

MARCH 2003

JOINT ASM-SAMPE MEETING

WHEN:

Thursday, March 27, 2003

SCHEDULE:

5:30 p.m. **Social Hour**

6:30 p.m. **Dinner, Choice of:**

- Charbroiled USDA Prime Top Sirloin Steak
- Fresh salmon filet with lemon-caper cream sauce
- Chicken Marsala w/mushrooms & red wine demi-glaze
- Vegetable plate

7:30 p.m. **Speaker Presentation:**

PROF. SIA NEMAT-NASSAR

WHERE:

[The Butcher Shop Steakhouse](#)

5255 Kearny Villa Road

San Diego, CA 92123

(858) 565-2272

COST:

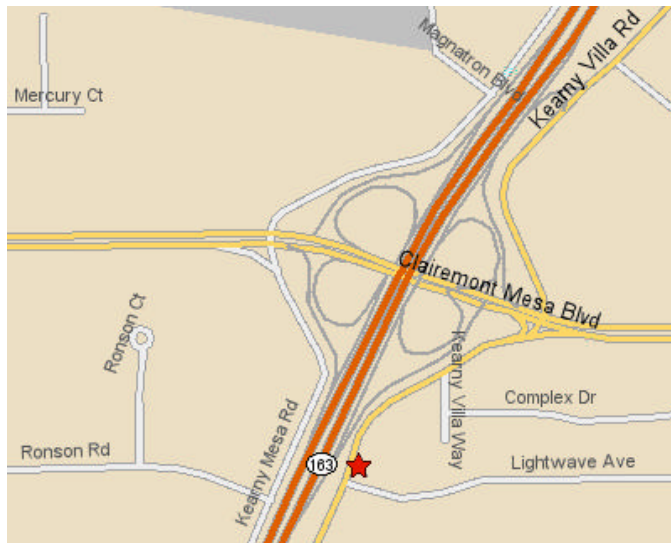
ASM or SAMPE Members - \$18

Students - \$10

Non-members - \$22

RESERVATIONS:

Call the Chapter Information Line at (619) 685-8848, or send an e-mail with **your dinner preference** by **March 25th** to sandiego@asmchapters.org



PROFESSOR SIA NEMAT-NASSAR

*Chair, Center of Excellence for Advanced Materials,
University of California, San Diego*

presents

Multifunctional Materials/Structures: A New Horizon in Engineering Science

Multifunctional materials and structures are systems designed and manufactured to possess one or more integrated functionality, in addition to their required mechanical and load-bearing attributes. Development of multifunctional materials and hence structures requires a multidisciplinary approach that has been the hallmark of Engineering Science. In this talk, I will review a class of multifunctional lightweight composites which have tuned electromagnetic (EM) signature management and sensing, self-crack-healing, thermal management, as well as being structurally strong and tough. The EM functionality is produced by integrating into the composite's fabric minute amounts of conductors of optimal configuration, which leads to composites with desired electric permittivity and magnetic permeability. The relevant basic theory, computational simulations, experimental characterization, and processing techniques, will be briefly presented.

SPEAKER BIO

Dr Nemat-Nassar is a Professor in the Mechanical and Aerospace Engineering Department at UCSD, where he has held a faculty position from 1966-1970, and 1985 to the present. He is the Director of the UCSD Center of Excellence for Advanced Materials. He held the John Dove Isaacs Chair in Natural Philosophy from 1996-2001. He is a member of the National Academy of Engineers, Life-Fellow of ASME, Fellow of AAM, SES, and foreign fellow of the Danish Center of Applied Mathematics and Mechanics. He has received several fellowships and awards including the Alburz Educational Foundation Prize, the SES William Prager Medal in Solid Mechanics, 2002, and the ASME Nadai Medal, 2002. Current research interests focus on experimentally-based analytical/computational, nano-scale modeling of response and failure modes of materials, particularly multifunctional systems; polyelectrolytes and ionic polymer metal composites; shape-memory alloys; advanced metals and ceramics; and granular materials. He is editor-in-chief of the international journal *Mechanics of Materials*, has edited the book series *Mechanics Today*, and the book series *Mechanics of Elastic and Inelastic Solids*. He has authored, co-authored, or edited over nineteen books and proceedings, including co-authorship of an advanced book entitled *"Micromechanics: Overall Properties of Heterogeneous Material."*

Volunteers Needed for Science Fair Judging!

The 2003 Greater San Diego Science and Engineering Fair will be held at the Balboa Park Activity Center March 26-30th. Judging will be Wednesday, March 26th, 12:30-2:30 PM and volunteer judges are needed. Contact James Powell at (619) 544-2481

Abe Hurlich Award

Applications are being accepted for the Abe Hurlich San Diego Chapter Student Award. The award includes a \$1200 scholarship, one-year ASM membership and medallion. For applications, visit the chapter website or call the Chapter Information Line.

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Watch for details on the
Spring Educational Series: **CORROSION**.

Special guest speakers will include:

- **Dr. Jan Talbot**, Professor of Chemical Engineering & Materials Science, UCSD
- **Dr. Juan Carlos Nava**, Materials and Corrosion Consultant
- **Mr. Roger Benham**, President, Bencor Corrosion Specialists

The seminar will be held **April 22, 24, 29** and **May 1** at the Solar Turbines Learning Center.

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