

October Continuing Education

October 19, 2004

Memorial Union at Iowa State University,

Topic: ADDRESSING UNCERTAINTY (Are We Doing It As Well As We Could?)

Dr. Charles R. Mischke, P.E.

Emeritus Professor of Mechanical Engineering Iowa State University

Date: Tuesday, 19 October 2004

Time : 1:00-5:00 PM

Place: Memorial Union Iowa State University

Fee: \$75.00 Professionals (payable at the door with check or cash) **Students:** Free

Note: Optional dinner after the seminar (to be announced; registrants are responsible to pay for their own meal)

Register at <http://sections.asme.org/Centrallowa/>

Professional Development Hours (PDH) Credits - 4 Hours

Meeting Chairman: Dr. George R. Wandling, P.E.
Proceeds will help fund an ASME Central Iowa Section Scholarship for an Iowa State University Mechanical Engineering Student.

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Sessions:

1. The futile attempt to avoid interference, and the fix.
2. Allowable stress by the stochastic design factor method — the normal-normal and the lognormal-lognormal cases.
3. The nature of factor of safety and design factor advice.
4. Stochastic description of fatigue in steels.

WHY YOU SHOULD ATTEND!

- * Whether or not you are a licensed professional engineer, or a student in engineering, this presentation can change your perception of how the universe behaves and how you can describe it.
- * A devil is often in the details. The presentation and extensive notes will take you step-by-step through understanding how we got to where we are, and why we shouldn't be there. Engineers must address uncertainty and deterministic methods cannot address uncertainty directly.
- * After a review of history the presentation will include placing a simple design task before three engineers, and present the results.
- * We shall present statistical descriptions of static and fatigue failure.
- * A side-by-side stochastic and deterministic adequacy assessment will be made for your study — an eye-opener. We will turn the stochastic adequacy assessment inside out, and develop a design (synthesis) approach.
- * As a result one can organize one's viewpoint to see wherein engineers have been only partly right, and identify what remains to be done.
- * As a result one can begin to understand the need for a new engineering paradigm, what it is, and why it addresses uncertainty.
- * **"It's not what we don't know that hurts us, as much as it is what we know that tain't so."**

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Engineers Provide Sustainable Solutions Through International Volunteerism

ASME members around the world have the chance to get involved in real-world engineering projects, gaining exposure and training in internationally responsible and sustainable engineering through ASME's partnership with Engineers Without Borders™ – USA (EWB-USA).

Offering a unique opportunity for professional engineers (active or retired) and engineering students, EWB-USA is a non-profit organization established in 2000 to help developing areas worldwide with their engineering needs. EWB-USA projects may involve the design and construction of water, waste-water, sanitation, energy, and shelter systems. Projects are initiated by, and completed with, contributions and support from the local, host community, which is trained to operate the systems without external assistance. In this way, projects are appropriate and self-sustaining. The projects are conducted by groups of students under the supervision of faculty and professional engineers from partnering engineering firms and professional Societies.

ASME members should contact Diedra Hackley (hackleyd@asme.org) if they are interested in any of the above projects, or would like to propose a project of their own.

Partners In Mechanical Engineering Grants Available

The Board on Diversity and Outreach is accepting applications for Partners in Mechanical Engineering grants. All ASME Sections are eligible to apply. Grants are made on a first-come, first-served basis. For more information, go to <http://www.asme.org/communities/diversities/bdo/partners.html>

ASME's 125th Anniversary in Full Swing!

Log onto www.asme.org/anniversary for information on events to take place during 2005, as well as historical material and information on how you can get involved.

Member **2** Member REFERRAL

Refer a friend or colleague to ASME!

Visit www.asme.org/membershipdrive for complete details.

New Faces of Engineering Strives to Recognize Young Talent

The *New Faces of Engineering* strives to promote the accomplishments of young engineers by highlighting their engineering contributions and the resulting impact on society. The campaign is designed to enhance and improve the image of engineering by:

Putting faces to what has often been referred to as "the stealth profession."

Showing a group of young, diverse and talented engineers, thereby portraying engineering as an exciting profession open to everyone.

Providing both stimulation and incentive for college engineering students to explore the variety of career options available to them with their engineering degrees as well as encouraging high school students to study engineering in college.

Help students understand they are part of a global profession.

This is an opportunity to represent the mechanical engineering profession and ASME as the top individual *New Faces*. The ASME finalist will be featured in a full-page ad in USA TODAY during Engineers Week, February 20-26, 2005. The finalist's photo will be captioned with the engineer's name and ASME affiliation, employer and a brief statement of that individual's accomplishments as they relate to the public welfare.

New Faces provides a unique opportunity to learn from new engineers. EWeek and the ASME staff will interview the top individuals regarding the experiences leading them to select engineering careers, the challenges in making the transition to the work force, and other key experiences that can be used with K-12 and college students.

The top candidates will participate in an e-mail and/or online Question and Answer discussion forum with engineering undergraduates globally at a future date to be determined. Candidates are asked to list languages in which they are fluent.

National Engineers Week will profile the top individuals. The profiles will be posted on the ASME web site, www.asme.org, National Engineers Week web site at www.eweek.org and at www.discoverengineering.org, the EWeek web site for middle school students.

The engineering trade press will be targeted for feature stories on the top individuals. The local media of all the nominees will be targeted to capture general press coverage.

Visit http://www.asme.org/eng_week/ to submit your application by the Oct. 22, 2004 deadline.

ASME Launches 'Communities of Practice'

Want to talk to your peers about technical matters, career and personal interests? Do you need communicate with your peers without going to a meeting or even leaving your desk?

Now ASME offers you a new tool to communicate, get the information you need and meet others with similar interests and concerns at the new ASME Communities of Practice site.

On the CoP site, you can join a community, suggest a new community, participate in discussions and polls, and post your own message or request to be notified when messages are posted on the community. Its your choice what communities you participate in, and how you choose to participate.

The Communities of Practice pages also allow you to customize your own personal page to include your communities, your own links and calendar and to access an ASME event calendar.

You will need to register the first time that you use the page, and set your preferences for your home page. It only takes a few moments – then you are ready to participate, or just observe the discussions. To visit the site, and test the features for yourself, go to www.cop.asme.org.

Make Your Contribution to the FasTrack E-zine Today!

The FasTrack is emailed to early career members (previously known as the young engineer), and provides quick online access to what's new and current in professional & technical resources including highlighting featured member benefits and enhancements, etc.

The FasTrack e-zine features a special section called "Q&A with Experienced Engineers (Five Career Questions Asked)" and we invite you to share your experience. The idea is to feature an engineer each month responding to the same 5 questions. Among the questions posed are:

When you first started your career, what was the biggest lesson you learned on the job? What is the underlying foundation for career success today? How do you keep up-to-date within your industry? What advice would you give a recent engineering graduate looking for work? Has your involvement in ASME changed or influenced your career path?

If you are interested in contributing, please send your responses to Cheryl Hasan at hasanc@asme.org. Please include your name and job title, as it will be included in the section. To view the latest Fastrack Ezine, click on: <http://www.asme.org/youngengineers/fastrack>

EQUAL ACCESS FOR ALL 2004 FIRST LEGO League (FLL)

The playing field has NO LIMITS. The challenge is to address specific needs of individuals, who face physical challenges in today's society and build a modern society that is one of equal access for all. FIRST-LEGO League (FLL) mesmerizes thousands of 9-14 year-olds and their adult partners through the beginning months of each school year.

Using the LEGO MINDSTORMS Technology, LEGO bricks and other elements such as sensors, motors and gears, teams of 9-14 year old children, a coach, and a mentor, research, design, build and test a fully autonomous robot. The 8-week design and build period begins mid September and the local and state tournaments are from November to January.

ASME is a supporter of FIRST Robotics Competition and the middle school-level FIRST/Lego League. Over 46,000 students worldwide participated in FLL last year. ASME members – as individuals, student groups, or sections – help in many ways – and more are always needed. ASME Sections and Student Sections can sponsor or start teams or individuals can volunteer to help at tournaments or to be coaches or mentors for local schools. Those wishing to get involved with kids and invest in the future of the profession are always well rewarded!

For more information on how to get involved, please contact Dawna Schultz at schultzd@asme.org or visit: <http://www.asme.org/education/precollege/partner.htm>.

International Mechanical Engineering Congress & Exposition and RD&D Expo.



Log onto <http://www.asme.org/congress> for valuable information on 500 technical sessions and 9 industry tracks. Various special events and tours are also scheduled to take place during Congress. The conference will take place at the Anaheim Hilton in Anaheim, Calif. from Nov. 13-19.

ASME Congress is once again teamed with the Research, Development & Design Expo, the only event dedicated to presenting the latest developments and tools in the world of engineering.

To register for the 2004 IMECE & RD&D expo, click [here](#).

Student Activity Calendar

October

- Oct. 1 [Renewal](#) deadline for 2004-05 ASME Student Membership
- Oct. 15 [Application deadline](#) for Winter/Spring student loans
- Oct. 21 2004-05 [Graduate Teaching Fellowship](#) – application deadline.
- Oct. 29-30 Fundamentals of Engineering Exam
- * Attend your [Regional Student Leadership Seminar](#)

November

- Nov. 1 Preliminary reports due for [Ingersoll-Rand Contest](#)
- Nov. 1 Deadline for [Diversity Action Grant](#) applications
- Nov. 13 [Young Engineers Forum](#) – held at Congress
- Nov. 14 [Student Design Contest](#) finals held at Congress
- Nov. 14-19 [Congress](#) – Anaheim California
- Nov. 15 [Old Guard Oral Competition](#) finals held at Congress

New Mortgage Benefit for ASME Members!

Wachovia makes the mortgage process easy by providing competitive rates, quick approvals, and accurate closings. Members also receive friendly, personal attention through an ASME-dedicated mortgage team.

For details, visit <http://www.wachovia.com/misc/0,,507,00.html>

Diversity Action Grants Now Available!

The Board on Diversity and Outreach (BDO) will be accepting applications for Diversity Action Grants (DAG) for the 2004-2005 academic year. Encourage the ASME Student Section in your area to apply for these competitive grants. Deadline for applications is Nov. 1, 2004.

For more information, go to <http://www.asme.org/communities/diversities/bdo/dag.html>

Continuity & Change Update

The Codes & Standards Project Team has developed their organizational structure recommendations: <http://www.asme.org/change/PHASE%20II/C&SOrgChart-TG5-8-11.pdf>

A new Transition Rules Project team template is available on the web. The purpose of the Rules Transition team is to take a proactive position ensure that ASME's governance documents adequately define the reorganized ASME. Click [here](#) for the complete template.

Project Team Progress Reports:

The Centers Project team is in the midst of reviewing draft vision and mission statements. Program units that the Centers group have interest in are also being reviewed.

The Knowledge and Community Groups Project team is currently developing their mission and vision statements, which will represent the society as a whole.

More information providing the latest on Continuity & Change initiative can be found on the C&C Newsletter: <http://www.asme.org/change/IINEWSLTR0904.htm>. For a complete list of project teams, click [here](#).

Local Section

Return Address
Street Number and Name
City, State 98765-4321

POSTAGE

ADDRESS SERVICE REQUESTED

Mailing Address
Street Number and Name
City, State 98765-4321