University Night - Tuesday, Feb. 23rd, 2016

"Fatigue Failures in Engineered Systems – Have We Learned Anything from the Past?"

Fatigue failures have been considered in multiple investigations since the mid-1800’s when railroad axle failures led to several catastrophic accidents in Europe. The realization that metals could fail at applied loads or stress levels less than the yield stress, provided impetus for investigations to determine the root cause of the failures as well as to identify methods (e.g. via equipment design or improvement of material properties) to eliminate, or minimize, the susceptibility to fatigue fractures in operating equipment. Even though extensive research has advanced our fundamental understanding of fatigue mechanisms, fatigue failures continue to occur, often leading to tragic consequences. In this presentation, the fundamental basis for fatigue will be reviewed and opportunities to increase the fatigue performance, and thus safety, of operating equipment will be discussed.

Professor David Matlock, Emeritus Professor at the Advanced Steel Processing and Products Research Center, Colorado School of Mines, received his B.S. degree in engineering science from the University of Texas at Austin (1968), and his M.S. (1970) and Ph.D. (1972) degrees in materials science and engineering from Stanford University. He joined the CSM faculty in 1972 and is involved in teaching and research, primarily related to the mechanical properties of materials. He is one of the co-founders of the Advanced Steel Processing and Products Research Center, an industry-university cooperative research center established at CSM in 1984. The Center currently has 29 corporate sponsors and is recognized as one of the most successful industry/university research centers in the world. He served as Center Director from 1993 until his retirement in May 2013. In retirement he continues to be an active participant in all Center operations.

Schedule:
5:30 to 7:00 pm - Social Hour & Dinner
7:00 to 8:30 pm - Introduction & Presentation

Where:
UCSD Materials Engineering Building

Cost:
$30.00 Non-members, $25.00 Members, $15.00 Students, Dinner & Beverage included in the price.

Parking:
We are making arrangements for parking, cost should be about $5.00

*Due to the cost & planning we are asking that you please RSVP by Friday February 19, so we have a good count.

ASMSandiego@gmail.com
2016 Abe Hurlich Scholarship Award
Applications Accepted until Friday March 4th

Each year, the San Diego chapter of ASM International presents the Abe Hurlich Award to an exemplary student of materials science. The award was established in memory of Abe Hurlich, a member and past-chair (1960) of our chapter, and past-president of ASM International (1977). The award recognizes one local student who exhibits outstanding merit in scholarship, leadership, and service. Continuing undergraduate and graduate students are eligible. The award consists of a $1200 scholarship and one-year ASM membership. To apply, please fill out the application AND have a brief letter of recommendation from a professor. Email the application to San Diego chapter of ASM International at asmsandiego@gmail.com. You may continue your responses on an additional sheet of paper. The award will be presented at the Awards Night Banquet in April 2016.

If you have additional questions, please address it to the ASM San Diego Chapter through e-mail or call Bob Klug (619) 544-2334 and we will respond at the earliest possible convenience.

National Engineers Week

“Technological Invention and Innovation: A Selective Review”
By Dr. Richard Hallion

Dr. Hallion received his BA and PH.D from the University of Maryland in the 1970s. In 1993, he graduated from Harvard University’s National Security Studies Program for Senior Executives. Throughout his long and illustrious career, Dr. Hallion has held numerous positions including, among others: Curator of Science and Technology for the National Air and Space Museum, NASA Contract Historian, Air Force Historian at Edwards AFB, Wright Patterson AFB, Andrews AFB, and the Pentagon. Special Advisor for Airspace Technology to the Air Force Chief Scientist. Research Associate in Aeronautics, National Air and Space Museum and the Smithsonian Institution. Dr. Hallion has published a diverse variety of books, articles, and essays related to his profession and his areas of expertise. In addition, he is a Fellow of AIAA, RAes, and the Royal Historical Society, as well as being a member of various military, defense and historical societies.

Annual Awards Banquet, Friday, Feb. 26th, 2016
5:00 - 9:30 P.M. at San Diego Air & Space Museum in Balboa Park

The ASM Chapter has purchased a table for eight (8) to this event. We will be offering these seats for $25.00 each on a 1st come 1st served basis to ASM members and Sponsors who are interested in attending. For additional information or to RSVP use the link below or contact Bob Klug at (619) 544-2334.

Additional Info  Banquet - RSVP

Note: As part of the National Engineers Week, your San Diego Chapter of ASM is supporting this year’s MATHCOUNTS Competition being held at UCSD on February 27th, 2016.
Spring is Upon Us

It may not seem to be, but trust me, this is prep time for all the spring fun stuff. The 1st part of the ASM year is primarily directed toward the students. We have moved the annual university visit & associated professorial presentation into February to better align with the student schedule. This is also the big kick-off to the *Abe Hurlich Scholarship*. In March we visit and interview younger students at the “Greater San Diego Science & Engineering Fair”. This is always a great event. All of this culminates in the **Student Awards Night** when we invite our selected students and families to dinner and enjoy their presentations. We hope you will try to attend these events and support our future.

Speaking of awards, we should also bring to your attention the National Engineer Week with the Annual Awards Banquet, for additional information go to the following link: [http://www.new-sandiego.org/home.html](http://www.new-sandiego.org/home.html)

This affair always has an interesting and informative speaker and your ASM Chapter has purchased a table for this event. If interested please RSVP.

We are also sponsoring a local competition, MATHCOUNTS, a program directed toward the promotion and improvement of quality mathematics education. The competition will be held at UCSD on February 27th.

We are excited about these local events and that we can be part of increasing the science and technical education in southern California.

Thanks again for all your support,
The Executive Committee

**PS:** Martin Spang, on behalf of the Bioengineering Graduate Society at UC San Diego, is looking for donations of material, shape memory nitinol in particular, to demonstrate biomedical devices for outreach activities and to get children interested in bioengineering. If you can help, please contact him at – mtspang@eng.ucsd.edu or (440) 463-7452.

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**ASM San Diego Chapter**

**Up-Coming Events**

**March 15 – 20**
Greater San Diego Science & Engineering Fair

**March 22nd**
Technical Meeting – TBD

**April 26th**
Student Awards Night

**Local Professional Societies**

- **NSBE** [www.nsbeprofessionals-sd.org](http://www.nsbeprofessionals-sd.org) (National Society of Black Engineers)
- **ASME** [www.facebook.com/AsmeSanDiego](http://www.facebook.com/AsmeSanDiego) (American Society of Mechanical Engineers)
- **ASNT** [www.sd-asnt.org](http://www.sd-asnt.org) (American Society of Non-Destructive Testing)
- **AWS** [www.awssection.org](http://www.awssection.org) (American Society of Welding Engineers)
- **NACE** [www.nace.org](http://www.nace.org) (National Association of Corrosion Engineers)
- **ASCE** [www.asce-sd.org](http://www.asce-sd.org) (American Society of Civil Engineers)
- **SWE** [www.swesandiego.org](http://www.swesandiego.org) (Society of Woman Engineers)
- **AIAA** [www.aiaa-sd.org](http://www.aiaa-sd.org) (American Assoc. of Aeronautics & Astronautics)

**Temecula Valley Engineering Association**
(Joint ASM – ASCE – NACE)
Contact: e hernandez@projectxcorrosion.com
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Ed Hernandez, PE, NACE CCT
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CORROSION FAILURE AND FORENSIC ANALYSIS
ASM San Diego Chapter Event Sponsorship:
Includes mention in event advertising & recognition during event introductions.
$200 / Meeting

Event Sponsorship helps us to offer members and students meals & refreshments at reduced cost.

Have any questions, comments, or suggestions
Please write to the chapter at:
ASMSanDiego@gmail.com

ASM Website
http://www.asminternational.org/web/san-diego-chapter

This is your chapter let us know what we can do to improve it!