

**April 6<sup>th</sup> Program**

**T.Y. Lin**  
**Structural Engineering Pioneer**  
**A Retrospective of His Vision**

*By Hamid Fatehi, Program Chair*



T.Y. Lin (1912 - 2003)

Pioneer - "a person or group that originates or helps open up a new line of thought or activity or a new method or technical development," (Webster New Collegiate Dictionary). This definition applies to T.Y. Lin, Professor Emeritus in civil engineering at the University of California, Berkeley. He was a visionary whose pioneering work in prestressed concrete had a profound influence on modern structural design. April's program will illustrate the history of T.Y. Lin's professional contributions through his firm's projects and the vision he had that created lasting monuments to his brilliance. A career that led development of the United States prestressed and precast concrete industry, economic parking structures, arena roofs and cable structures, high rise buildings, and bridge building.

In the late 1950's one of his early students asked T.Y. to join him in starting a consulting engineering business. The firm supported the growth of the new prestressed concrete technology, prestressed concrete manufacture industry and provided structural engineering consulting services. T.Y. was associated with this Los Angeles based

company that evolved under the management of Felix Kulka and Y.C. Yang to a national and international company with multiple offices in the America's and Asia. During the 60's, 70's, and 80's the firm was recognized for long span structures, high-rise buildings, prestressed and post tensioned concrete structures and major bridge projects. The seeds of this firm have

*Continued on page 9*

**April 13<sup>th</sup> Program**

**Seismic Design and Behavior of**  
**Composite Steel-Concrete Moment**  
**Frame Buildings**

By Gregory Deierlein, PhD, PE  
Stanford University

*Pat Chow, Program Chair*

The South Bay meeting continues to feature exciting and current topics. SEAONC is pleased to present an evening with good food; great speaker; and an interesting program.

Composite moment frames, consisting of steel beams and reinforced concrete columns, were introduced about 25 years ago as a cost effective alternative to conventional steel frame construction in mid-to high-rise buildings. Since then, considerable research has been done to validate their performance for seismic design, which has led to their adoption into building codes.

This presentation will provide an overview of research and development on composite moment frames, including examples of practical applications, seismic design provisions, and results from a recent pseudo-dynamic test of a full-scale three-story composite frame.

Professor Deierlein is the Director of the John A. Blume Earthquake Engineering Center at Stanford University.

**A Message from the President**

**Securing Society against**  
**Earthquake Losses**

For most of us involved in structural engineering on the West Coast, earthquake safety or earthquake loss reduction is a significant part of our work. The earthquake problem may even give a certain flair to structural engineering that doesn't exist elsewhere in the country. A well known San Francisco structural engineer once told me that whenever he was traveling on an airplane and was greeting the passenger sitting next to him, he would introduce himself as a *structural engineer* if he was very busy and needed to be productive on the flight; and as an *earthquake engineer* if he wanted to spend the flight engaged in conversation.

*Continued on page 2*

**Meeting Notice**

There are TWO April  
dinner meetings:

**April 6<sup>th</sup>, 2004**  
**The City Club**  
**155 Sansome Street, 10th Floor**  
**San Francisco**

**April 13<sup>th</sup>, 2004**  
**Michael's at Shoreline**  
**2960 N. Shoreline Boulevard**  
**Mountain View**

Fax registration form on the back of  
this newsletter to the SEAONC office  
before 12 noon on:

San Francisco Mtg.: Fri., April 2<sup>nd</sup>  
South Bay Mtg.: Fri., April 9<sup>th</sup>

**FAX: 415-764-4915**

While the general interest in earthquakes and their effects on our the built environment is obviously a positive thing, it doesn't automatically translate into real progress in this field anymore than a building owner's general interest in earthquakes will make his building safer without actual structural improvements. Just as the building owner needs a plan and budget to address a seismic deficiency, the U.S. needs a plan and budget to provide society with the appropriate level of protection of both life safety and financial assets. Given our technology and economic power, are we providing the public with the level of protection it is justifiably assuming?

The Earthquake Engineering Research Institute (EERI) has recently undertaken an ambitious effort on behalf of all of us involved in reducing earthquake risk – structural and geotechnical engineers, geoscientists, architects, planners, public officials, and social scientists – and on behalf of the public itself. Our Congress is currently in the process of considering the reauthorization of NEHRP – the National Earthquake Hazards Reduction Program. The outcome of this reauthorization will have a major impact on our effectiveness as earthquake engineers to protect society against this very real hazard. EERI, as part of a NEHRP coalition, is playing a key role in Washington in the effort to educate congress to the scope of the earthquake risk so that funding can be set at an appropriate level.

NEHRP was established by the U.S. Congress in 1977 in response to the threat of large earthquakes in the U.S. and has provided significant funding for research in earthquake engineering. As structural engineers, we are probably most familiar with NEHRP through the publications known as the NEHRP *Provisions*, which are published triennially by BSSC and are intended to bridge the gap between seismic research and building codes. It's interesting to note that NEHRP was originally structured as an earthquake prediction program with a life-safety goal. The thought was that if science could predict when and where earthquakes might occur, we could focus our attention accordingly. Since that time, we've come to understand the limitations of earthquake prediction and to recognize that it is not the key to risk reduction. However, much has

been accomplished under NEHRP in the past twenty-five years, including improving our ability to design structures to resist earthquakes.

So what programs should be undertaken through NEHRP over the next twenty years and how much should our federal government spend? Those are the questions that are addressed by EERI in their research and outreach plan titled *Securing Society Against Catastrophic Earthquake Losses*. The EERI plan demonstrates the country's increasing vulnerability to earthquake loss and provides a comprehensive plan to serve as a framework for future research. EERI expresses a concern about the eroding levels of funding available for earthquake engineering research and takes the position that it is due to the lack of a holistic plan and a common voice. Reading the plan from a structural engineering perspective a couple of things stand out: first, although structural engineering plays a critical and central role, the overall challenge and opportunities extend well beyond our own field; and second, although the life safety problem is far from solved in this country, the scale of the economic problem after an earthquake will likely overwhelm our resources.

The EERI Plan comprises five integrated research and outreach programs for developing the tools to protect against catastrophic earthquake losses:

1. Understanding Seismic hazards
2. Assessing Earthquake Impacts
3. Reducing Earthquake Impacts
4. Enhancing Community Resilience
5. Expanding Education and Public Outreach

Structural engineering is most directly involved in the second and third programs but plays a role in all of them.

From the standpoint of seismic vulnerability it's interesting to note that while seismic safety is still an obvious concern in this country, to the point that earthquakes in both the West Coast and in mid-America could take thousands of lives, the potential economic losses are staggering. It is projected that the \$40 billion economic loss that shocked the public after the Northridge

earthquake can easily be expected to hit \$100 billion in future events. The point is made that the average annual financial loss from U.S. earthquakes is in the order of \$4.4 billion in residential and commercial buildings alone. When industrial transportation and utility losses are considered, the total exceeds an average of \$10 billion annually. This is noteworthy, considering the extent to which we are still shaken by the September 11, 2002 events, which resulted in about 3000 deaths and \$100 billion in economic loss.

The EERI Plan calls for an average annual spending of \$330 million, for a total estimated cost over twenty years of \$6.54 billion. This funding level may sound high for something that doesn't involve bricks and mortar and indeed it represents a significant increase over the current spending level. While it is unlikely that this level of spending will actually be approved by the Congress, at least not this year, it does at least serve as a starting point and as a basis for an ideal plan – perhaps one that could get the attention of Congress immediately after a major earthquake.

As with any budget, one needs to look at the various components of it to judge its reasonableness. It's impossible within the space of this column to cover what is presented in a 62-page plan, but a couple of the research areas are exciting and worth mentioning. These include the George E. Brown Jr. Network for Earthquake Simulation (NEES) project and the Advanced National Seismic System (ANSS). Both involve efforts to advance current and future technologies into earthquake engineering practice. NEES involves the construction or enhancement of engineering laboratories at fifteen universities. Its goal is to advance the state of knowledge in earthquake engineering through new methods for experimental and computational simulation. ANSS is an initiative of the USGS in collaboration with universities, private industry and state governments to modernize strong motion seismographic networks. It will consist of 6,000 new instruments concentrated in high-risk urban areas to monitor ground shaking and the response of buildings and structures. When fully devel-

## A Message from the President

*Continued from page 2*

oped, ANSS will provide the means to generate rapid ground shaking maps to facilitate post earthquake response.

SEAOC, along with about thirty other U.S. and international organizations involved in earthquake engineering, provided an endorsement of the EERI Plan. The SEAOC letter, contained within the plan, expresses the view that the plan "... will provide practitioners with the tools to improve safety of our communities throughout the United States." Chris Poland, past EERI president and frequent visitor to Washington as an advocate of the plan, considers it the ideal approach to getting the very broad earthquake risk picture to congress. The efforts so far have already resulted in commitments that will effectively double NEHRP spending over the previous budget. Copies of the EERI Plan can be ordered from EERI, who can be reached at [eeeri@eeri.org](mailto:eeeri@eeri.org).

- David Bonneville, President

## Letters to the President

*The President's column in the March newsletter titled "Our Careers in Structural Engineering", which dealt with globalization and outsourcing, generated a lot of interest among our members. The following are a few of the letters President Bonneville received.*

David:

Congratulations on another extremely well written column in the SEAONC newsletter. The article addressed one of the most critical issues facing both our profession and our nation, our competitiveness in the global economy. Unfortunately, you concluded the excellent discussion by adopting the mantra of the very people who are responsible for our lack of competitiveness, the education unions and the politicians that pander to them. American education is not falling behind because of lack of investment. In fact, the portion of the U.S. budget currently spent on education exceed the percentage spent on this segment in any time in our country's history. It is not the lack of investment in education that is leading to the sadly declining quality of our educational system but rather the focus of what our educators try to teach. As a society we have decided that the most important values to teach are the importance of "diversity" and the rights of the individual, that it is more important that

## Letters to the President

students "feel good" about how they are doing in school than that they actually learn something, that students learn to work together and produce mediocre products, rather than working as individuals to excel. Our educators today believe it is more important to point out the relatively insignificant role of historic figures who happened to be of an appropriate gender, race or national origin, than to instruct students in the truly significant events in world and national history.

Even our textbooks in mathematics and the sciences are littered with illustrations placed in the text only to push forward a social agenda. Until the citizens of this nation make it clear that facts are important, that whether you feel good or not, when you do a mathematics problem it is important to get the right answer, that gravity will pull things down, regardless of issues of diversity, we will fall far behind the other nations of the world. Our economies will suffer, our people will suffer and ultimately, none of us will feel very good.

Regards,  
Ronald O. Hamburger, SE

David:

Thanks for a good message this month. I think you (and Carly Fiorina) hit the nail on the head in noting that outsourcing is not going to be limited to functions that employ cheap labor, but will affect higher technology as well, especially if we don't fix our education systems. Our office has already outsourced some of our CAD overseas, especially in overload times, and just today, I saw some very impressive 3D renderings that one of our clients had had done in China. I expect, as you do, that the trend will move up the food chain and will eventually include some of our analysis and some of our detailing, at least on large projects. Your message was a good wake up call. I hope our politicians will begin to understand these issues better.

C. Mark Saunders

David:

Not having received my SEAONC newsletter for the past three months, I called our local office and they responsively mailed all three to me yesterday. One purpose of the this

*Continued on page 10*

## 2003-04 Committee Chairs

**Business Forum**  
Simin Naaseh  
415/837-0700  
[simin@forell.com](mailto:simin@forell.com)

**Bylaws**  
J.E. Goudie  
925/933-5876

**Computer Applications**  
(TBD)

**Construction Quality Assurance**  
Art Dell  
415/989-9900  
[adell@soha.com](mailto:adell@soha.com)

**Continuing Education**  
Troy Morgan  
415/837-0700  
[troy@forell.com](mailto:troy@forell.com)

**Disaster Emergency Services**  
Joe Zsutty  
408/298-9018  
[jzsutty@aol.com](mailto:jzsutty@aol.com)

**Existing Buildings**  
David Bonowitz  
415/771-3227  
[dbonowitz@mindspring.com](mailto:dbonowitz@mindspring.com)

**Legislative**  
David Wilson  
415/834-2010  
[dwilson@cdengineers.com](mailto:dwilson@cdengineers.com)

**Professional Practices**  
Douglas Hohbach  
650/617-5930  
[dhohbach@hohbach-lewin.com](mailto:dhohbach@hohbach-lewin.com)

**Program**  
Hamid Fatehi  
415/957-9445  
[hamid.fatehi@arup.com](mailto:hamid.fatehi@arup.com)

Pat Chow (South Bay)  
650/428-2860  
[patchow@rpse.com](mailto:patchow@rpse.com)

**Public Affairs & Membership**  
Derrick Roorda  
415/398-5740  
[droorda@de-simone.com](mailto:droorda@de-simone.com)

**Public Relations**  
Carrie Bischoff  
415/392-6952  
[cbischoff@degenkolb.com](mailto:cbischoff@degenkolb.com)

**Seismology & Structural Standards**  
Gary Mochizuki  
925/938-3303  
[gary@structsol.com](mailto:gary@structsol.com)

**Website**  
Darrick Hom  
510/272-9040  
[dbhom@ev1.net](mailto:dbhom@ev1.net)

**Young Members Forum**  
Ali Afrasiabi  
650/494-1600  
[aafraziabi@umerani.com](mailto:aafraziabi@umerani.com)

**CALENDAR  
OF EVENTS**



**April 6**

San Francisco Dinner Meeting  
City Club, San Francisco

**April 13**

South Bay Dinner Meeting  
Michael's at Shoreline, Mountain View

**April 14**

Business Forum Luncheon  
City Club, San Francisco

**April 24**

Rebuilding Together Day

**April 27**

Seismology & Structural Standards  
Committee Meeting

**May 2**

ATC-20 Training  
Golden Gate Club, San Francisco

**May 4**

San Francisco Dinner Meeting  
City Club, San Francisco

*Opinions expressed in the SEAONC NEWS are not necessarily those of the Structural Engineers Association of Northern California. Advertising rates and information sent upon request. Acceptance of advertising and informational brochures in the SEAONC NEWS does not constitute endorsement or approval by SEAONC of the products or services advertised. SEAONC reserves the right to refuse any advertising.*

*The SEAONC NEWS is published monthly by the Structural Engineers Association of Northern California, 74 New Montgomery Street, Suite 230, San Francisco, CA 94105-3411. It is distributed to members of SEAONC as a membership benefit. Reproduction for noncommercial purposes is allowed if the source is acknowledged.*

**Posting for Membership**

**Member SE**

Steven Curry  
Vice President, Murphy Burr Curry, Inc.  
Shaun Moynahan  
Principal, SEMCO Engineering, Inc.

**Member**

Hassan Ally  
Project Engineer, Tipping Mar + Associates  
Betty Chan  
Project Engineer, GPLA, Inc.  
Wen-Hsiung Lin  
Engineer/2002, Ben C. Gerwick  
Chan Siong Loh  
Design Engineer, Hohbach-Lewin, Inc.  
Swee-Young Tan  
Project Engineer, DES Architects & Engineers  
Do Tran  
Owner, TND2 Engineering & Construction

**Associate**

Meaghan Halligan  
Project Engineer, Murphy Burr Curry  
Akuvai, Hine  
Project Engineer, Murphy Burr Curry

**Student**

Carmen Ho  
Graduate Student, Stanford University  
Gerald Ng  
Graduate Student, Stanford University  
Karl Telleen  
Graduate Student, Stanford University  
Matthew Tsui  
Graduate Student, Stanford University

**Affiliate**

Geoff Eckert  
Senior Technical Recruiter, Aerotek Engineering  
Steve Saunders  
Saunders Construction Inc.

**New Members**

**Member SE**

Jason Towle  
Senior Engineer, Simpson Gumpertz & Heger, Inc.  
Chun Wong  
Project Structural Engineering Associate, DSA

**Member**

Ben Au  
Project Manager, Holmes Culley  
Lisa Hardin  
Design Engineer, Hohbach-Lewin, Inc.  
Shedly Seaman  
Engineer, Seamark Engineering

**Associate**

Gokhan Akalan  
Structural Designer, A.T. Merovich & Associates  
Jean-Pierre Chakar  
Jr. Structural Engineer, Skidmore Owings & Merrill, LLP  
Allison Johnson-Moore  
Engineer, Middlebrook + Louie

**Student**

Khanh Chau  
Graduate Student, Santa Clara University  
Christopher Durkin  
Graduate Student, Cornell University  
David Kane  
Masters Student, UC Davis  
Lukki Lam  
Graduate Student, University of California, Berkeley

**Industry**

William Gibb  
President, Steel Cast Connections

**Affiliate**

Paulette Salisbury  
Owner, Paulette Salisbury & Associates

**STRUCTURAL DRAFTING**

**Walton Bruce McMillan**

Civil Engineer C022059

650-327-2670

\$30 per HOUR

www.McMillanEngineers.com

746 Bryant Street Palo Alto CA 94301



## Committees on Assignment

### SEISMOLOGY & STRUCTURAL STANDARDS

By Gary Mochizuki, Committee Chair

The committee members have been very busy all year reviewing code related items and voting on the ballot items for NEHRP and ASCE7. One of the items that the committee is currently reviewing is the method of determining R values for proprietary lateral load resisting systems. For the time being, the International Code Council (ICC) is the governing body for producing Evaluation Service (ES) reports for proprietary products. These proprietary items include structural systems.

A stirring problem is the way that the ICC is approaching their ES reports for qualification of structural systems. At a recent State Seismology meeting, Trus Joist made a presentation on their TJ shear panel. They indicated that part of their process to obtaining their ICC ES report acceptance was to determine an R value for their product, but no guidance was given as how this was to be determined. ICC does not seem to care how it is determined. The problem with this is that a system can be qualified assuming a high R value say of 12 with justification through testing, but without any past performance during earthquakes. Since the entire building is designed for this value the other lateral load resisting elements along the load path would also be designed using an R value of 12.

A few months ago at an ICC hearing, Kevin Moore, representing SEAOC, made a seemingly convincing presentation on the pitfalls of using these high R values. However, when the issue was balloted, the product with this seemingly high R value was approved. We are in the process of reviewing and attempting to develop a rational method of determining R values for these systems that have no history of past performance.

Within the main committee there are various active subcommittees. The main tasks at the sub-committee level are as follows:

**Steel** – The sub-committee has been gathering information from their on-line survey on the braced frame design, but to date they have received only a few responses. The entire association was alerted of this survey, but very few people have responded. A larger cross section of the association must complete the survey, to make this survey worthwhile.

**Concrete** – Examples are nearly complete to show when a portion of a slab can be used as a collector for a shear wall.

**Foundations** – Micropiles are used often in Caltrans work. Design guides are available for their use, but for buildings there are no code provisions. Building code provisions are being prepared.

**Light Frame:** SEAOC and the Light Gauge Steel Engineers Association (LGSEA) will jointly produce a construction manual comprised of a single design example of a two story house worked out two ways once using light gauge steel and once using wood for comparison. The (LGSEA) will submit the design. The light frame sub-committee prior to publication would review the submitted

*Continued on page 8*

## Business Forum

### SEAONC BUSINESS FORUM APRIL MEETING

#### Preparing for that Winning Presentation

Wednesday, April 14, 2004

12:00 pm – 1:30 pm

City Club – San Francisco

155 Sansome Street, Bechtel Room, 9th Floor

Our April program promises to be a fun, interactive and extremely informative presentation by one of the most sought after presentation training coaches in the A/E/C industry. The program is designed to help individuals and teams present information targeted for each client or audience in an elegant and vital way, which highlights the talents and personality of each individual.

We will discuss the entire process of preparing for a winning presentation including:

- ◆ How to organize an effective presentation and how to make it instantly flexible if presentation or client conditions change
- ◆ How to overcome the anxiety and how to keep the body from getting in the way of the mind
- ◆ How to make a presentation seamless and show teamwork
- ◆ How to stay in control
- ◆ How to be sure that our presentation materials support our message and much more...

To help us with the above questions, we have invited Susan Murphy to be our speaker, who is the founder of Murphy Motivation ([www.murphymotivation.com](http://www.murphymotivation.com)). Murphy Motivation provides training, consulting, seminars and lectures to companies, organizations and individuals in the A/E/C field. Susan Murphy has spoken at the last six AIA National Conferences, as well as the PSMA/SMPS National Conference, where she is scheduled to speak again this year. Her areas of expertise include presentation skills, relationship building and maintenance, selling skills, coaching colleagues and employees, and personal counseling and coaching. Susan Murphy has the reputation of being a tough coach who uses her high energy and humor to keep her participants engaged and happy while they struggle to try new skills and to practice changed behavior.

We highly encourage you to attend and bring your staff members whether they are novices at this or natural presenters and marketers. We assure you that all will benefit from Susan Murphy's vast experience on the subject.

Please sign up early, as this will be a very popular meeting.

**Cost:** \$25 for Business Forum Members  
\$35 for SEAOC Members  
\$40 for Other Attendees

**Meal Selections:** Chicken, Flank Steak or Pasta

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

Registration Deadline is: **Monday, April 12th at 12:00 p.m.**



Are you interested in exciting projects and outstanding career opportunities? **Rutherford & Chekene**, a recognized leader in structural and seismic engineering, may be the place for you. We are looking for highly talented and motivated structural designers and analysis specialists of all levels of experience to work on some of the most prestigious building projects in the Bay Area and beyond. We offer a dynamic and highly collaborative office environment and a superior benefit package. Please send resume and letter of interest to Peter Revelli at [prevelli@ruthchek.com](mailto:prevelli@ruthchek.com), or call 510/740-3200.

In addition, our award winning team at **Rutherford & Chekene** is seeking an experienced geotechnical engineer to supplement our expanding geotechnical department. This is a unique opportunity for an individual with a strong interest in practicing geotechnical engineering in a multi-disciplinary setting with fellow structural and civil engineers. Candidates should have a PE license and 5-10 years of experience in geotechnical engineering; a GE license would be a plus. This position offers an opportunity for rapid advancement to Associate or higher status for a proven individual. Please send resume and letter of interest to Gyimah Kasali at [gkasali@ruthchek.com](mailto:gkasali@ruthchek.com), or call 510/740-3340.

**Tipping Mar & Associates** is an award winning structural engineering firm. We have an enthusiastic staff of 17 who work collaboratively. Our approach 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 to [steve@tippingmar.com](mailto:steve@tippingmar.com)

**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 indepen-

dently, team player with interest in working in a collaborative and technically challenging environment.

-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.

**DESIMONE Consulting Engineers**, a leading national structural engineering firm, has an immediate opening in our growing San Francisco office for a bright, creative, self-motivated engineer with strong technical and management skills. The ideal candidate should have 2-5 years experience in new design and seismic rehabilitation, as well as excellent communication skills and a PE (preferred). We offer a very competitive benefits package, coupled with a fun and dynamic work environment. Fax your resume to 415/398-9834 or e-mail: [rpolvka@de-simone.com](mailto:rpolvka@de-simone.com).

**NISHKIAN MENNINGER** SEEKS EXPERIENCED REGISTERED ENGINEER with 5 or more years experience in various types of structures; office buildings, high-rises, schools, multiple-tenant residential & other commercial projects, garages and seismic rehab. Resume & salary requirements to: 1095 Folsom Street, San Francisco, CA 94103 or e-mail: [lnishkian@nishkian.com](mailto:lnishkian@nishkian.com).

**Buehler & Buehler Structural Engineers Inc.**

B&B has over a half century in the industry and 6,500 projects under our belt. Our Sacramento and Roseville offices encompass a professional staff of 50 with 18 registered Structural Engineers. We are looking for Structural Engineers with 2-3 years experience and excellent communication skills, registered CEs preferred. Fax (916) 443-0313 / Email [buehler@bbse.com](mailto:buehler@bbse.com)

Senior Project Manager  
**KPFF Consulting Engineers** seeks Senior Project Manager w/a minimum of 10 years experience and SE license. Master's degree and healthcare experience preferred. Applicant must be motivated and possess excellent

technical, written and verbal communication skills. We offer excellent career growth opportunities with a competitive salary & benefits package. Send resume to: Office Manager, KPFF Consulting Engineers, 1160 Battery, Suite 300, SF, CA 94111. EOE

CAD OPERATOR  
**KPFF Consulting Engineers** seeks CAD Operator proficient with AUTOCAD 2000. Minimum 3 years structural drafting experience required. Send resume and salary history to: KPFF Consulting Engineers, 1160 Battery Street, Suite 300, San Francisco, CA 94111. NO PHONE CALLS or WALK-INS. EOE.

**Landtech Consultants**, a small established Fremont Structural/Civil Engineering firm is seeking an engineer with good communication skills. If you are interested in working on a variety of projects in a low stress pleasant environment send us your resume via fax (510) 505-9503 or email [ksobeid@landtech.com](mailto:ksobeid@landtech.com). We offer a competitive salary and benefits package and a wonderful opportunity for growth.

**City & County of San Francisco (CCSF)** – Geotechnical Engineer, Salary: \$3,179 – \$3,862 Biweekly. Geotechnical engineering work on city projects, performing subsurface investigations; geotechnical analysis and report preparation of municipal facilities projects; providing oversight and direction to consultants for geotechnical analysis and recommendations for any necessary changes that may occur during construction; performing field inspections of landslide and rock-fall events; serving as the department's geotechnical expert; managing personal services contracts for geotechnical, geological and environmental drilling, testing, analysis and report preparation; providing consultation services to other city agencies; supervising and training subordinates. Requires Five (5) years verifiable professional engineering experience, including two (2) years equivalent to a 5207 Associate Engineer level or higher; and possession of a Certificate of Registration as a Professional Engineer in California as a Civil Engineer and a Geotechnical Engineer License. Submit a standard CCSF Application, resume, verification of education/licenses/experience to: Department of Public Works, Personnel Office, 5241/BOE, 875 Stevenson St, Rm 470, SF, CA 94103. Announcement and applications also available at 44 Gough Street, SF,

## Job Forum cont.

CA from 8:00 a.m. to 5:00 p.m. (M-F). Position open until filled.

**TEAC Consulting Engineers**, an established reputable structural engineering firm located in San Ramon, is seeking Junior level Project Engineers and Senior level Project Managers. We offer a great working environment with a challenging variety of residential and light commercial projects. We specialize in Production Housing (Wood and Light-Gauge Steel), Custom Estates, Retail and Commercial structures. We are seeking motivated engineers that have a minimum of 2 years of relevant experience with a variety of building materials including wood, light-gauge steel, steel, concrete and masonry. Proficiency in Timber design is highly desirable. Our compensation is very competitive and we have a strong benefits package including flexible hours, employer paid family Medical and Dental Coverage and an Employer Matched 401K. Send resumes by fax to 925-275-0126 or e-mail to [employ@teacengineers.com](mailto:employ@teacengineers.com). No resume prepared, but you think you are an ideal candidate? Call Allison Tabor at 925-275-0110, Ext. 105.

**Rinne & Peterson Structural Engineers**, [www.rpse.com](http://www.rpse.com), seeks and executes diverse, challenging projects. Are you flexible, detail-oriented, customer-focused, with great communication skills? Want flexible hours, growth opportunity, competitive salary, great benefits and superb working environment? Please fax cover letter and resume to HR, Attn: Sharon, 650.428.2861, or e-mail [sharonberman@rpse.com](mailto:sharonberman@rpse.com).

**Jon Brody Consulting Engineers** is a small San Francisco firm with a reputation for design creativity and a high level of professional service. We work on a wide variety of project types, with a focus on the integration of structural requirements with architectural design objectives. Committed and focused engineers with strong design, analytical, interpersonal, and communications skills and a minimum of two years of design experience in California are encouraged to apply for either Project Engineer or Project Manager positions on our team. You can be a key part of the growth of a highly esteemed, award winning firm, assume a higher level of responsibility, and enjoy the atmosphere of a smaller, more flexible company. Competitive salary and benefit package including paid vacation, medical and retirement plans. E-mail resume/cover letter to

[inquiries@jonbrody.com](mailto:inquiries@jonbrody.com), or mail to Jon Brody Consulting Engineers, 1045 Sansome Street, Suite 200, San Francisco, CA, 94111.

**Hohbach-Lewin, Inc.** is currently hiring engineers for its Palo Alto and San Francisco offices. Current projects are predominantly in the commercial, education and residential markets. For more info, visit our website at [www.hohbach-lewin.com](http://www.hohbach-lewin.com). Successful candidates will be self-motivated, good communicators and have a strong technical background. Fax your resume to (650) 617-5932 or e-mail [dlewin@hohbach-lewin.com](mailto:dlewin@hohbach-lewin.com)

**The Office of Statewide Health Planning and Development's (OSHDP) Facilities Development Division (FDD)** reviews and inspects health facility construction projects valued in excess of \$2 billion, making it one of the largest building departments in the State of California. FDD enforces building standards as published in the California Building Standards Code as it relates to health facility construction.

### District Structural Engineer\*

The District Structural Engineer is assigned to a specific geographic area and performs difficult and complex field engineering work related to the design and inspection of acute care hospitals, skilled nursing facilities, and other design structures. Positions exist throughout the State of California.

### Senior Structural Engineer\*

The Senior Structural Engineer reviews plans (drawings), specifications, calculations, and other supporting documents required for the construction of acute care hospitals, skilled nursing facilities, and other design structures. Positions exist in Sacramento and Los Angeles.

\* OSHDP conducts continuous testing for each of these difficult to recruit classifications.

If you would like additional information regarding employment with the Office of Statewide Health Planning and Development's Facilities Development Division, please refer to FDD's web site at: <http://www.oshpd.ca.gov/fdd/Employ/index.htm> or e-mail [FDDPERSONNEL@OSHDP.CA.GOV](mailto:FDDPERSONNEL@OSHDP.CA.GOV).

## DISPLAY ADS

Full Page	\$900/mo.
2/3 Page	\$600/mo.
1/2 Page	\$480/mo.
1/3 Page	\$360/mo.
1/4 Page	\$270/mo.
1/6 Page	\$225/mo.

### Inserts/Flyers

1 sided	\$1000/mo.
2 sided	\$1200/mo.

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 by e-mail at [seaonc@ix.netcom.com](mailto:seaonc@ix.netcom.com) or phone at 415/974-5147.

## Job Forum Insertion Fees:

\$150 for up to 450  
characters/spaces

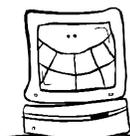
\$15 for each 45  
characters/spaces thereafter

All job forum ads will  
also be posted on the  
SEAONC web site.

## May News deadline:

Friday, April 9<sup>th</sup>, 2004

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



## Committees on Assignment

*Continued from page 5*

designs. The sub-committee is also helping the existing buildings committee review the City of San Leandro's proposed plan sets for the retrofit of cripple wall houses.

If you are interested in any of these topics, please contact the sub-committee chairs listed on the SEAONC website or join us at our next meetings on March 30 and April 27. See the SEAONC website for the times and locations of the meetings.

### **EXISTING BUILDINGS COMMITTEE**

#### **Brian Tucker to Speak on Global Earthquake Risk**

*By David Bonowitz, S.E., Committee Chair*

Dr. Brian E. Tucker, founder and president of GeoHazards International, will give the 1906 Commemorative Lecture at the April 13 meeting of the EERI Northern California Chapter. The event is open and free to SEAONC members and guests.

Tucker is a seismologist and a 2002 MacArthur Fellow. His talk will explore efforts to reduce earthquake risk around the world, including the Experts' Meeting on Earthquake Safety in Schools held recently in Paris. He will draw on lessons from past and current GHI projects, highlighting the range of approaches used in India, Central Asia, Nepal, Ecuador, and elsewhere.

The April event marks the anniversary of the 1906 San Francisco Earthquake and Fire. Previous 1906 Commemorative Lectures were given by Lloyd Cluff, Stephen Tobriner, and SEAONC Honorary Member Eric Elsesser.

The meeting will also feature presentations of the EERI Chapter's annual awards for innovation and exemplary practice in earthquake risk reduction. Last year's award recipients were SEAONC Member Chris Rojahn and the City of Portola Valley.

For meeting details, please see the EERI-NC website, [www.quake06.org](http://www.quake06.org), or contact David Bonowitz, SEAONC's liaison to the EERI Northern California Chapter.

### **REBUILDING TOGETHER COMMITTEE**

#### **Rebuilding Together Needs Contributions!**

Rebuilding Together (formerly Christmas in April) is a nationwide, non-profit organization that coordinates volunteers and sponsorship in an effort to improve buildings in the community. This year, we have the opportunity to assist the Dolores Street Community Services building at 938 Valencia Street in San Francisco. The project includes remodeling the kitchen, building partition walls, wiring new lighting, and generally brightening the atmosphere of this neighborhood-based shelter.

In order for SEAONC to participate this year, we need both volunteers for Rebuilding Together Day, April 24th, and we need donations. For SEAONC to become an "Institution Renovation Sponsor", we need to raise \$7,500. Currently we have raised over \$4,500 towards our goal, but we still need your support. If you have already made a donation, thank you for your generosity.

Please consider volunteering and contributing to Rebuilding Together. Your contribution puts hammers, saws, and paintbrushes into volunteers' willing hands, and it provides the "bricks and mortar" needed to build a better community. Please send your tax-deductible donation, payable to Rebuilding Together, to the address below. You will receive a receipt for your donation. For more information about Rebuilding Together, please visit our website at [www.rebuildingtogethersf.org](http://www.rebuildingtogethersf.org) or contact Joyce Feng.

If you are interested in volunteering, please include your name, company, phone number, and address. Also, if you have any specialty skills, for example; electrical, carpentry, plumbing, or painting, please let us know.

Send all donations to:

Rebuilding Together c/o Joyce Feng  
Degenkolb Engineers  
300 Frank H. Ogawa Plaza, Suite 450  
Oakland, California 94612  
510 / 272-9040, extension 222  
[jfeng@degenkolb.com](mailto:jfeng@degenkolb.com)

Send all volunteer information to:

Gordy Wray at [gwrap@degenkolb.com](mailto:gwrap@degenkolb.com)

Continued from page 1

grown into T.Y. Lin International, which is now an International Transportation Engineering company that has active transportation and bridge construction projects throughout the world.

Reinhard Ludke, Vice President of C+D Consulting Civil and Structural Engineers, Mark Ketchum, Ph.D., Principal of OPAC Consulting Engineers, and Charles Redfield the Principal Bridge Engineer with his firm will present T.Y. Lin projects at the April program. Mark and Reinhard were students of T.Y. and they all had the privilege of working at T.Y. Lin International and collaborating with T.Y. Lin on some of his noteworthy projects. T.Y. used to make slide presentations for his lectures, seminars, and presentations. The April Programs will use some of T.Y.'s "Slide Library" to provide a retrospective of his professional career.



Ruck-A-Chucky Bridge

T.Y. was respected as one of the greatest structural engineers of his time. Lin earned a reputation for combining elegance and strength in his designs. The April 6<sup>th</sup> program will showcase some of Lin's work. His mark can be seen worldwide, from San Francisco's Moscone Convention Center to the Kuan Du Bridge and new bridges in Taiwan and China, to the roof of the National Racetrack in Caracas, Venezuela and "wing girder" bridges in Bogota, Columbia. The Moscone Center's 22,000-square-foot Exhibition Hall was the world's largest underground room at the time it was constructed in 1980. His imagination created the 1978 Ruck-A-Chucky cable supported bridge slated for construction over the American River in Auburn, California after the Bureau of Reclamation constructed the Auburn Dam. This bridge led to numerous media headlines including Popular Mechanics covers and a national focus on the "art" of bridge engineering.

It was in the midst of the Cold War that Lin developed one of his boldest ideas: Connecting Alaska to Siberia with a bridge across the Bering Strait, he called "Intercontinental Peace Bridge" because he saw the span as a critical link that could foster better relations between the United States and Russia. For Lin, bridges had become the tangible symbol of his desire to not only connect two bodies of land, but to span cultures and politics. "Psychologically, this bridge will demonstrate that human energy and technical capabilities can be devoted to constructive rather than destructive measures to the benefit of all mankind," wrote Lin in a statement describing the project's mission. The proposed North America - Asia Bridge has been the subject of a Discovery Channel television documentary and remains an unrealized dream.

[www.structuralsolutions.com](http://www.structuralsolutions.com)

## 2004 STRUCTURAL ENGINEERING REVIEW WORKSHOPS

Based on the 1997 UBC & the 2000 IBC

This year due to a **significant format change in the California exam**, a substantial portion of the program will be dedicated to the **2000 IBC** provisions. The **expanded 13-session** program is instructed by distinguished lecturers who are experts in their field of practice, and the majority have been involved in recent code development efforts for the **2000 IBC**. This year's program is not only ideal for the SE exam candidates, but it also provides an excellent refresher course for the 97 UBC and a **great Segue way to the ASCE-7**, which will be adopted throughout the country regardless of the model code adoption.

**Please see our web site above or call (800) 566-2906 for more information about the workshops and registration.**

May 8	General/Analysis (UBC/IBC)	Ben Yousefi, SE
May 22	Wood (UBC/IBC)	Norm Scheel, SE
June 5	Steel Design (UBC/IBC)	Rafael Sabelli, SE
June 12	Overview of IBC	Dr. S.K. Ghosh, Ph.D.
June 13	Concrete (UBC/IBC)	Dr. S.K. Ghosh, Ph.D.
June 26	Masonry/Title 24 (UBC/IBC)	Bob Chittenden, SE
July 10	OSHPD Provisions/Analysis	Chris Tokas, SE/Ben Yousefi, SE
July 24	Wood (UBC)	James Son, SE
August 14	Steel Design (ASD&LRFD)	Dr. A. Astaneh, Ph.D., PE
August 28	Structural Dynamics/Concrete (UBC/IBC)	Dr. S.K. Ghosh, Ph.D.
August 29	Concrete (UBC/IBC)	Dr. S.K. Ghosh, Ph.D.
September 18	Steel Design (UBC/ASD)	Dr. A. Astaneh, Ph.D., PE
September 25	General Overview	Ben Yousefi, SE

### What Past Attendants Are Saying About Our Workshops:

"I just wanted to thank you for helping me pass the SE exam! I attended your classes last summer/fall and they apparently work! Whether I passed or not, my opinion about your classes wouldn't have changed. They were practical, clear, and planned well. I learned a great deal from the guest lecturer's (most of them) and would highly recommend them to my colleagues." **Shane Fitzgerald, SE, Martin & HBL Structural Engineers, Los Angeles**

"I took the exam and passed. I think it was due to the thorough preparation of your course, so thanks a lot for doing such a good job. I'm glad I took the time and expense to fly down from Seattle to do it." **Surinder Mann, SE, KPFF, Seattle**

## Letters to the President

*Continued from page 3*

letter is to, again, compliment you on your well organized and expertly phrased Message From The President in the March issue. Indeed, your concerns regarding outsourcing of structural engineering services is valid and significant. You asked for responses, so here's mine.

Outsourcing of structural services is nothing new; we've been doing it since the structural title was created with the industrial exemption, and others. I've been beating the drum for years now about the need for a structural engineering practice act with no exemptions. I believe that every structure intended for human occupancy or use, including bridges, if you will, should be designed by a licensed structural engineer. I started an activity directed towards that end, at the State Board's behest, about seven years or so and it immediately fell flat on its face, total lack of support or cooperation by the board and the five committee members appointed by the four associations who nominated members to form a committee. Then along came the certification issues which, I believe, totally blunted the practice act effort. But I don't know for sure because I can't find out.

One of my three major concerns regarding the current procedures and activities of the Association both local but especially the State SEAOC, is the lack of communication between the State Association SEAOC and the membership in general. Last August there was a "meeting" of the SEAOC Fellows in the San Luis Obispo and one of the issues discussed and receiving unanimous approval was to petition the State Board to recognize that they represent the entire general membership and that that membership is entitled to more information on what transpires at State Board meetings; it was suggested that the Board publish a brief resume of the important issues discussed, publish a copy of SEAOC budget (in dollars, not pie charts) and be transparent in their activities; it was recommended that the major State Technical committees act similarly in communicating to the membership issues which they are considering and on which they take action, especially the Seismology and Structural Standard committee. It's been reported to me that the presentation of the views of the Fellows at the September Board meeting was limited to the recently adopted Fellows sponsored Ethics Statement. I have no factual basis on which to rely for this last statement because there's no discrete way for me to find out.

It is my belief that the Association is at a significant crossroads at the present time. It no longer has a recognized leadership role in code issues, and although it fulfills many significant functions to the benefit of the practicing structural engineer (seminars, publications, etc) it has several structural flaws which prevent it from achieving their expressed goals and objectives it espouses. I believe that the general membership should have a more direct participatory role in the ongoing activities of the Association. For example, I understand that David Bonowitz is currently writing a new version of the Blue Book; before it is adopted as an Association, I would suggest that it go through a "Beta check" of a select number of members who are willing to review the document and offer their comments. Similarly, any new recommendations of the Seismology and Structural Standards Committee should be beta tested before formal adoption. As I have stated before, I oppose any form of the NCSEA's proposed certification program here in California. I believe it diminishes the identity and authority of the practicing structural engineer and simply adds further confusion as to how the public will view the licensed structural engineer. For the State Board to endorse the certification program upon its own cognizance and without sounding out the feelings of the membership as a whole is, in my mind, presumptive to say the least.

Pretty strong words, I acknowledge. I've devoted some 54 years or so to advancing the best interests of the Association, an organization in which I strongly believe and support and I hope that the opinions stated above are interpreted in the context. I am, as are you, concerned about the issues you raised in your last newsletter statement. Globalization, outsourcing, electronic analysis and a whole host of other issues are issues being faced by just about every business entity in the United States. There are positive efforts which our associations can take to mitigate their effects on us, but I strongly believe that we need to take a big step back, look at ourselves honestly and without bias and question the "business as usual" attitude in which we currently operate.

Again, compliments on your thoughts and my best regards,  
Steve Johnson



### Bulletin Board

**The Office of Statewide Health Planning & Development (OSHDP)** is advertising Request of Qualifications RFQ 03-4002 for structural plan checking services. Please visit our website at [www.oshpd.ca.gov](http://www.oshpd.ca.gov) under FDD "Business Opportunities" for more information.

### SEAOC 2004

Announcing the 75th Anniversary  
SEAOC Convention in Monterey

August 25-28, 2004

**SEAOC**  
2004 • MONTEREY

[www.seaonc.org/monterey2004](http://www.seaonc.org/monterey2004)

## South Bay Program Wrap-Up

*By Pat Chow, Program Chair*

A group of 4<sup>th</sup> and 5<sup>th</sup> graders started the evening by sharing their fantastic story of competition in State and Global Finals organized by an international group that challenges kids to solve a variety of problems. SEAONC member Armen Shamamian volunteered as a mentor in providing engineering insight to this group who chose to solve a structural engineering problem – design, fabricate and load test a 50 grams wood structure that can bear 500 pounds.

Karan Chitnis, Dylan Daniels, Salman Husaini, Daniel Ki, and Tony Parng scored first in the state finals with a 23 gram structure that held 482 pounds. However, the Global was more competitive and challenging - with 3,000 participants and a requirement to support 1,000 pounds. The group found it very difficult to load 1,000 pounds in eight minutes while having to perform a play that integrated the structure in the performance. They loaded 655 pounds on their 28 gram structure as time ran out. The group is making another go at it this year.

Our best wishes to these inspiring individuals and our sincere appreciation goes to Armen Shamamian.

Susan Lyons, the featured speaker presented an informative and interesting program about innovation in designing parking structures. Susan also identified special challenges that are peculiar to parking structures.

Parking structures are usually companion buildings, not the featured glamorous buildings; consequently they are often sited on irregular and challenged sites; their architecture has to respect the “main” building. Since the structural cost is 60% to 70% of building cost, there is a great deal of pressure to make them efficient. The goal is to deliver the project at the lowest cost/ stall and SF/stall. Other unique facts include the use of long span members; the building geometry, dimensions and span lengths are driven by the parking layout.

The key to success is to remove complexity in the design, and to collaborate with the architectural features. For example, consider melding structural elements such as SMRF beams with crash barriers and/or facade. Make it simple. Manage or prevent potential structural challenges such as concrete shrinkage on a long deck; and locate shear walls away from building corner to prevent cracks and keep collectors more economical.

Other challenges include finding reasonable ways to avoid or mitigate short columns, in-fill walls, and ramps that connect levels. Solutions for these may include computer modeling and logical thinking. For example, one may consider using a physical slip joint at the ramp to floor connection to disconnect the ramp– simple!

Susan also offered the following food for thought:

- ◆ Locate elevator/stair as exterior appendages
- ◆ Use closure pour strip toward the interior of span
- ◆ Use corbels, light-well, slide bearing, or expansion joints as solutions for mitigating the short column issue
- ◆ When using moment frames, remember the ramps may decrease the building period and affect the behavior
- ◆ Always address stiffness compatibility and incompatibility
- ◆ Beware of and address secondary effects

SEAONC extends our sincere appreciation to Susan Lyons for her insight and innovation in engineering parking structures. More information may be found in next month’s PCI publication.

**APRIL**

- 6 San Francisco Dinner Meeting  
City Club, San Francisco
- 13 South Bay Dinner Meeting  
Michael's at Shoreline, Mountain View
- 14 Business Forum Luncheon  
City Club, San Francisco
- 24 Rebuilding Together Day
- 27 Seismology & Structural Standards Committee Meeting

# Registration

Note: There are TWO dinner meetings this month.  
Please indicate your choice of ONE or BOTH.

## April 6<sup>th</sup> SEAONC Dinner Program, City Club, San Francisco

*T.Y. Lin, Structural Engineering Pioneer  
A Retrospective of His Vision*

The City Club, 155 Sansome St., 10th Floor, San Francisco  
BART: Montgomery Street Exit, San Francisco

**Deadline for pre-registration:  
12 noon, Friday, April 2<sup>nd</sup>, 2004**

Dinner and program reservations are limited. Register early!  
No cancellations after 12 noon, Friday, April 2<sup>nd</sup>, 2004.

<b>COST:</b>	PRE-REGISTERED	LATE REG.
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

## April 13<sup>th</sup> South Bay SEAONC Dinner Program, Michael's at Shoreline, Mountain View

*Seismic Design & Behavior of Composite  
Steel-Concrete Moment Frame Buildings*

Michael's at Shoreline  
2960 N. Shoreline Boulevard, Mountain View

**Deadline for pre-registration:  
12 noon, Friday, April 9<sup>th</sup>, 2004**

Dinner and program reservations are limited. Register early!  
No cancellations after 12 noon, Friday, April 9<sup>th</sup>, 2004.

<b>COST:</b>	PRE-REGISTERED	LATE REG.
SEAONC Member	<input type="checkbox"/> \$28	<input type="checkbox"/> \$33
Junior Mbr (29 and under)	<input type="checkbox"/> \$20	<input type="checkbox"/> \$25
Non-Member	<input type="checkbox"/> \$33	<input type="checkbox"/> \$38
Student	<input type="checkbox"/> \$15	<input type="checkbox"/> \$15

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 to: 415/764-4915** or phone: 415/974-5147  
Make check payable to **SEAONC** and bring with you to the door.

Please check meeting(s) you wish to attend:

- April 6<sup>th</sup>, City Club
- April 13<sup>th</sup>, Michael's, South Bay

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

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.