



The American Society of
Mechanical Engineers

Editor: Dennis K. Lieu
Dept. of Mechanical Engineering
University of California
Berkeley, CA 94720
Phone: (510) 642-4014(voice)
(510) 643-5599 (fax)
e-mail: dlieu@euler.berkeley.edu

ASME San Francisco Section

Newsletter

February 1993

February Meeting: Superconducting Levitation

Date: Thursday, 25 February 1993
Location: California Cafe
1540 North California Blvd, Walnut Creek
(510) 938-9977
3 blocks south of Walnut Creek BART station
Menu: Grilled Stuffed Chicken Breast
or Pan Seared Flounder
(vegetarian meal upon request)
Time: 6:00 PM Cocktails
7:00 PM Dinner
8:00 PM Program
Cost: \$20 ASME members
\$22 Non-members
\$10 Students
RSVP: S.F. ASME
(415)721-4478
RSVP before 19 February 1993
with choice of entree

Dr. Francis C. Moon
Cornell University
ASME Distinguished Lecturer



Dr. Moon is a prominent researcher in chaotic dynamics and nonlinear problems in space structures. In his lecture "Superconducting Levitation", the mechanics of superconducting magnets for bearings and other levitated devices are addressed. This lecture derives from research involving problems in the mechanics of electro-magnetic solids.

This meeting will be a joint meeting of the ASME San Francisco and Mount Diablo sections.

Reminder...

Don't forget about our January meeting with ASME Distinguished Lecturer Karl J. Springer from the Southwest Research Institute. The topic of his talk will be on the three big E's of transportation: Energy, Efficiency, and the Environment. This presentation traces recent events that resulted in paradox on top of paradox as the industry achieved government regulations and customer acceptance. The meeting will be at Spenger's Fish Grotto in Berkeley (1919 4th Street) beginning with cocktails at 6:00 pm and dinner at 7:00 pm. The cost is \$18 (for orange roughly or siloin tips) for ASME members. If you haven't yet made reservations for this event, please do so immediately. The SF ASME telephone number is (415)721-4478.

Celebrate Engineers' Week: February 14 - 20

There will be many activities during this week, sponsored by ASME and other engineering societies. This year's Engineers' Week Banquet will be held at the Presidio Officer's Club in San Francisco. The date of this event is 18 February, beginning at 6:00 pm. The event will feature a prominent guest speaker from industry, and scholarship awards to exemplary local high school students who plan to pursue engineering in college. Free parking is available on site. The cost is \$30 per person, with a choice of steak or salmon as the dinner entree. For more information, contact Charles Howard at (415)924-9548.

Message from the Chair... Volunteer to Serve on an SF ASME Committee for 1993-94

As I mentioned in my first Message from the Chair last summer: "You contribute to the character of your society. Cliche as this may seem, it is true that without the collective you, there would be no ASME. Section activities are one of the fundamental building blocks of the society, and one of the chief vehicles for grassroots input to the society's operation and management. A healthy, active section is essential to a healthy, active society." The section is currently developing a slate of candidates for next year's officers (i.e., July 1993-June 1994), so now is the time to take our pulse and find out how healthy we are. One clear need is for volunteers to serve on (and in many cases, chair) various SF ASME committees. The list of committee opportunities includes: Program (Meeting Planning), Newsletter, Industrial Relations, College Relations, Honors & Awards, History & Heritage, Technical Activities, Government Relations, Public Relations, Unemployed Member Services, Minorities & Women (chiefly educational outreach programs), Professional Development, Satellite Programs, Professional Practice & Ethics, Member Interests, and Membership Development. In most cases, the requisite level of commitment entails at most one monthly executive committee meetings, follow-up telephone inquiries, and drafting of newsletter announcements. Some require little recurring monthly work but rather the coordination of one annual major event (e.g., an industry breakfast or the Bay Area Technical Conference). Call me or one of the committee chairs listed in the newsletter for more information. I know you're all busy and a little overcommitted already, but please consider giving it a try.

Rich Myhre

Serve as a Session Aide ... Attend a Conference Free

ASME and the Japanese Society of Mechanical Engineers (JSME) are sponsoring the International Conference on Nuclear Engineering on 22-24 March 1993 at the Hyatt Regency at Embarcadero Center (San Francisco). As the local host section, we will be providing session aides to assist ASME/JSME staff with speaker A/V needs, distribution and collection of evaluation forms, session poster placement, etc. Volunteers are needed. In exchange for serving as an aide, ASME/JSME will waive that day's registration fee. Half-day slots are available on Monday afternoon, 22 March, Tuesday morning and afternoon, 23 March, and Wednesday morning and afternoon, 24 March. To get a copy of the conference agenda and/or sign up, call Don Moseman at (415)973-9701. Session assignments are made on a first-come, first-serve basis, so call early to get your preference.

Call for ASME Company Reps

Are you looking for a great way to help ASME? You can do it with very little time commitment by becoming a Company Representative!! You simply receive information on ASME events and publicize it to other interested members of your Company, or become more actively involved as a member of the San Francisco Section's Industrial Relations Committee. If you're enthusiastic, looking for a way to help the engineering community, or simply willing to lend a hand, please call Marco Bruzzano at (510)242-1604, or write c/o Chevron U.S.A. Richmond Refinery, 841 Chevron Way, Richmond, CA 94802-0272. Thank you.

E-Week and Discover "E"

National Engineers Week (14-20 February 1993) offers a unique opportunity to cultivate interest in math, science and engineering among the nation's youth, the engineers of tomorrow. Engineering societies sponsor a variety of extra-curricular programs and classroom visits as part of a program called Discover "E". Initiated in 1990, Discover "E" has grown to be the largest outreach program of its kind sponsored by the engineering profession. This year the "E" in Discover "E" stands for Energy.

All ASME members interested in visiting schools to talk about their perspectives of engineering are encouraged to participate in the program. The National Engineers Week Committee provides information to help us organize our forces and we are currently in the process of contacting schools about Discover "E" and recruiting engineers to give presentations. If you or your colleague are interested in speaking at schools or would like to help organize our outreach efforts, please leave a message on our new section phone, (415)721-4478, and I will get back to you.

Madeleine Moffitt

Executive Council Meetings

San Francisco Section Executive Council meetings are held at 6:15 PM the first Wednesday of each month, September through May. The location is the offices of Bevilacqua-Knight (BKI), 501 14th Street, Suite 210 (second floor), Oakland. BKI is in the Oakland City Center complex next to the 12th Street BART station. Validated parking is available in the City Center garage. All members who are interested in helping organize events for the San Francisco Section are invited to attend.

Enjoy a Fresh Brew with ASME

No, it's not a brewery tour -- it's the new ASME coffee mugs. Featuring a generous, sturdy design, these cobalt blue mugs emblazoned with the ASME cloverleaf in microwavable gold provide a quick reference to the San Francisco section's and the Western Regional Office's phone numbers. You can use your steam tables for a coaster. \$6.50, including postage (\$5 if you buy one at a dinner meeting).

1993 ASME Bay Area Technical Conference

Sponsored by the Santa Clara Valley Section

Saturday, May 1, 1993

The University of California, Berkeley
Berkeley Sensor and Actuator Center

MEMS

Microelectromechanical Systems (MEMS) is the new revolution in silicon. Applying silicon manufacturing techniques opens a new world of opportunities. Although already extensively used for sensors for such devices as automobile airbags, new emerging applications of micromachines promise to have a wide ranging impact on fields as diverse as medical devices and robots. The keynote speaker will be Albert P. Pisano, PhD, Associate Director of the University of California Berkeley Sensor and Actuator Center (BSAC). Distinguished speakers, exhibits, and activities at BSAC will demonstrate the range of MEMS applications, manufacturing techniques, and the future direction of the technology. For information on registration, exhibit space, or corporate sponsorship, contact Tom Roberts or Ann Brannon at (408)998-3260.

GAS-TURBINE ENGINEERS

ThermoScience International Corp seeks engineers competent in large gas-turbine engine design for positions of full-time employment. Positions require technical degrees and 10 or more years experience in the field.

The following areas of special competence are required:

Position A: Mechanical design
- Mechanical design of blades and rotors.
- Mechanical and thermal stress analysis.
- Fluid management in blade-cooling systems, including transpiration cooling.
- Materials for use in high stress, high temperature conditions.

Position B: Heat management
- Heat flow and thermal stress analysis.
- Analysis and design of schemes to transfer heat and control turbomachinery temperatures.
- Materials for use in high stress, high temperature conditions.

Candidates should also have working knowledge of the thermodynamics and general practice in the design of gas turbine engines, and should be familiar with aero-thermodynamics used in designing the gas path. Familiarity with commercially available computer codes for design and analysis will be helpful.

ThermoScience, located in Silicon Valley, is a newly formed company with exciting concepts for building more efficient gas turbine engines than are possible today. The company has a unique opportunity to serve a power-production industry poised for dramatic growth.

These openings are key positions for engineers at the cutting edge of gas-turbine technology. They offer the challenge of a new business and incentive participation in rewards for its success. Reasonable relocation expenses will be paid.

Interested parties should send a summary of experience, education, compensation history, and professional objectives to:

Frederick M. Trapnell, President
ThermoScience International Corp
P.O. Box M
Menlo Park, CA 94025
Fax: 415/361-1275

Engineering

Tap Into A Great Source.

More than 15 million Southern Californians - half the state's population - look to MWD as a primary source for water. Over 2,000 employees look to us as the source for career opportunities. Consider our current openings:

Engineer

\$4,984 - \$6,190/month-Job Code 92-121 JB

This key position in our Engineering Division's Specifications Branch will prepare heavy construction and equipment-related specifications for water treatment and hydro-power plants, reservoirs, pipelines and other facilities and supervise project specifications engineers. MQ's: BSCE and current CA PE registration, and 6 years' exp. as a specifications writer using PCs and CSI formatting.

Associate Engineer

\$4,344 - \$5,410/month-Job Code 92-139 LJ

Individual will be responsible for writing specifications and contract documents for equipment related to construction. Requires 4 years' directly related experience and PC proficiency (CSI formatting a plus). EIT or PE registration and liaison experience in contracting, law, administration, and/or consulting is preferred. BSME or CE required.

Associate Engineer

\$4,344 - \$5,410/month-Job Code 91-033 KV

Responsible for specifications and contract documents, you will also research and evaluate materials and equipment for heavy construction projects. Position calls for 3 years' experience writing specs for water treatment and hydro-power plants, finished water reservoirs, maintenance/control facilities, regulatory stations and miles of pipelines. You'll also need a BSME or related degree, preferably with an EIT or California PE certification. Also prefer liaison experience in contracting, law, administration, and/or consulting. PC proficiency, preferably with WordPerfect 5.1, and CSI formatting a plus.

Associate Engineer

\$4,344 - \$5,410/month-Job Code 92-158 RB

This position will: conduct field tests and manage computer aided test data acquisition; write test procedure and reports; review process piping and instrumentation drawings; review piping and mechanical equipment fabrications, and layout and assembly drawings; write equipment specifications; and conduct fabrication and equipment inspections. Requires BSME from an accredited college/university (CA PE preferred), and 2 years' experience in process instrumentation and computer aided data management and field testing. Location: near downtown L.A.

To request an application form, call 1-800-540-6311 (in CA) or (213) 250-6453 and refer to the appropriate job code listed above. RESUMES WILL NOT BE ACCEPTED WITHOUT A COMPLETED APPLICATION. Open until sufficient applications are received. MWD supports the principles of equal employment opportunity and affirmative action. Women, minorities, veterans and the disabled are encouraged to apply.

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

We Tap Only The Best

1992-1993 San Francisco Section Executive Council

Chair

Richard J. Myhre, PE
Bevilacqua-Knight, Inc.
(510)444-8707

Secretary

Donald W. Moseman
Bechtel Corp.
(415) 973-9701

History and Heritage, Honors and Awards, Professional Practice and Ethics

Eric Worrell, PE
Tosco Refinery
Concord, CA 94520-3610
(510)228-1220 x2571

Nominating Committee, Newsletter Editor

Dennis K. Lieu, DEng
University of California
(510)642-4014

**Vice Chairman,
Technical Activities Chair**
Willard A. Nott, PE
Lockheed Missiles and Space
(408)743-2378

**Programs Chair,
Minorities and Women**
Madeleine Moffitt
Integrated Motions, Inc.
(510) 527-5810

Unemployed Members
Lynden Davis, PE
ASME Western Region Ofc.
(415)499-1148

Members-at Large
Stefan Wagner
Tim Yeung

Treasurer
Eric L. Broadhurst
Charles M. Salter Assoc.
(415)397-0442

Industrial Relations
Marco Bruzzano
Chevron USA, Inc.
(510) 620-1604

College Relations
Ahmad Ganji, PhD
San Francisco State University
(415)338-1174

JOB BULLETIN 1-800-624-9002

MEMBERS

Looking for a job? Contact the ASME Western Regional Office to obtain a copy of the Job Bulletin.

COMPANIES

Looking for mechanical engineers? Contact ASME Western Regional Office to place a free listing in the Job Bulletin, or to obtain information regarding advertising in Mechanical Engineering magazine.

Advertising Space Available

This newsletter is published monthly, and reaches approximately 1500 professional and 250 student members. \$200 Full page, \$100 1/2 page, \$50 1/4 page, \$20 business card, \$10 25 word classified

Contact Dennis Lieu (510) 642-4014