

*November 4th East Bay Program*

*A Message from the President*

**SEISMIC PROTECTIVE SYSTEMS, SEISMIC ISOLATION AND DAMPING SYSTEMS**

Prof. Michael C. Constantinou  
University at Buffalo, State  
University of New York

*By Hamid Fatehi, Program Chair*



Prof. Constantinou will be updating us on the latest research being performed at University of Buffalo in the area of Seismic Isolation and Damping Systems. He will be using a number of projects where he has been a consultant to elaborate on the practical consideration in implementing these systems. Prof. Michael Constantinou is a professor and Chair at the Department of Civil, Structural and Environmental Engineering University at Buffalo, State University of New York.

Seismic isolation is a construction technique and a technology for mitigating the damaging effects of earthquakes on structures through the introduction of flexibility and energy absorption capability by use of a seismic isolation system. The objective of adding an energy dissipation (or damping) system to new and existing construction is to dissipate much of the earthquake-induced energy in elements not forming part of the gravity framing system. Key to this construction technique is limiting or eliminating damage to the gravity-load-resisting system.

This lecture will introduce the audience to the theory and application of these tech-

nologies in an approach that unifies research and implementation. The presentation will be pictorial, and will emphasize the developmental work in these technologies at the University at Buffalo. Selected applications of these technologies will be discussed, in which important aspects of the analysis and design will be presented. These applications will include the LNG tanks in Greece, the Bolu viaduct and the Ataturk Airport in Turkey, the Woodrow Wilson Bridge in Washington, DC, the Museum of the Acropolis in Greece, applications of the toggle and scissor-jack damping systems, and the Sakhalin gas platforms in Russia.

**Meeting Notice**

**Tuesday, November 4th, 2003**

Assembly	5:45
Dinner	6:30
Program	7:30

**Faculty Club, UC Berkeley**

*For directions and parking information, see flyer inserted in this newsletter.*

Fax registration form on the back of this newsletter to the SEAONC office by 12 noon Friday, Oct. 31<sup>st</sup>, 2003  
**FAX: 415-764-4915**

Several weeks ago I attended a meeting here in San Francisco of an organization called the ACE Mentor Program. ACE is the acronym for Architects, Contractors and Engineers and the organization's goal is to provide an after-school outreach program to inner-city high school students, especially disadvantaged ones, who might not be aware of opportunities for careers in design and construction. ACE was started several years ago by Charles Thornton, the well-known New York structural engineer, and has been very successful in a number of East Coast cities. It depends on volunteer structural, mechanical and electrical engineers, architects and contractors. The intent is to launch the program this year in San Francisco, Oakland and San Jose.

In the course discussing volunteer needs for the San Jose area, the team leader for that section, an architect, asked where she might look for volunteers. I recommended that she start with structural engineers, and specifically with SEAONC. My reasoning was that it is my impression that structural engineers, and particularly SEAONC members, are the most likely people to provide the volunteer leadership needed for this type of program. She was impressed and asked why this is the case with SEAONC. After pointing out that the number of structural engineers in the room exceeded the combined total of architects, mechanical and electrical engineers and contractors, I listed for her some of the community-based activities our members are currently involved in. The best known include Student Impact, Rebuilding Together and Leap. Following is

*Continued on page 2*

## A Message from the President

Continued from page 1

a brief description of each of those activities:

Student Impact Project, also known as the Three Brick Bridge Project, is an eight-week high school program initiated and administrated by the Engineers Alliance for the Arts. Teams of engineers volunteer in art, science, and math classrooms, teaching basic structural engineering principles through the context of a model bridge design. The program is directly integrated into the class curriculum. Students are introduced to concepts of load path, tension and compression elements, and constructability, as well as the multidisciplinary aspects of aesthetics, and verbal and written communication skills. The program culminates in an inter-school competition and awards ceremony where student teams present their bridges to a judging panel. In 2003, the program reached over 200 students in eight schools across the Bay Area, with the participation of 40 SEAONC members representing over \$200,000 of billable hours. The Student Impact Project is a rewarding way to reach a broad spectrum of students and directly impact the high school curriculum. If you're interested in Student Impact, there will be announcements in the newsletter and website. In the meantime, you can contact Kate Stillwell at: [kstillwell@degenkolb.com](mailto:kstillwell@degenkolb.com).

Rebuilding Together (formerly Christmas in April): This organization brings sponsorship and volunteers together to help low-income homeowners, particularly those who are elderly or disabled. SEAONC has been involved in this effort for 12 years, and brings enough volunteers together each year to tackle one of the organization's most challenging residential projects. There is discussion this year about taking on a commercial project, such as a women's or homeless shelter. Volunteers, and those wishing to contribute financially, should contact the SEAONC Public Affairs and Membership Committee. See the SEAONC website.

Leap... "Imagination in Learning" is a local non-profit organization that utilizes resources from the local building indus-

try to administer art and architecture residencies in Bay Area schools. The organization is centered around encouraging imagination and creativity in young minds through curriculum based participatory projects. Leap was formed in the wake of Proposition 13 and is widely known for its famous Sandcastle Classic fund-raiser, held every September at Ocean Beach. Anyone interested in participating is welcome to contact the Leap office at 415.512.1899.

It's interesting that while SEAONC (and of course SEAOC) has made its reputation nationally and internationally from the contributions its members have made to the improvement of structural and seismic safety, we have definitely not ignored the needs of our immediate community. By the way, if you are interested in ACE, or any of our other programs, please let me know through the SEAONC office. Needless to say, each of these activities has an ongoing need for both volunteers and financial contributions.

- David Bonneville, President



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## CALENDAR OF EVENTS



### November 4

East Bay Dinner Meeting and YMF Student Night at Berkeley

### November 11

DES Committee Meeting  
KPFF, San Francisco Office

Business Forum Luncheon  
Joint Meeting with AIA, SF Chapter  
AIA Office, San Francisco

### November 11 & 18

Fall 2003 Seminar  
Light Gauge Steel Construction  
Continuing Education Committee  
PG&E Auditorium, San Francisco

## IN MEMORIAM

*Paul F. Fratessa, Honorary member, and Past President of SEAONC*, died on September 26, 2003 at his home in Lincoln Hills California.

Paul received his Bachelors and Masters degrees in Civil Engineering at San Jose State College, and worked for several Engineering firms in the Bay area, including H.J. Degenkolb and Ruthroff and Englekirk before starting his own company in Oakland, CA. He was also the head of the Department of Architectural Engineering at California Polytechnic State University at San Luis Obispo before his recent retirement.

His other activities included: Fellow of Architectural Engineering Institute – ASCE, Structural Engineering Association of California, National Council of Structural Engineers' Association, California Seismic Safety Commission, Planning Commission, City of Moraga Licensed Soccer Coach. Paul also gave many engineering presentations and was a frequent writer of engineering articles.

Paul and Mary-Jo moved to Lincoln after his retirement in May. In lieu of flowers, contributions may be sent to the Paul Fratessa Memorial Scholarship, CalPoly-CAED, Bldg. 5, San Luis Obispo, CA 93407. There will be a public Celebration of Life on November 15<sup>th</sup> at 2:00 p.m. at 2078 Coldwater Lane, Lincoln, California.

*Contributed by Charles L. Vickers*

## Committees on Assignment

### **DISASTER EMERGENCY SERVICES**

#### **Upcoming ATC-20 Training**

by Jeff Falero, DES Committee Vice Chair

The DES Committee would like to remind current DSW volunteers that it will be holding the final two ATC-20 SUPPLEMENTAL trainings for 2003. If you currently possess a DSW-Volunteer card without an expiration date, it will expire at the end of 2003. To obtain a new card, you must either attend this 2-hour Supplemental Training (cost is only \$30), or the full day-long ATC20 training seminar in the future. If you currently do not hold a DSW card, you will need to take the full day-long seminar.

SUPPLEMENTAL Training will be offered at the following times and locations:

1. Date & Time: November 12, 5:30pm  
Location: Interactive Resources  
117 Park Place  
Point Richmond, CA  
Instructor: Don Cushing, Interactive Resources
2. Date & Time: December 2, 4:30pm  
Location: The City Club  
155 Sansome Street  
9th Floor, Bechtel Room  
San Francisco, CA  
Instructor: Raymond Lui, KPFF Consulting Engineers

#### **ATC-20 TRAINING SEMINAR & PROCEDURES**

If you are interested in learning about how buildings are tagged (green, yellow, or red) following an earthquake or would like to brush-up on what you've learned in the past, this should be a great opportunity. This daylong event will be held in late Spring 2004 at an East Bay location with a good variety of building types that we plan to mock-up as part of the seminar. The ATC-20 training seminar focuses on the post-earthquake safety evaluation of buildings. Expect a good list of speakers and presenters. Look for a seminar announcement and sign-up form in the February 2004 newsletter.

#### **BORP UPDATE**

The Building Occupancy Resumption Program (BORP) is an award-winning program of the San Francisco Department of Building Inspection, developed in cooperation with SEAONC. BORP allows building owners to pre-certify private post-earthquake inspection of their buildings by qualified licensed engineers upon acceptance of a written inspection program. The BORP is also a subcommittee of the DES Com-

mittee, and it reviews and recommends approval of written inspection programs; develops BORP guidelines, training programs, and other informative materials. A recent ABAG Survey asked whether Cities and Counties have a program similar to that of San Francisco, which first introduced the BORP. No fewer than 8 local Bay-Area jurisdictions responded that they were either amenable to the BORP program, or had one now underway. Congrats to Zan Turner and the BORP Subcommittee for all their good work!

#### **GET INVOLVED**

If you are interested in helping the committee organize the ATC-20 Training Seminar in Spring 2004, or if you are interested in reviewing BORP proposals, or if you are interested in supporting SEAONC Engineers involved in FEMA Urban Search and Rescue (US&R) teams based in Menlo Park and Oakland, it is never too late to get involved! Feel free to contact me (jeff@gfidseng.com) or simply show up at our next DES meeting, which is scheduled for Tuesday November 11 at 5:30 PM in the new San Francisco office of KPFF: 1160 Battery Street, Suite 300.

We hope to see you then.

### **YMF Student Night at Berkeley**

YMF will be hosting a Student Night with the UC Berkeley Student Chapter of SEAONC before the next Dinner Meeting November 4th. The students will be attending the Dinner Meeting and be touring the Oakland Office of Rutherford and Chekene beforehand.

This will be our selling point for students to join SEAONC, so mingling with the students is strongly encouraged.

If you have any questions or need further information, please feel free to contact Ali Afrasiabi at aafraziabi@umerani.com.

*Hope to see you there!*

## 2003-04 Committee Chairs

### **Business Forum**

Simin Naaseh  
415/837-0700  
simin@forell.com

### **Bylaws**

J.E. Goudie  
925/933-5876

### **Computer Applications (TBD)**

### **Construction Quality Assurance**

Art Dell  
415/989-9900  
adell@soha.com

### **Continuing Education**

Troy Morgan  
415/837-0700  
troy@forell.com

### **Disaster Emergency Services**

Joe Zsutty  
408/298-9018  
jzsutty@aol.com

### **Existing Buildings**

David Bonowitz  
415/771-3227  
dbonowitz@mindspring.com

### **Legislative**

David Wilson  
415/834-2010  
dwilson@cdengineers.com

### **Professional Practices**

Douglas Hohbach  
650/617-5930  
dhohbach@hohbach-lewin.com

### **Program**

Hamid Fatehi  
415/957-9445  
hamid.fatehi@arup.com

Pat Chow (South Bay)

650/428-2860  
patchow@rpse.com

### **Public Affairs & Membership**

Derrick Roorda  
415/398-5740  
droorda@de-simone.com

### **Public Relations**

Carrie Bischoff  
415/392-6952  
cbischoff@degenkolb.com

### **Seismology & Structural Standards**

Gary Mochizuki  
925/938-3303  
gary@structsol.com

### **Website**

Darrick Hom  
510/272-9040  
dbhom@degenkolb.com

### **Young Members Forum**

Ali Afrasiabi  
650/494-1600  
aafraziabi@umerani.com

## Continuing Education Committee

### Fall 2003 Seminar

By Troy Morgan, CEC Chair

The SEAONC Fall Seminar is rapidly approaching, and we hope everyone will take advantage of this exciting opportunity to receive up-to-date information on Light Gauge (Cold-Formed) Steel Design and Construction. The seminar features some of the foremost experts on light-gauge steel, and is sure to be a valuable resource for structural engineers, architects, and building contractors at all levels of experience.

The first night of the seminar will feature Hank Martin, who will give an overview of light gauge steel and introduce the various governing provisions, including those to be adopted in the future. Following Mr. Martin will be Marc Press, presenting light gauge steel load-bearing wall systems. After the break, Reynaud Serrette will present light gauge steel lateral force-resisting systems. The second evening will begin with Tom Castle, who will present light gauge interior wall and cladding systems. Ray Grage will then be discussing general light gauge steel detailing topics and the issues than are typically faced in construction. Finishing the evening will be Chris Tokas, who will overview light gauge detailing for OSHPD-reviewed projects.

We are very excited about this Fall Seminar, and are looking forward to strong attendance from registrants and vendors alike. Please refer to the insert in this newsletter for complete information and registration instructions. If you have any questions about this seminar or the Continuing Education Committee, please feel free to contact me at troy@forell.com

## Posting for Membership

### Life Members SE

Stewart Larson  
Larson-Yuen Associates, Inc.

### Member

Michael Allen  
Designer, Degenkolb Engineers  
Lisa Hardin  
Design Engineer, Hohbach  
Lewin, Inc.  
Clara Lau  
Engineer, Rinne & Peterson  
Structural Engineers

### Associate

Nicholas Bucci  
Designer, Degenkolb Engineers  
Natan Litinskiy  
Detailer EIT, CE Toland  
Linda Stewart-Knight  
Assistant Engineer, Peoples  
Associates  
John Van Auken  
Vice President, North Valley  
Graphics, Inc.  
Grace Yamamoto  
Engineer, Arup

### Industry

Teresa Derian  
President, Sales & Marketing,  
Steel Cast Connections  
William Gibb  
President, Steel Cast Connections

### Student

Kelly Jee-Hyeon Kim  
Graduate Student,  
San Francisco State University

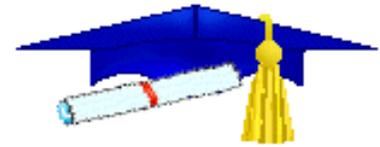
**Thank you to the following members and firms who contributed to the SEAONC Scholarship Fund since last month:**

### \$150 - \$51

Helmut Krawinkler

### \$50 and Under

Harold Engle  
Matthew Engle  
Mikael Gartner  
Alan Kren  
Constantine Shkapsky



Make a contribution this year when renewing your membership and join this prestigious list!

## New Members

### Member

Shalva Marjanishvili  
Senior Engineer/2003  
*Hinman Consulting Engineers, Inc.*

### Associate

Derek Beaudoin  
Staff Engineer (EIT)  
*Watry Design, Inc.*  
Brian Smith  
Assistant Engineer  
*Madsen, Kneppers & Associates*

### Student

John Eggers  
Graduate Student  
*University of Texas*

## STRUCTURAL DRAFTING SERVING PRINCIPALS

**650-327-2670**

**Walton Bruce McMillan**  
Civil Engineer C022059

746 Bryant Street, Palo Alto, CA 94301



The **Applied Technology Council (ATC)** is pleased to announce the immediate availability of the following recently completed reports, which are available through the ATC office (201 Redwood Shores Parkway, Suite 240, Redwood City, California 94065; phone, 650/595-1542; fax, 650/593-2320; e-mail, [ATC@ATCouncil.org](mailto:ATC@ATCouncil.org) and ATC's Online Store ([www.ATCouncil.org](http://www.ATCouncil.org)):

**ATC-13-1 Report, *Commentary on the Use of ATC-13 Earthquake Damage Evaluation Data for Probable Maximum Loss Studies of California Buildings*.** The purpose of this *Commentary* is to provide guidance to consulting firms who are using ATC-13 expert-opinion data (published by ATC in 1985) for probable maximum loss (PML) studies of California buildings. This report explains the development of the ATC-13 expert-opinion estimates of physical damage caused by earthquakes, the limitations of the ATC-13 data, and the issues associated with using the data for PML studies. The report also contains three appendices containing information and data not included in the original ATC-13 report: (1) ATC-13 model building type descriptions, including methodology for estimating the expected performance of standard, nonstandard, and special construction; (2) ATC-13 Beta damage distribution parameters for model building types; and (3) PML values for ATC-13 model building types. The report was funded by ATC's *Henry J. Degenkolb Memorial Endowment Fund* (66 pages; \$30 per copy, plus shipping and sales tax). All proceeds from the sale of this report will be deposited in the *ATC Endowment Fund*.

**ATC-51-1 Report, *Recommended U.S.-Italy Collaborative Procedures for Earthquake Emergency Response Planning for Hospitals in Italy*.** The report contains: (1) descriptions of current procedures and concepts for emergency response planning in the United States and Italy, (2) an overview of relevant procedures for both countries for evaluating and predicting the seismic vulnerability of buildings, including procedures for postearthquake inspection, (3) recommended procedures for earthquake emergency response planning and postearthquake assessment of hospitals, to be implemented through the use of a Postearthquake Inspection Notebook, which is included as an appendix in the report, and demonstrated through the application on two representative hospital facili-

ties; and (4) recommendations for emergency response training, postearthquake inspection training, and the mitigation of seismic hazards. The report was developed with funding from the Servizio Sismico Nazionale of Italy (Italian National Seismic Survey, NSS) (120 pages; \$55 per copy, plus shipping and sales tax).

**ATC-57 Report, *The Missing Piece: Improving Seismic Design and Construction Practices*,** was developed to provide a framework for eliminating the technology transfer gap that has emerged within the National Earthquake Hazards Reduction Program (NEHRP) that limits the adaptation of basic research knowledge into practice. The report defines a much-expanded problem-focused knowledge development, synthesis and transfer program to improve seismic design and construction practices. Two subject areas, with a total of five Program Elements, are proposed: (1) systematic support of the seismic code development process; and (2) improve seismic design and construction productivity. The report was funded in part by NIST and in part by ATC (102 pages; \$40 per copy, plus shipping and sales tax).

The ***Eighth International Conference on Structures Under Shock and Impact*** is to take place from March 29 - 31, 2004 and the ***Eighth International Conference on Computer Aided Assessment and Control in Damage and Fracture Mechanics*** will immediately follow from March 31 - April 2, 2004. Both conferences will be held in Crete, Greece.

I am currently preparing the programs for these conferences and do hope that you can participate. These successful conferences have attracted the interest of many of our colleagues around the world and continue to update the international scientific community through the subsequent distributions of the conference books and the permanent archives of conference papers in the WIT eLibrary on our website.

If you wish to present a paper, I will need to receive your abstract now so that we can incorporate your work into the desired conference programme. At this stage, I only need short abstracts (200 words or so) plus the title of the paper and name(s) of the author(s) with affiliation(s) and full particulars of the corresponding author. Please note that the paper

deadline is December 8th, 2003. However, if you need any additional time please contact the Senior Conference Co-ordinator, Rachel Green at [rgreen@wessex.ac.uk](mailto:rgreen@wessex.ac.uk). For further information about the conferences, you can visit our website at: <http://www.wessex.ac.uk/conferences/2004/>

By *Carlos Brebbia*, Conference Director

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#### 2004 L.A. TALL BUILDINGS CALL FOR PAPERS

The 2004 Annual Meeting of the Los Angeles Tall Buildings Structural Design Council will commemorate "A Decade of Experience." The focus of the meeting will be the *direct effect on structural engineering design practice from the key earthquakes of the past 10 years*, including the 1994 Northridge Earthquake and 1995 Kobe Earthquakes.

The Council is calling for papers for the annual meeting to be held in Los Angeles on May 7, 2004 at USC's Davidson Center. Considering the context of the past 10 years, suggested topics for papers include: impact of new knowledge on structural design practice, impact of changes in building code provisions for steel, concrete, precast concrete, masonry, wood, nonstructural components, and energy dissipation, impact of new geotechnical engineering practices, changes in the legal environment and shortcomings still be to rectified. A one-page abstract describing the content of the paper must be received by December 15, 2003. Final papers are due March 15, 2004.

Submit abstracts to:  
Dr. Gregg E. Brandow, LATBSDC  
Executive Director  
Brandow & Johnston Associates  
1660 West Third Street  
Los Angeles, California 90017  
Email: [gbrandow@bjase.com](mailto:gbrandow@bjase.com)  
Web: [www.TallBuildings.org](http://www.TallBuildings.org)

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#### Congratulations!

Toft, de Nevers & Lee has added Kevin J. Capitolo as Associate to the firm. Mr. Capitolo is a licensed Civil and Structural Engineer in the State of California.

**Forell/Elssesser Engineers**, an award-winning structural/civil engineering firm, offers outstanding career opportunities to engineers and CAD drafters with all levels of experience who seek a dynamic, challenging and rewarding work environment ([www.forell.com](http://www.forell.com)). Work on exciting projects and collaborate with innovative design engineers. We offer an unparalleled salary & benefits package, including employer matched 401(k), pension and incentive compensation plans. Contact: Jim Guthrie, 160 Pine St. #600, San Francisco, CA 94111; fax 415/837-0800 or [jim@forell.com](mailto:jim@forell.com)

Structural Engineer - Are you dynamic, competitive, creative? **Marr Shaffer & Miyamoto** is ready for you. Established over a half a century ago, MSM is one of the most respected engineering firms, with an office in Pasadena and Sacramento. Our projects range from complex high-rise structures to commercial buildings with expertise in seismic rehabilitation and state-of-the-art design procedures. In earthquake engineering we design retrofits and new buildings with dampers, base isolators and fiber reinforced plastic. We are seeking project engineers, project managers, and CAD drafters. Communication skills and a commitment to be the best are essential. We offer a great working environment, a complete benefit package, and a chance to take a great life journey! Check out our website at [www.msml.com](http://www.msml.com) for more information. If you are ambitious and have a minimum 2+ years experience with a variety of building materials (steel, concrete, timber), please submit your resume to [resume@msml.com](mailto:resume@msml.com)

**Tipping Mar & Associates** is an award winning structural engineering firm. We have an enthusiastic staff of 17 who work collaboratively. Our ap-

proach is innovative, and our projects are diverse. We are seeking a bright, creative, self-motivated individual for a challenging position as a structural engineer. Please send your resume with a cover letter to Tipping Mar & Associates, 1906 Shattuck Ave, Berkeley, CA 94704, fax to 510-549-1912, or e-mail [steve@tippingmar.com](mailto:steve@tippingmar.com)

#### **Chief Structural/Civil Engineer**

- Plan and direct the engineering activities (civil, structural, mechanical engineers, designers) on the design, development, manufacture and installation/construction of major broadcast systems.
- Ensures all engineering projects, initiatives and processes are in conformance with the organization's guidelines.
- Design of aluminum and steel structures.
- Civil Works and foundation design experience.
- Hands-on familiarity w/Codes and Standards (AISC, ACI, UBC, etc.).
- Oversee functions of and provide guidance to staff of engineers in the performance of their daily duties.
- Proven exp. with estimating engineering tasks, program budgets, and developing and adhering to schedules.
- BS in Civil/Mechanical Engineering plus 10+ years progressive responsibility required; P.E. and MS strongly preferred.

Send resume and cover letter to H R Director at: [Jobs7310@hotmail.com](mailto:Jobs7310@hotmail.com).

**Howard Carter Associates**, located in Monterey since 1955, is seeking a registered engineer with experience in structural design and detailing. Ideal candidate will be reliable, self-motivated, AutoCad proficient, have excellent communication skills, and be capable of managing a project from

start to finish. We offer excellent benefits, competitive salaries, and exposure to a broad range of projects. Please fax resume to 831-373-5872

Structural Engineer with 1 to 3 years experience wanted in **Marin County** engineering/ architectural firm. Wide variety of projects in design, repair and forensics. Selected engineer will have good writing skills as well as engineering skills, and be able to work well with other staff members and clients. Excellent working environment and benefits. Email resumes to [ellen@waassoc.com](mailto:ellen@waassoc.com).

**PARADIGM Structural Engineers, Inc.** is growing. Opportunities for Staff Engineers (with a minimum of 3 to 5 years experience), Senior Project engineers, and drafters are available. Come join a team of professionals dedicated to development, client satisfaction and upward mobility. If you are seeking a challenging position that fosters growth and allows you to develop to your full potential, come see us at [www.paradigmse.com](http://www.paradigmse.com)

Engineer, Associate Plan Check - **Santa Clara County Building Inspection Office** is seeking a California licensed civil or structural engineer with commercial/residential plan check/design experience and good knowledge in California Building Code & structural design. Salary range \$74,929 - \$91,071 annually. For job application, call (408) 299-5830 or [www.sccjobs.org](http://www.sccjobs.org).

**SOHA Engineers** has openings:  
-Project Engineer with 4-7+ yrs exp. In structural/seismic analysis and design of buildings. CE license. Must have good technical skills, able to work fairly independently, team player with interest in working in a collaborative and technically challenging environ-

ment.

-Project Manager/Principal Structural Engineer, 10-15+ yrs exp. SE license. Must have excellent technical, verbal and written communication skills.

-SOHA offers stability, diversity of projects, and career growth opportunities. Please send resume with cover letter to: SOHA Engineers, c/o Human Resources, 550 Kearny Street, Suite 200, San Francisco, CA 94108 or Fax 415-989-9909.

Looking to escape the high cost of living? **Teter Consultants** (www.tetercon.com) an AE firm in Central California is seeking a qualified structural engineer with 5+ yrs experience designing wood, concrete, masonry and steel structures (licensed PE preferred). Competitive salary and benefit packages. If you are interested in working in a positive environment, fax resume to 559.438.7554 or e-mail [bettyg@tetercon.com](mailto:bettyg@tetercon.com).

**GFDS Engineers** has been providing structural engineering services from its San Francisco office for over 40 years and is dedicated to quality design and a thoughtful approach to integrating structure and architecture. We are looking for a bright, creative individual with a minimum of 5 years experience in the design and detailing of projects with structural and architectural distinction. MSCE and SE preferred. Please email your resume to [linda@gfdseng.com](mailto:linda@gfdseng.com)



**Job Opening  
Project Structural Engineer**



**OLMM**

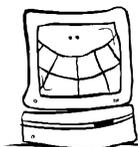
**OLMM** is a well-established and reputable structural engineering firm with offices in Oakland and San Francisco. We have immediate opening for a Project Structural Engineer in our Oakland office. Position requires PE or SE license, minimum 6 years of progressively responsible experience in the analysis and design of major building structures, and strong communications skills.

We offer top compensation package, excellent opportunity for growth, challenging projects, and a great place to work. Come join us and make a difference!

Please e-mail resume to [alyssa@olmm.com](mailto:alyssa@olmm.com).

**December News  
deadline:  
Monday, Nov. 10<sup>th</sup>,  
2003**

Submit your articles by  
e-mail to:  
[SEAONC@ix.netcom.com](mailto:SEAONC@ix.netcom.com)



**Job Forum  
Insertion Fees:**

\$150 for up to 450  
characters/spaces

\$15 for each 45  
characters/spaces  
thereafter

All job forum ads will  
be posted on the  
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<b>1/3 Page</b>	<b>\$360/mo.</b>
<b>1/4 Page</b>	<b>\$270/mo.</b>
<b>1/6 Page</b>	<b>\$225/mo.</b>

Rates are for finished camera-ready black and white ads or proofed PDF files with embedded fonts. *Full payment is required at time of insertion order.* For advertising contract, size specifications, and special rates for running an ad for multiple months, contact the SEAONC Office at [seaonc@ix.netcom.com](mailto:seaonc@ix.netcom.com) or phone 415/974 -5147.

NOVEMBER LUNCHEON

AIA Office - San Francisco  
130 Sutter St., Hallidie Bldg., Ste. 600  
Tuesday, November 11th, 2003 from 12:00p.m. – 2:00 p.m.

***Firm Survival in Turbulent Economic Times***  
*A Joint Meeting With the AIA, SF Chapter*

Join us for this interactive discussion about effective measures we can take in our businesses to survive the tough demands of this turbulent economy. We will discuss warning signs and indicators to look for and monitor, to be able to make the right decisions at the right time.

We have invited Phil Edwards President of Edwards Management Group to talk to us about successful survival measures used by the A&E industry firms, and to moderate the follow up conversation. Phil Edwards specializes in providing financial/operational, management, and ownership transition services to Design Industry Firms for over twenty years. He is on the faculty of Advanced Management Institute for Architecture and Engineering and is educated in accounting, finance and behavioral sciences. With his extensive background, Phil will give insightful guidance about:

- Staffing: Appropriate staff ratios, cutback strategies, etc.
- Projects: Need to pick and choose projects wisely
- Overhead costs: How to control costs without affecting the operations
- Bankers: When and how to use line of credit
- Warning signs: What to monitor and how often

This promises to be an informative discussion on a subject that matters – more so than ever. Join us and bring your questions.

**Cost:** \$20 for Business Forum Members & AIA Members  
\$30 for Non-Business Forum Members & Non-AIA Members

**Meal:** Sandwiches will be served

**RSVP:** Contact the SEAONC office at [seaonc@ix.netcom.com](mailto:seaonc@ix.netcom.com) or call (415) 974-5147.

Registration Deadline is *Friday, November 7<sup>th</sup> at 12:00 p.m.*  
Space is limited so register early.

SEPTEMBER 9<sup>TH</sup> SAN FRANCISCO PROGRAM WRAP-UP

By Bryce Tanner, Program Committee

The September monthly meeting featured a presentation by Dr. John M. Barsom on fracture in steel welded joints. His lecture, entitled “Structural Failures: Effects of Joint Design,” is a companion to the paper which was selected for the 2003 T.R. Higgins Award.

Dr. Barsom noted three interrelated factors that can lead to fracture. Those factors are: *stress concentration at local changes in geometry, restraint due to material geometry and temperature differentials or non-uniform yielding of material* and *presence of initial cracks or defects*. These three factors were present in several past structural failures highlighted during the discussion as examples of errors in joint detailing, material choice and fabrication. Though some of the examples were drawn from the ship-building industry, Dr. Barsom also emphasized the failures observed in pre-Northridge beam-column welded connections, particularly the weld between beam bottom flange and column face.

Some of Dr. Barsom’s observations about this type of connection were as follows:

- The weld access hole in the beam web typically terminated at the beam flange in a right angle. Right angles tend to act as points of stress concentration.
- Weld backup bars were left in place and often incompletely fused to the column face. The gap between the weld backup bar and the column face acts as an initial crack.
- The bottom-most weld pass, which was located just above the gap between backup bar and column face, was typically a lower-quality weld than the others due to an unfavorable angle for the welder.
- The welder could not place a continuous bead of weld across the bottom flange because of interference by the beam web. Slag was trapped at the start and stop points of the weld, resulting in initial defects.
- Weld metal was often placed too quickly, resulting in high temperature differentials and restraint stresses.
- The resulting principal tensile stresses in this joint were at an oblique angle to the column flange. As cracking tends to occur perpendicular to the angle of principal tensile stress, cracks were often observed within the column flange itself.

According to Dr. Barsom, a better bottom flange connection may be achieved by removing the backup bar, grinding away the original weld’s first pass, and placing an additional weld to the underside of the beam flange. This removes some of the weld defects while forcing the point of stress concentration further into the beam, so that cracks are less likely to propagate into the column. Dr. Barsom concluded his lecture by remarking that although we have made improvements in our detailing and weld material specifications for moment frames since Northridge, we need to apply these principles to other connection details as well. Most notably, we should consider using a curved transition instead of a right angle where brace frame gusset plates meet beams and columns.

We thank Dr. Barsom for his insightful talk and for his contributions to our field.

*Ad for  
Computers and Structures*

upcoming events

NOV

4 East Bay Dinner Meeting  
Faculty Club, UC Berkeley

YMF Student Night at UC Berkeley

11 DES Committee Meeting  
KPFF, San Francisco Office

Business Forum Luncheon/Joint Meeting with AIA  
AIA Office, San Francisco

11 & 18 Light Gauge Steel Construction  
Fall 2003 Seminar

Registration

**Structural Engineers Association of Northern California**

**November 4<sup>TH</sup> SEAONC DINNER PROGRAM, EAST BAY, FACULTY CLUB UC BERKELEY**

**5:45 pm**  
**General Assembly**

**6:30 pm**  
**Dinner**

**7:30 pm**  
**Program**

**Location:**  
**Faculty Club**  
**UC Berkeley**

*For directions & parking information, see flyer inserted in this newsletter.*

If no label is shown above, or for guests, please fill in the form below.

NAME \_\_\_\_\_

COMPANY \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PHONE \_\_\_\_\_ FAX \_\_\_\_\_

RSVP by Fax: 415/ 764-4915, e-mail: seaonc@ix.netcom.com, Phone: 415/974-5147

**Deadline for pre-registration: 12 noon, Friday, October 31<sup>st</sup>, 2003**

***Make check payable to SEAONC and bring with you to the door.***

Register early! Dinner and program reservations are limited. No cancellations after 12 noon, Friday, October 31<sup>st</sup>, 2003. No-shows will be invoiced. Tickets not claimed by 6:45 p.m. on the night of the event are subject to being sold. Note: Individuals with outstanding monthly meeting balances are required to pay in advance for a meeting reservation and pay all outstanding monthly meeting invoices.

<b>COST:</b>	PRE-REGISTERED	LATE REGISTERED (After Deadline)
SEAONC Member	<input type="checkbox"/> \$34	<input type="checkbox"/> \$39
Junior Mbr (29 and under)	<input type="checkbox"/> \$28	<input type="checkbox"/> \$33
Non-Member	<input type="checkbox"/> \$39	<input type="checkbox"/> \$44
Student	<input type="checkbox"/> \$15	<input type="checkbox"/> \$15