suggest the diversity of the workshop participants and the breadth of the Mid-America earthquake problem. As each organization expressed its relative role as a producer, user or facilitator with respect to education, preparedness, response, recovery, geosciences, risk assessment, risk reduction, public awareness, mitigation, incentives, standards and research, pieces of the puzzle started to fall into place and the promise of a successful partnership started to unfold.

The leadership role that the MAE Center provides in earthquake research and education was clear to the workshop participants. However, it was also obvious that academic research and education is but one small part of earthquake loss reduction in Mid-America, and that partnerships or alliances with other organizations are necessary to make the research results of the MAE Center truly implementable. Certainly, research and education can benefit from a diverse partnership such as CUSP. But the worth of the partnership has a much greater meaning beyond the perspective of research. A successful partnership will be beneficial for merging efforts between our neighboring states and communities as noted with the following five examples.

- Because an earthquake in our area can travel across several states, emergency response plans must be coordinated beforehand between neighboring state emergency management agencies. Emergency management operations in the states surrounding the New Madrid seismic zone can benefit from the coordination that CUSEC provides.
- Consistent maps of soil conditions are necessary to evaluate path effects of earthquakes as they travel across state boundaries. Geological mapping across the Mid-America region requires coordination of each state geological survey. The CUSEC State Geologists are working as the model group for the partnership in this regard, and are providing basic geological data needed to depict the seismic hazard.
- The departments of transportation in the states surrounding the New Madrid seismic zone need to coordinate their engineering activities as well as their emergency operations. Vulnerability of transportation networks in Mid-America must involve DOT's from several states in the region. Research and development for design and retrofit of major river crossings must involve multi-state cooperation. Earthquake preparedness planning should be done through a consortium of state DOT's rather than independently by state as is done at present.
- Alliances of businesses in the multi-state region can benefit from sharing of knowledge/problems on how to react to the earthquake threat. Through cooperative efforts, industries vulnerable to a particular aspect of the earthquake problem can solve their respective problems through a sharing of research and development. Communities can develop joint action plans to preserve business interests in the event of an earthquake.
- Local building commissioners can coordinate their efforts at assessing earthquake losses and risk. Methods for estimating inventories of building stock, construction vulnerability and loss potential can be shared among commissioners from different communities with similar levels of earthquake risk.

These are but a few examples of how a partnership such as CUSP can help reduce future earthquake losses and improve the quality of life in our communities. Research of the MAE Center will be enhanced through cooperative efforts such as these because problem identification, solution and implementation can be all the more streamlined. In this respect, the MAE Center fully supports CUSEC in the formation of the Central US Partnership, and will strive to see that the ideals of the partnership, as discussed at the Kentucky workshop, will be developed to become reality.

*D.P. Abrams*

## **ATC-35-3 Report Now Available**

ATC Report 35-3, Proceedings: Workshop on Improved Characterization of Strong Ground Shaking for Seismic Design, is now available. Sponsored by the U.S. Geological Survey, the workshop was held in July 1997 under the auspices of the ATC-35 Program. This report documents the two-day workshop conducted to identify and improve how earthquake ground motion is characterized for use in seismic design, including codes for buildings and bridges.

Among the topics addressed in the workshop were alternative ground motion parameters, on-demand customized deaggregated hazard matrices and time histories, basin response, site response based on near-surface measurements, ground motion duration, near-fault effects, fault-zone trapped waves and topographic effects.

The report may be obtained from the Applied Technology Council. Contact them at 650-595-1542 (voice), e-mail: [atccouncil.org](mailto:atccouncil.org), or web site: [www.atccouncil.org](http://www.atccouncil.org).

## **SCEC INSTANeT NEWS**

The Southern California Earthquake Center (SCEC) is now providing a new web service called INSTANeT News. Providing weekly coverage of earthquake research and news, INSTANeT will provide articles via e-mail. Short news items will provide summary information and offer a link to the longer article available at [www.scec.org/instanet](http://www.scec.org/instanet).

The SCEC INSTANeT News replaces the SCEC Quarterly Newsletter (SQN). All current SQN subscribers will receive a refund for issues beyond SQN 5.2 and have been automatically placed on the INSTANeT News e-mail list. Subscription/unsubscription instructions are online at [www.scec.org/instanet/subscribe.html](http://www.scec.org/instanet/subscribe.html).

## **Sixth ASCCS International Conference Proceedings Available**

Conference proceedings from the Sixth ASCCS (Association for International Cooperation and Research in Steel-Concrete Composite Structures) International Conference held in Los Angeles March 22-24, 2000, are now available. The two-volume proceedings include 146 technical papers.

To purchase the proceedings, contact the Department of Civil Engineering, University of Southern California (Attn.: ASCCS-6 Secretariat), Los Angeles, CA 90089-2531, or [yanxiao@usc.edu](mailto:yanxiao@usc.edu).

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Visit the MAE Center's Education web site at: <http://moment.mit.edu/maeed/home.asp>. The purpose of the web site is to increase knowledge of earthquake engineering at all educational levels.

## **3.6M Earthquake Strikes Indiana**

On April 13 a magnitude 3.6 earthquake struck central Indiana. Centered thirty miles north northwest of Indianapolis, the earthquake was felt in Indianapolis and Crawfordsville. There are no reports of damage.

The strongest recorded earthquake in Indiana was a magnitude 5.1 that struck on September 27, 1909. Centered between Terre Haute and Vincennes, the 1909 earthquake was felt in Arkansas, Illinois, Iowa, Kentucky, Ohio and Tennessee.

## **Earthquake Risk Management Publications Available**

The California Seismic Safety Commission (SSC), as part of the Proposition 122 Seismic Retrofit Practices Improvement Program, has published two new reports. *Earthquake Risk Management: A Toolkit for Decision-Makers* (Report SSC 99-04) gives an overview of the earthquake mitigation process and provides an in-depth discussion of major issues facing decision makers. *Earthquake Risk Management: Mitigation Success Stories* (Report SSC 99-05) gives examples of earthquake risk management techniques across California.

Both publications are available from the California SSC. For more information, call 916-263-0594, or visit the SSC web site at: [www.seismic.ca.gov](http://www.seismic.ca.gov).

## **NEES FAQ Sheet Now Available on Web**

The NSF's Frequently Asked Questions (FAQ) sheet for the Network for Earthquake Engineering Simulation (NEES) Programs Solicitation is now on the web. Questions concerning the NEES Programs Solicitation are accepted by e-mail only. Those questions deemed to be of general interest are then posted on the FAQ sheet. The FAQ sheet can be accessed two ways: through the NEES home page at [www.eng.nsf.gov/nees](http://www.eng.nsf.gov/nees) or through [www.eng.nsf.gov/nees/Frequently\\_Asked\\_Questions/frequently\\_asked\\_questions.htm](http://www.eng.nsf.gov/nees/Frequently_Asked_Questions/frequently_asked_questions.htm).

## **Earthquake Strikes Upper New York State**

On April 20 a 3.7M earthquake struck the small town of Newcomb, New York, about 95 miles northwest of Albany. A 2.3M earthquake had struck Newcomb four days previously. Felt in eastern New York state and Montpelier, Vermont, the 3.7 event caused no reported damage. On Oct. 7, 1983, a 5.3M earthquake was centered in Newcomb that was felt in twelve states and four Canadian provinces and caused minor damage.

## **MAE Center News**

### **Annual MAE Center Site Review Held at Georgia Tech May 18-19, 2000**

The annual National Science Foundation site review for the Mid-America Earthquake Center was held May 18-19, 2000, at the Georgia Institute of Technology. The review was preceded on May 17 by concurrent program coordination meetings where researchers and end users met to learn about and discuss research in the Transportation Networks



University of Illinois undergraduate students Jennifer Gilbert, Gozen Basar, Michelle Karow, David Bartolai and Hank Hsing pose in front of their research project poster, Losses to Air-Rail Networks

Program, the Essential Facilities Program and the Hazards Evaluation Program. A meeting of the Student Leadership Council that was opened to all students in attendance concluded the day.

The site review featured an overview of the MAE Center by the MAE Center Director and presentations by program coordinators and co-coordinators. An extensive poster session of MAE Center research projects provided the opportunity for interaction and discussion among the site review team, investigators and students. Faculty and students from each of the seven MAE Center core partner institutions participated in the review.



Poster session at the Georgia Tech Structures Laboratory

### **MAE Center Annual Meeting and Annual RA Symposium Dates Set**

Mark your calendars now to attend the annual RA Symposium AND annual meeting of the Mid-America Earthquake Center November 18-20, 2000, in New Orleans at the Omni Royal Orleans Hotel. Located on rue St. Louis, the Omni Royal Orleans offers an exciting venue for the meetings. Upcoming newsletters will provide further registration information.

#### **Draft Agenda**

Mid-America Earthquake Center Annual Meeting  
And Annual RA Symposium  
November 18-20, 2000  
Omni Royal Orleans Hotel  
New Orleans

#### **Saturday, Nov. 18**

8:00 am Continental Breakfast  
8:30 am RA Symposium  
noon Lunch  
1:00 pm RA Symposium Continues  
6:00 Open Dinner

#### **Sunday, Nov. 19**

8:30 am Continental Breakfast  
9:00 am Plenary Session  
noon Banquet Lunch  
2:00 pm Concurrent Program Meetings (with students)  
6:00 pm Open Dinner

#### **Monday, Nov. 20**

8:00 Continental Breakfast  
8:30 Concurrent Program Meetings Continue with End Users  
noon Lunch  
1:00 pm Meeting of the Leadership Team  
8:00 pm Adjourn

**access<sup>2</sup>** Become a partner with the MAE Center and make an impact on results of investigations directed at evaluating seismic hazards and developing retrofit strategies for the built environment in Mid-America. As a partner of the MAE Center through this preferred access program, you will have a voice in how research programs are planned and executed, and how their results are implemented to practice. Business, industry and government partners are invited to become an integral part of the Center's activities by interfacing directly with coordinated research programs as well as with individual research, outreach and education projects.

Members are the first to be informed of the most recent earthquake information, and have access to the latest research results via published reports, technical papers, software and data. To become a member, obtain an application form from the MAE Center website or by calling 217-244-6302.

## MAE Center Co-Sponsors Post Earthquake Highway Response and Recovery Seminar

The Mid-America Earthquake Center is a co-sponsor of the Post Earthquake Highway Response and Recovery Seminar to be held September 5-8, 2000, at the Adam's Mark Hotel, St. Louis.

The purpose of the Seminar is to assist state and local highway agencies in Mid-America in understanding the issues related to emergency preparation and response to a major earthquake and to present ideas to help minimize response and recovery times for restoring highway operations. The Seminar is aimed at mid- and upper-level state DOT construction and maintenance personnel, bridge inspectors, public relations personnel, public works directors, city and county engineers, and emergency management personnel.

For additional information including attendee and exhibitor registration forms, hotel information, and agenda topics, visit the Seminar website at: <http://www.fhwa.dot.gov/modiv/quake/htm>, or contact: Donald Neumann, FHWA – Missouri Division, at 573-636-7104 or Dave Musser, Missouri DOT, at 573-526-1871.

## Recent MAE Center Publications

Aschheim, M. 1999. Yield point spectra: a simple alternative to the capacity spectrum method. In: *Proceedings of the Structural Engineers Association of California 68<sup>th</sup> Annual Convention*.

Craig, J.I., Goodno, B.J., Towashiraporn, P., and Dogan, T. 1999. Hazard mitigation for long recurrence interval earthquakes using passive response modification. *U.S.-China International Workshop on Seismic Isolation, Energy Dissipation and Control of Structures*.

Dyke, S.J. Current direction in earthquake engineering education. 2000. In: *Proceedings of the 2000 Engineering Mech. Special Conference*. American Society of Civil Engineers: Reston, Va.

Hawkins, N.M., Kaspar, I.I., and Karshenas, M. 1999. Seismic retrofit of Poplar Street interchange in St. Louis. *Structures Congress, ASCE*.

Peralta, D.F., Bracci, J.M., and Hueste, M.B. 1999. Performance of rehabilitated floor and roof diaphragms. In: '99 *EERI Annual Meeting: Building the Future: A New Generation of Codes, Standards and Earthquake Engineering Professionals*. Earthquake Engineering Research Institute: Oakland, CA.

Romero, S., Rix, G.J., French, S.P. 2000. Identification of transportation routes in soils susceptible to ground failure in the New Madrid Seismic Zone. *Transportation Research Record*. National Academy Press: Washington, D.C.

Wen, Y.K. 1999. Reliability and performance based design for seismic loads. In: *Asian-Pacific Symposium on Structural Reliability and its Applications*. National Center for Research on Earthquake Engineering and National Taiwan University: Taipei, Taiwan, Republic of China, pp. 75-94.

## EERI/NEHRP Professional Fellowship Reports Now Available

The reports prepared by Suzanne D. Nakaki and Jeffrey R. Keaton, the 1998 and 1999 NEHRP Professional Fellows in Earthquake Hazard Reduction, are now available. The EERI/NEHRP Professional Fellowship are funded by FEMA.

Suzanne Nakaki's report, *Developing Design Guidelines for Precast Concrete Diaphragms*, stresses the development of design guidelines for precast concrete diaphragms from a system performance perspective. Nakaki's research was conducted with John Stanton, University of Washington, Seattle.

Jeffrey Keaton's report, *Synthetic Seismograms for Normal-Faulting Earthquakes Using the Composite Source Model*, focuses on Keaton's belief that the composite source model provides a useful alternative to scaling earthquake recordings for engineering design applications. Keaton's research was conducted with John Anderson and Yuehua Zeng of the University of Nevada, Reno, Seismological Laboratory.

The reports are free. For copies, contact the EERI office at 510-451-0905 (voice) or by e-mail: [eeri@eeri.org](mailto:eeri@eeri.org).

## Advanced National Seismic System under Development

Preliminary planning is now underway for implementation of an Advanced National Seismic System (ANSS) in the Central United States. The ANSS is an initiative to organize, modernize, and standardize operation of seismic networks in the U.S. A cross-disciplinary effort, it is designed to meet national needs through regional organization.

At a meeting of the interim national oversight committee in Albuquerque on February 29, a management structure was proposed and it was concluded that six or seven regional organizations are needed. Regions are to be formed by local interested parties developing an implementation plan and submitting it to the national committee. When a plan meets the goals and standards of the ANSS, the region will be established. Further details can be found at <http://pasadena.wr.usgs.gov>.

An interim regional subcommittee in the Central U.S. has been formed and met on April 18. Another meeting was held on May 31 in conjunction with EERI in St. Louis. For more information on the Central U.S. interim regional subcommittee, visit <http://www.ceri.memphis.edu/CUSSN>.

## **OUTREACH and EDUCATION**

### **Summer 2000 REU (Research Experience for Undergraduates)**

Exciting opportunities to practice earthquake engineering research awaits the eight exceptional students who have been awarded MAE Center appointments with the Undergraduate Research Experience (REU) Program. The three National Science Foundation sponsored Earthquake Engineering Research Centers, MAE Center, PEER, and MCEER will each support a select number of undergraduate students from universities and four-year colleges to spend ten weeks conducting individual research projects as a member of a faculty advisor's research team.

Justin Ocel from the University of Minnesota and Jesse Hoagg, Duke University, will be working with Roberto Leon at the Georgia Institute of Technology. Joining the Museum Display team headed by John Nichols at the University of Illinois will be Kevin Lay from Central Methodist College. David Pflingsten from Texas A&M University will be assisting Mark Aschheim at the University of Illinois with the ST-10 Dynamic Tests of Low-Rise Building Systems project. Working with David Gillespie at Washington University will be Jimmy Antia from the University of Illinois. Joining Neil Hawkins's ST-13 Rehabilitation of Bridge Columns team will be Troy Milburn from the University of Louisville. Kory Wilmot from the University of Illinois will be at the Georgia Institute of Technology working with Steve French. Assisting Paul Mayne at the Georgia Institute of Technology will be Anna-Britt Mahler from Ohio Wesleyan University.

A Communications Workshop to augment oral and written communication skills is to be held in St. Louis, Missouri, on July 7-9, 2000. Jointly sponsored by the MAE Center, MCEER, and PEER will be an Earthquake Symposium for Young Researchers. This symposium will be held in Memphis, Tennessee, August 17-19, 2000, and will provide a forum for REU students to introduce the results of their research.

### **MAE Center Sponsors One-Day Short Course**

The Mid-America Earthquake Center is sponsoring "Design Considerations for Buildings in Moderate Seismic Zones," a one-day short course, on June 15, 2000, in Cincinnati; June 16<sup>th</sup> in Boston; June 17<sup>th</sup> in Chicago/Oakbrook. Co-sponsors for the seminar series include the Department of Civil and Environmental Engineering – University of Cincinnati, Boston Society of Civil Engineers Section/ASCE, and the Structural Engineers Association of Illinois. Distinguished speakers include Robert B. Herrmann, Paul Mayne, Brad Cross, S.K. Ghosh, Daniel P. Abrams, and Richard W. Howe. For program information and registration details, please visit the MAE Center website at <http://mae.ce.uiuc.edu>.

### **MAE Center Students Participate in Earthquake Field Training Mission**



MAE Center graduate students Peeranon Towashiraporn (Georgia Tech), Laurel Clark (University of Memphis), Duhee Park (University of Illinois) and Omer Erbay (University of Illinois) with Prof. Shahram Pezeshk (University of Memphis)

The second annual MAE Center Earthquake Field Training Mission was held May 10-17, 2000. This year's fellowship winners were Duhee Park (University of Illinois at Urbana-Champaign), Laurel Clark (University of Memphis), Peeranon Towashiraporn (Georgia Tech), and Omer Erbay (University of Illinois at Urbana-Champaign). The four MAE Center research assistants joined the earthquake engineering class of Imperial College, London, to participate

in a field assessment exercise.

This year's exercise began at Imperial College with an orientation session and then continued in North



Earthquake site in Menidi, Greece

Athens, the site of a recent earthquake. Participants visited the National Technical University of Athens, Nafpaktos (via the Corinth Canal), and the Rion-Antirion Bridge site. Professor Shahram Pezeshk of the University of Memphis accompanied the group along with Professor Amr Elnashai of Imperial College.

### **U.S. News and World Report issues 2001 Graduate Program Rankings**

*U.S. News and World Report* has published its 2001 graduate program rankings. The Civil Engineering Department at the University of Illinois at Urbana-Champaign has retained its No. 1 ranking. The Massachusetts Institute of Technology is ranked No. 2. Also among the top ten are the Georgia Institute of Technology (No. 6) and Texas A&M University (tied for No. 10). Congratulations to these MAE Center core partner institutions for their continuing commitment to excellence!

**2000**

**June 18-22:** Second International Symposium on Structural Lightweight Aggregate Concrete, Kristiansand, Norway. Contact: Norwegian Concrete Association, [www.betong.net](http://www.betong.net).

**June 25-28:** 12th International Brick/Block Masonry Conference, Madrid, Spain. Contact: Prof. Josep M. Adell, 34-91 336 65 60 (voice), e-mail: [construccion@aq.upm.es](mailto:construccion@aq.upm.es).

**July 5-6:** 2-Day International Conference on Railway Engineering 2000, London. Contact: [railway@ecspublications.com](mailto:railway@ecspublications.com).

**July 20-21:** ASCE Seminar on Earthquake Induced Ground Motions, Las Vegas, Nev. Contact: ASCE, <http://www.asce.org>.

**July 31-August 4:** International Association of Geodesy (IAG) Symposium, Banff, Alberta, Canada. Contact: [www.acs.ucalgary.ca/~sideris/GGG2000/GGG2000.html](http://www.acs.ucalgary.ca/~sideris/GGG2000/GGG2000.html).

**August 27-September 2:** 20th International Congress of Theoretical and Applied Mechanics, Chicago. Contact: ICTAM, 217-333-2880 or [www.tam.uiuc.edu/ICTAM2000](http://www.tam.uiuc.edu/ICTAM2000).

**September 5-8:** Post Earthquake and Highway Response and Recovery Seminar, St. Louis. Contact: Federal Highway Administration, Don Neumann, 573-636-7104 or [www.fhwa.dot.gov/modiv/quake](http://www.fhwa.dot.gov/modiv/quake).

**September 13-15:** Asia Pacific Structural Engineering & Construction Conference (APSEC) 2000, Kuala Lumpur, Malaysia. Contact: Dr. Faridah Shafii/Dr. Nordin Yahaya, 607-5576160, ext. 3095/3120/3081, e-mail: [apsec2000@fka.utm.my](mailto:apsec2000@fka.utm.my).

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

**September 19-20:** ACI Fourth International Conference on Repair, Rehabilitation and Maintenance of Concrete Structures, and Innovations in Design and Construction, Seoul, Korea. Contact: William R. Tolley, 248-848-3700.

**September 25-27:** PCI/FHWA/FIB International Symposium on High Performance Concrete, Orlando. Contact: Precast/Prestressed Concrete Institute, 312-786-0300 (voice), e-mail: [info@pci.org](mailto:info@pci.org) or [www.pci.org](http://www.pci.org).

**October 5-7:** Deep Foundations Institute International Conference and Exposition, New York, N.Y. Contact: [www.dfi.org](http://www.dfi.org).

**October 5-7:** 3rd International PhD Symposium in Civil Engineering, Vienna, Austria. Contact: Konrad Bergmeister, 0043-1-47-654-5250 (voice); e-mail: [PhD-Symposium@ikiserver.boku.ac.at](mailto:PhD-Symposium@ikiserver.boku.ac.at).

**October 11-13:** 6th International Seminar on Structural Masonry for Developing Countries, Bangalore, India. Contact: Dr. B. V. Venkatarama Reddy, 91-080 3092327 (voice), e-mail: [issm@civil.iisc.ernet.in](mailto:issm@civil.iisc.ernet.in).

**November 7-9:** Fifth International Conference on Corporate Earthquake Programs, San Jose, Cal. Contact: Dr. Steven Vukazich, 408-924-3858 (voice), e-mail: [vukazich@email.sjsu.edu](mailto:vukazich@email.sjsu.edu).

**November 12-15:** Sixth International Conference on Seismic Zonation, Palm Springs, Cal. Contact: EERI, 510-451-0905 (voice), e-mail: [eeri@eeri.org](mailto:eeri@eeri.org).

**December 13-15:** ASD 2000, Hong Kong. Contact: [ceylxu@polyu.edu.hk](mailto:ceylxu@polyu.edu.hk).

**2001**

**January 7-12:** Conference on Computer Methods and Advances in Geomechanics, Tucson, Ariz. Contact: [intermix.engr.arizona.edu/~epd/#IACMAG](mailto:intermix.engr.arizona.edu/~epd/#IACMAG).

**February 7-10:** EERI Annual Meeting, Monterey, Cal. Contact: EERI, [www.eeri.org](http://www.eeri.org).

**March 27-31:** 4th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, San Diego, Cal. Contact: Shamsher Prakash, [prakash@umr.edu](mailto:prakash@umr.edu).

**March 28:** Special Session on "Geotechnical Aspects of Taiwan, Turkey, Greece, Mexico, India and Other Recent Earthquakes," during the 4th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, San Diego, Cal. Contact: Shamsher Prakash, [prakash@umr.edu](mailto:prakash@umr.edu).

**March 31-April 1:** ASTM Symposium on Performance of Exterior Walls, Phoenix, Ariz. Contact: Dorothy A. Fitzpatrick, 610-832-9677 (voice).

**May 21-23:** ASCE Structures Congress 2001, Washington, D.C. Contact: [www.asce.org/conferences/structures-2001](http://www.asce.org/conferences/structures-2001).

**June 4-6:** 9th Canadian Masonry Symposium, Fredericton, New Brunswick. Contact: Dr. John L. Dawe, 506-459-8889 or e-mail: [dawe@unb.ca](mailto:dawe@unb.ca).

**June 18-20:** Third International Conference on Concrete under Severe Conditions, Vancouver, British Columbia. Contact: Prof. N. Banthia, 604-822-9541 or e-mail: [banthia@civil.ubc.ca](mailto:banthia@civil.ubc.ca).

**July 4-6:** 3-Day International Conference on Structural Faults & Repair--2000, London. Contact: Prof. M. C. Forde, [m.c.forde@ed.ac.uk](mailto:m.c.forde@ed.ac.uk).

**July 29-August 3:** International Conference on High Performance Materials in Bridges, Kona, Hawaii. Contact: [www.engfnd.org](http://www.engfnd.org).

**2002**

**July 21-25:** 7th National Conference on Earthquake Engineering, Boston. Contact: [www.eeri.org](http://www.eeri.org).



## Mid-America Earthquake Center

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### **MAE Center Personnel**

Daniel P. Abrams, Director  
James E. Beavers, Deputy Director  
Sue E. Dotson, Administrative Manager  
Sandra Menke, Education Program Assistant  
John M. Nichols, Postdoctoral Research Associate

### **Executive Advisory Board**

Carl Stepp, Chair, Earthquake Hazards Solutions  
David Boore, United States Geological Survey  
Gene Corley, Construction Technology Laboratories  
William Marcuson, U.S. Army Engineers  
Dennis Mileti, Natural Hazards Research Center  
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Jim Cooper, Federal Highway Administration  
Susan Tubbesing, Earthquake Engineering Research Institute

***For further detail on news items  
see the MAE Center web site at <http://mae.ce.uiuc.edu>.***