News of the Profession

Large Earthquakes Hit Alaska and Philippines

An M7.2 earthquake hit Kodiak Island, Alaska on December 6 at 2:12 PM local time. It caused minor damage in Kodiak, with items falling off shelves and walls, and power was lost for about 40 minutes. No injuries were reported. The event was located to the west of the area that ruptured during the 1964 M9.2 earthquake.

On December 12, an M6.8 event hit the Philippines in the early morning. The event was centered near the northern town of Lingayen in Pangasinan province and shook the capital, Manila, and much of the main island of Luzon. Power was lost in many parts of Manila. Three people were reported dead and at least 24 injured.

EERI/FEMA Professional Fellowship Awarded

Rafael Sabelli, Director of Technical Development for DASSE Design in San Francisco, has been selected as the Year 2000 NEHRP Professional Fellow in Earthquake Hazard Reduction, awarded by EERI under a cooperative program funded by the Federal Emergency Management Agency (FEMA). This activity is undertaken by FEMA as part of the National Earthquake Hazards Reduction Program. The fellowship is designed to provide an opportunity for a practicing professional to gain greater skills and broader expertise in earthquake risk reduction. The Institute extends thanks to the review committee, composed of Charles Real of the California Division of Mines and Geology, Andrew Merovich of A.T. Merovich and Associates, Engineers, in San Rafael, James Kelly of the PEER Center, and Chia-Ming Uang of U.C. San Diego.

Sabelli’s research will focus on improving the design and analysis of earthquake-resistant steel braced frames. His work is an extension of previous work on braced frames and recent developments related to moment-resisting frames and performance-based engineering. He will prepare seven building designs, identical except for the configuration of braces. Comparisons of the designed structures will be made on the basis of structural weight, expected requirements for cladding movement, and expected force demands on mechanical systems. These structures will then be analyzed using nonlinear dynamic analysis and a range of ground motions, including ensembles selected to be consistent with current NEHRP hazard maps. Their performance will be compared on the basis of structural ductility demands, drift ratios, and force demands on mechanical systems; any exceedence of design values for these will be of particular interest.

Yield modes predicted by these analyses will be compared to those observed in braced frame structures in recent earthquakes.

For the past five years, Sabelli has worked as a project engineer for DASSE Design. He uses steel-braced frames extensively in his design practice and has researched the considerable literature available on the behavior and design of braces and braced frames. He has presented some of his findings at professional meetings and published them in technical journals. This fellowship will give Sabelli the opportunity to do the refined nonlinear dynamic analyses necessary to fully develop and validate his ideas. He will also be able to integrate his work with parallel advances made by others related to performance-based engineering and application of reliability concepts to design.

Sabelli earned his MS degree in engineering and his MA degree in architecture from the University of California at Berkeley, and his BA from the University of Chicago.

The Professional Fellowship, awarded annually, provides a stipend of $30,000, commencing in January 2000, and includes tuition, fees, relocation and living expenses for a six-month period.
The National Institute of Standards and Technology (NIST) announces a competition for fiscal year 2000 to co-fund new, innovative research and development projects under the Advanced Technology Program (ATP). The program expects to have approximately $50.7 million available in fiscal year 2000 for first-year cost-shared funding of new projects that can run as long as five years. Proposals are accepted from any industry and any field of technology and are due March 8, 2000. Detailed competition rules and the ATP Proposal Preparation Kit are available from the ATP web site at www.atp.nist.gov, by sending e-mail to atp@nist.gov, or by calling 800/287-3863.

HAZUS99, implemented through PC-based geographic information system (GIS) software, is a nationally applicable, standardized method for estimating earthquake losses at the community or regional level. The new release includes the ability to generate automatically and analyze a study region, based on data downloaded from REDICUBE, a real-time earthquake reporting system in California. Other improvements in HAZUS99 include potable water network analysis capability, analysis of multiple fault segments, 3-D fault modeling, and the latest advances for estimating bridge damage. HAZUS99 incorporates the updated USGS97 Fault Maps; new national databases for bridges, potable water pipelines and railway tracks; an improved hospital database; and an updated EPA HAZMAT database.

HAZUS99 is available on CD-ROM in three editions: Eastern U.S., Central U.S., and Western U.S. Each HAZUS99 CD-ROM will include the existing versions of the Computer-Based Tutorial (CBT) and the Inventory Collection Tool (InCAST). Updated editions of the HAZUS user’s and technical manuals will be available for downloading from the FEMA web site at www.fema.gov and from the NIBS web site at www.nibs.org. For further information, contact Philip Schneider, Director, NIBS Multihazard Loss Estimation Program, at 202/289-7800 or pschneider@nibs.org, or Claire Drury, FEMA HAZUS Project Manager, at 202/646-2884 or Claire.Drury@fema.gov.

The National Institute of Standards and Technology (NIST) announces a competition for fiscal year 2000 to co-fund new, innovative research and development projects under the Advanced Technology Program (ATP). The program expects to have approximately $50.7 million available in fiscal year 2000 for first-year cost-shared funding of new projects that can run as long as five years. Proposals are accepted from any industry and any field of technology and are due March 8, 2000. Detailed competition rules and the ATP Proposal Preparation Kit are available from the ATP web site at www.atp.nist.gov, by sending e-mail to atp@nist.gov, or by calling 800/287-3863.

Announcements Request for Qualifications

The Prince William Sound Regional Citizens’ Advisory Council (PWS RCAC) is soliciting qualifications from individuals, firms, and academic institutions with the ability to interpret and assess seismic engineering and re-engineering design data. Expertise should include seismic adequacy, seismic design verification, retrofits, and correction of seismic deficiencies. Respondents should demonstrate expertise about seismic design criteria and related subjects for oil terminals, tanks, and pipelines. The RCAC is an independent non-profit corporation whose mission is to promote environmentally safe oil transportation. Qualification packets should include: a cover letter, list of published papers, resumes of key personnel, a list of previous clients, a rate or fee schedule, a statement of potential conflict of interest regarding prior work with Alaskan oil transportation facility operators, and additional material as appropriate. They should be received no later than 12:00 Noon (ADT) January 24, 2000 by Joe Banta, PWS RCAC, 3709 Spenard Road, Anchorage, AK 99503. Questions may be directed to him at 907/277-7222 or by e-mail at banta@anch.pwsrcac.org.

For more information regarding PWS RCAC, see the web site www.pwsrcac.org.

EERI Board Member Tom O’Rourke testifying at a hearing before the Subcommittee on Basic Research, U.S. House of Representatives on October 20, 1999 (see article in November 1999 Newsletter, page 4). The hearings dealt with lessons learned from the Turkey, Taiwan, and Mexico earthquakes. A copy of the testimony is posted on EERI’s web site. (photo: C-SPAN)
News of the Institute

EERI Endowment Fund and ICBO Produce Training Video

A few months ago in Seattle, an International Conference of Building Officials (ICBO) film crew, several EERI members, and three contractors with the Associated Building Contractors participated in the shooting of a video aimed at training carpenters and inspectors about the effects of earthquakes on buildings. The video emphasizes the need for proper construction techniques to ensure a complete load path in a building. The video is one product from the Endowment-funded Construction Quality project, under the leadership of Jim Russell and Cindy Hoover.

CDK Construction Services, S.S. Framing, Inc., and Silver & Black Enterprises, LLC, provided access to the job sites for the shooting. Scot Simpson of S.S. Framing, Inc. wrote the script with Jim Russell and is the talent in the video. The ICBO filming crew spent four days filming at the job sites.

The project committee for this Endowment project is industry-wide and includes members from the National Center for Construction Education and Research (NCCER), ICBO, Carpenters Training Council of Northern California, the Engineered Wood Association (APA), and the Southern Building Code Congress International (SBCCI). Funding was provided by the EERI Endowment Fund and the Federal Emergency Management Agency.

EERI expects the video to be ready by late January. It will be an excellent 15-minute video for framing crews as well as job superintendents and inspectors. Contact the EERI office for a copy, at a price of $24.95 including shipping (plus 8.25% sales tax in California).

News of the Membership

Andy Veletsos Receives Honorary Doctorate

Professor Andy Veletsos of Rice University, an EERI member since 1962, was honored last May by the University of Patras (Greece), which bestowed upon him the title of Honorary Doctor of the Civil Engineering Department.

In presenting the award, EERI member Prof. S. A. Anagnostopoulos cited the lifelong and pioneering contributions of Veletsos to the field of earthquake engineering, his academic and professional achievements, his personality, and finally his international recognition through numerous prizes and prestigious awards. The contributions to earthquake engineering by Veletsos place him in the elite group of individuals who may be considered the founders of the field, concluded Anagnostopoulos. In his acceptance speech, titled “Mitigating the Earthquake Risk,” Veletsos gave a brief but very eloquent summary of the major developments in earthquake engineering and touched upon what he considers current and future challenges in the field.

Publications

Earthquake Risk Management

The California Seismic Safety Commission (SSC) has published two documents as part of the Proposition 122 Seismic Retrofit Practices Improvement Program. The first, Earthquake Risk Management: A Toolkit for Decision-Makers (Report SSC 99-04), provides a step-by-step approach to the earthquake mitigation process as well as an in-depth discussion of the critical issues facing decision-makers in California. The second, Earthquake Risk Management: Mitigation Success Stories (Report SSC 99-05), provides examples of how earthquake risk is actively managed in diverse communities across California. Both publications were prepared by EQE International, Inc., and can be ordered from the California SSC by phone: 916/263-0594, or from its web site: www.seismic.ca.gov.

News of the Profession

Research Needs Emerging from Recent Earthquakes

EERI organized a workshop for the National Science Foundation to discuss research needs emerging from the recent earthquakes in Turkey, Greece, and Taiwan. The meeting was held in San Francisco on October 25 and 26, 1999. Fifty-four participants attended, including researchers from Turkey, Greece, and Taiwan, and members of the EERI reconnaissance teams that investigated these earthquakes. After plenary presentations on each earthquake, workshop participants separated into small working groups to discuss research needs in several areas. The recommendations have been summarized in a report that is now available on EERI’s web site (www.eeri.org). Hard copies are also available from the EERI office free of charge.
News of the Institute

Summary Minutes of the September 18, 1999 Meeting of the Board of Directors

Preliminaries: The meeting was called to order by President C. Arnold at 8:40 a.m. on Saturday, September 18, 1999. Directors present included N. Abrahamson, T. Anagnost, Secretary/Treasurer C. Comartin, J. Jirsa, T. O'Rourke, and P. Somerville. Also present were the New Madrid Chapter President P. Gould, visitor R. Mayes, Executive Director S. Tubbesing, and Administrative Secretary X. van de Walle. R. Mayes left at 10:50 a.m. Vice President R. Hamburger and Past President J. Nigg were unable to attend.

Executive Committee Update: EERI has been urged to identify good candidates for the California Seismic Safety Commission, since eight of 17 members of this committee have recently been removed with the change in administration. The EERI staff sent a blast fax to members requesting that they respond with names of potential candidates. This is an excellent opportunity for EERI to become more politically active, a key point suggested at the Subscribing Members’ Meeting on September 17, 1999.

Secretary/Treasurer’s Report: The combined balance sheet as of July 31, 1999 shows the Institute’s opening fund balance of $177,580 increased by excess revenue over expenses of $234,385. EERI’s total liabilities balance of $38,483 combined with the total fund balance equaled $450,448. The Endowment Program’s opening fund balance of $699,809 increased by excess revenue over expenses of $26,716. The Endowment Program’s total liabilities balance of $70,355 combined with the total fund balance equaled $796,879. All programs combined, including association, technical, and endowment, totaled $1,247,327.

The Investment Funds Report showed $254,939 in the General Administrative Short-Term Fund, $83,117 in the General Administrative Long-Term Fund, and $726,524 in the Endowment Fund. The Institute’s interest-bearing checking account showed a balance of $35,937. With the combined invested funds in both General Administrative Funds, this account totaled $373,994. The Grants Status Summary showed that of $2,061,247 in active grants, $1,826,887 had been expended as of July 31, 1999.

2000 Dues: The Board approved a motion to keep membership dues for the year 2000 at 1999 levels (Active $150, Affiliate $110, Subscribing $1000, Retired $75, Student $30, Institutional $300).

Executive Director’s Report: Turkey Earthquake: Executive Director Tubbesing reported that the August 17 earthquake in Turkey has dominated the office’s attention over the past month. A number of issues were raised regarding team selection and coordination with the NSF earthquake research centers and other investigators. These issues were referred to the LFE Committee for consideration.

DC Visits/NEHRP Meeting: Tubbesing participated in the NEHRP Meeting in Washington DC a few weeks ago. She stated that representatives from several of the NEHRP agencies affirmed that EERI plays an integral part in helping NEHRP fulfill its mission. The federal agencies rely upon EERI to demonstrate their continuing support for outreach, education, knowledge transfer, and learning from earthquakes.

While in Washington, Tubbesing visited a number of agency and legislative contacts to get a sense of what was going on in the legislative arena. With the July 1999 death of Representative George Brown, the earthquake community needs to identify a new “champion.” At the state level, California Assemblywoman Ellen Corbett heads up a new Select Committee on Earthquake Safety and Preparedness. She will attend EERI’s Performance-Based Design Workshop in Seattle.

Membership: Tubbesing stated that EERI will be promoting membership to all nonmember attendees of the Turkey earthquake briefings and to SSA members. Director Jirsa noticed the trend of declining numbers of Regular Members over the last few years. A goal was set to add ten new Subscribing Members during the next year.

Regional Membership: The Board reviewed the bar chart provided by staff member C. Logie and noted that there are nearly as many foreign members as there are members east of the Mississippi. Tubbesing commented that the membership ratios seem to have remained nearly constant during her tenure, with about 50% of the members in California.

List Server: Tubbesing mentioned that many members did not receive the flyer for the Turkey briefings until after they had taken place. The Board approved Tubbesing’s suggestion to add all members to the EERI list server, allowing them to unsubscribe if they desire. The office has used blast faxes to reach the membership, but they are much more expensive.

Regional Chapters Report: P. Gould feels that there is great potential for membership growth in the New Madrid area. He also mentioned that the three earthquake research centers, especially the Mid-America Earthquake Center and student chapters, could help increase EERI’s membership in the Midwest. FEMA seminars in the Midwest have been well-attended, and have resulted in increased EERI member-
ship. Gould suggested that a free trial membership with a seminar registration would be a good way to introduce EERI to more people. Discussion continued concerning the development of more regional chapters and members. Gould suggested that EERI hold more regional meetings in the Midwest, with increased student chapter involvement.

Publications Policy Committee: Monographs: Director O’Rourke updated the Board on the status of monographs. M. Yashinsky (Bridges and Earthquakes) is working on revisions, and is planning on meeting with the review committee in November 1999. R. Hanson and T. Soong are close to finishing their first draft of Passive Energy Dissipation Systems and will be ready for review next month. Hanson would like to have this in suitable form for a seminar early next year.

Earthquake Spectra: Spectra guideline revisions: Spectra Editor R. Borcherdt incorporated the suggested revisions both to the template and to the statement on “Objectives and Responsibilities for Publication of Earthquake Spectra” that were made last fall during the meeting with O’Rourke and Tubbesing.

Microsoft Access implementation: Conversion of the membership and Spectra databases to the Access database has taken longer than anyone anticipated, but the conversion should be completed soon.

Spectra distribution: Director Jirsa suggested that perhaps Spectra distribution could be web-based; people could pay by credit card and download the publication. There would be additional concerns, such as archival copies for libraries and delivery time for international subscribers. Tubbesing suggested bringing together the Publications Committee and the Information Technology Committee to come up with some strategies for marketing and delivery, and to determine reasonable options with associated costs.

Endowment Committee: The Board reviewed the report provided by M. Greene, Special Projects Manager. She expects that the first video, “Load Path for Framing Carpenters,” will be completed by the end of the year. A white paper on the “Role of Earthquake Engineering in Financial Risk Management” is in progress. The Ethics on the Web Site Committee is reviewing the third case to be posted to the web site.

Technical Seminars: Earthquake Analysis Methods: Predicting Building Behavior, the technical seminar developed last year, will be presented in Salt Lake City, Utah, and in Newport Beach, California. Considerable discussion was held regarding a new seminar based on information gathered by the Learning from Earthquakes program over the years. An additional suggestion was to hold a five-year Kobe retrospective meeting. Jirsa will submit these suggestions to Technical Seminars Chair S. Wood for consideration.

Meetings and Conferences Policy: The Meeting and Conferences Committee recently reviewed the policy and made suggestions to expand the existing guidelines, including creating timelines and an expanded Annual Meeting section. The Board reviewed the newly revised policy, and adopted it with minor modifications.

7NCEE Site Selection: Tubbesing has signed a contract for the 7NCEE to be held at the Boston Park Plaza Hotel, July 21-25, 2002.

Technical Projects Update: 6ICSZ: Progress continues to be made on the organization of this conference, to be held in Palm Springs in November 2000. A second announcement and call for papers is planned for later this fall. Many of the key speakers have been identified, and a company that will produce a CD-ROM of the proceedings has been selected.

Student Activities Committee: The Board approved a request from the Student Activities Committee to create an undergraduate category for the Student Paper contest. The Board requests that the committee set different parameters for this new category. It was suggested that a prize be given; however, the paper would not be presented at the Annual Meeting, nor would it be formally published.

Finalities: President Arnold adjourned the meeting at 5:50 p.m. on Saturday, September 18, 1999.

Announcements

ICBO Seminar on Wood Structures

The International Conference of Building Officials (ICBO) announced “Wood Structures II, Evaluation of Wind and Earthquake Forces,” a seminar to be held January 20-21, 2000 in Fortuna, California. The seminar will concentrate on the provisions for wind and earthquake forces and lateral-force bracing systems outlined in the 1997 Uniform Building Code (UBC). The seminar will be of special interest to plan examiners who perform structural review of construction plans and calculations, and architects who deal with structural analysis and design of small residential and light commercial buildings. All participants will receive an illustrated workbook, but they should bring their own 1997 UBC Volume 2 to the seminar. The cost of the seminar is $230 for ICBO members and $300 for nonmembers. Registration is available through ICBO Conference Headquarters by mail or fax. Contact ICBO at 5360 Workman Mill Road, Whittier, CA 90601; phone: 800/423-6587 x3418; and fax: 562/692-3853.
News of the Institute

Endowment Fund Donations

EERI has received the following donations to the Endowment Fund.

$2000
Clarence Allen

$500-$999
Lorraine Hubrich
I.M. Idriss
Joseph Penzien
Egor Popov
Nabih Youssef
Edwin Zacher

$200-$499
Christopher Arnold
Ronald Hamburger
Frederick Krimgold
Henry Lagorio
Gerald Lehmer
Faiz Makdisi
Tom O'Rourke
Cynthia Perry
Robert Preece
John Stanton

$100-$199
Robert Anderson
Siavash Basseri
Don Butler

Phillip Gould
Richard Huggins
Tom Kamei
Anqui Liu
Peter May
Ronald Mayes
William Petak
Leslie Robertson
Rafael Sabelli
William Savage
Anshel Schiff
Walter Silva
David Slemmons
Steven Tipping
Susan Tubbesing
Mason Walters
Edward Wilson
Thomas Wosser
James Yao

Other Amounts

Stephen Buonopane
Robert Chittenden
Mary Comerio
Eldon Gath
Melvyn Green

Arnaldo Gutierrez
John Hayes
Donald Jephcott
Jeffrey Kimball
Min Lung Kuo
James McCarty
John Meehan
Chikahiro Minowa
Andrew Mole
Rawn Nelson
Joseph Nicoletti
Guy Nordenson
Kenichi Ohi
Ramesh Patel
Shamsher Prakash
John Robb
Charles Roeder
Chester Schultz
Isaac Shina
Otto Steinhardt
Selcuk Toprak
Vicki Vance-May
Donald Wagener
James Wicoski

Call for Abstracts

RISK 2000 Conference

The 2nd International Conference on Computer Simulation in Risk Analysis and Hazard Mitigation will be held in Bologna, Italy October 11-13, 2000. The conference will focus on all aspects of risk analysis and hazard mitigation, ranging from specific assessments of risk to hazard mitigation associated with both natural and man-made hazards. Strategic issues of sustainable development, efficient use of resources, energy economics, and education will also be addressed.

Specific topics include: hazard prevention, management and control; estimation of risks; financial risk; risk maps; social and economic issues; workplace risk; emergency response; remediation of environmental damage; waste disposal; data collection and analysis; hazardous materials in transit; and case studies. Abstracts of no more than 300 words are due by February 22, 2000 to Susan Hanley, Conference Secretariat, RISK 2000, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton, SO40 7AA, UK; phone: +44-0238-029-3223; fax: +44-0238-029-2853; e-mail: shanley@wessex.ac.uk. For more information see the conference web site at www.wessex.ac.uk.

Erratum

Izmit Earthquake Reconnaissance Report

The photo credit given for Figure 12 in the EERI Special Earthquake Report on the Izmit, Turkey earthquake (the October 1999 issue of the Newsletter) was incorrect. The photographer was John Eidinger. EERI apologizes for the error.
### 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

**JANUARY**

20-21. ICBO Wood Structures II Seminar on Wind and Earthquake Forces, Fortuna, CA. See page 5. (1/00)

29-Feb. 5. 12th World Conf. on Earthquake Engineering (12WCEE), Auckland, New Zealand. Info: www.12wcee.co.nz (7/98, 8/99)

**FEBRUARY**

21-25. Japan-Turkey Workshop, Istanbul, Turkey. Info: bodurogl@itu.edu.tr (8/99)

**MARCH**

22-24. 6th ASCCS International Conf. on Steel-Concrete Composite Structures, Los Angeles, CA. Info: yanxiao@usc.edu (2/99)


**APRIL**


**MAY**

5-6. 5th Conference on Tall Buildings in Seismic Regions, Los Angeles, CA. Info: Marshall Lew, mlew@lawco.com (11/99)


28-June 2. Composite Construction in Steel and Concrete IV, Banff, Alberta, Canada. Info: www.uefoundation.org (7/99)

31-June 3. EERI Annual Meeting, St. Louis, MO. Info: EERI office, eeri@eeri.org, www.eeri.org (7/99)

**JUNE**


**AUGUST**

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

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

**SEPTEMBER**

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


**OCTOBER**


**NOVEMBER**

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


**2001**

**JANUARY**

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

**MARCH**


27-31. 4th International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, San Diego, CA. Info: prakash@novell.civil.umr.edu (6/99)

**MAY**


**2002**

**JULY**

21-25. 7th National Conference on Earthquake Engineering, Boston, MA. Info: www.eeri.org (9/99)
News of the Profession

Data from Hector Mine Earthquake

The M7.1 earthquake occurred on October 16, 1999 about 200 km northwest of metropolitan Los Angeles. The Los Angeles and Vicinity Strong-Motion Network, operated by the University of Southern California, had 78 stations in the field at that time. All stations were operational but only 39 triggered, because the motions throughout the area were small.

The records were digitized, processed, and posted on the web within a few days after recovery. ASCII files and PDF plots of Volume 1, 2, and 3 data for all 39 stations were made available in early November. The web address for this project is www.usc.edu/dept/civil_eng/Earthquake_eng/Hector_eq/. Financial support was provided by NSF grant CMS 9812721. For more information, contact Maria Todorovska at 213/740-0616 or mtodorov@usc.edu.

News of the Profession

Employment Opportunities

Johns Hopkins University, Baltimore, MD. Tenure-track assistant professor position in the area of structural engineering or structural mechanics. Contact: Nicholas Jones, Chair, Department of Civil Engineering, Johns Hopkins University, 3400 N. Charles St., Baltimore, MD 21218; nick@ceaxp1.ce.jhu.edu; www.ce.jhu.edu.

National Institute of Standards and Technology (NIST), Gaithersburg, MD. Senior position at ZP-V (GS 15) pay level in structural or mechanical engineering. Duties will include developing and leading a world-class multi-investigator program, and expanding and leveraging the ongoing research areas in which the Structures Division is engaged. Applications must be postmarked by January 31, 2000. Contact: NIST, Human Resources Management Division, 100 Bureau Dr., Stop 3550, ATTN: NIST-99-ASF-GA, Gaithersburg, MD 20899-2550; www.nist.gov.

University of Oregon, Eugene, OR. Entry-level tenure-track position in the Department of Geological Sciences. They seek individuals who study surficial geologic processes and hazards characteristic of tectonically active continental margins, including mass movements and dynamic links between the creation and destruction of topography. Contact: Surficial Processes Search Committee, Department of Geological Sciences, 1272 University of Oregon, Eugene, OR 97403-1272.