

Wednesday, April 21

Materials Information Management with the Cambridge Engineering Selector

Dr. Will Marsden
Granta Design, Ltd.

Joint Meeting with SAMPE NorCal

Please remember to indicate a meal selection when you sign up!

5:30 pm Social/Networking.....6:15 pm Dinner.....7:30 pm Speaker

Meeting Location:
Michael's at Shoreline
2960 Shoreline Blvd.
Mountain View
(650)962-1014

Dinner Cost: ASM Members \$20, Students \$10, Guests \$25
Meal Choices: New York Steak, Salmon, or Vegetarian

RESERVATIONS REQUIRED:
Stacy Ewert at (408) 742-2521 or stacy.s.ewert@lmco.com
Reservation deadline is 1pm on Monday, Apr 19 (\$5 late fee after this time)

The 2004 Joint ASM-SCV/SAMPE Norcal Scholarships will be presented! See Page 2...



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Meeting Directions

To get to **Michael's at Shoreline** from highway 101, exit at **Middlefield Rd. / Shoreline Blvd.** Head **north** on **North Shoreline Blvd.** Michael's is at the end of North Shoreline adjacent to the Shoreline golf course, about 2 miles from 101.

RETURN SERVICE REQUESTED

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Have You Moved Recently?

If so, please remember to correct your address by logging onto the national website, www.asminternational.org, where you can review and update your membership record.

About the Topic

Materials Information Management with the Cambridge Engineering Selector

Materials professionals are often surprised by the lack of IT systems to comprehensively address the needs of their field. After all, isn't materials science and engineering very data intensive? And where are the "materials equivalents" of CAD and CAE, both now mature offerings that have had a huge impact on engineering and design?

Today's engineers are confronted by an enormous quantity of information regarding materials in different conditions and environments. By its nature, this information is usually expensive to obtain, and therefore the business case obliges engineers to realize the maximum possible value from it. Often the expectations of the materials scientists who produce the data are different from the needs of the designers who use the data. The organization management may have a third set of requirements, and often there are other interested parties who are keen to express an opinion. This talk will explore the unique set of requirements at each stage in the progression of materials information from the test lab to the designer's desktop.

Identifying optimal materials for specific applications is one of the principle uses of materials information, and is an excellent example for understanding the flow and use of this information within materials intensive organizations. The presentation will discuss the varying uses of materials data in the material selection process, from the initial data-intensive screening to final selection based on "non-quantifiables" (e.g. microstructural or joining characteristics, availability, etc.). The talk will also illustrate how the Granta CES4 Software for Materials Data Management and access to materials databases established in collaboration with ASM International can make this selection process robust, and the selected materials options clear to the non-materials specialists on the engineering design team. The presentation will also discuss how the software can be used to prevent the loss of materials information, or to lower its cost by preventing the repetition of expensive materials research programs and "capturing" materials knowledge that is held by senior engineers before they retire.

About the Speaker

Dr. Will Marsden

Granta Design, Ltd.

Since 2000 Dr. Marsden has been the Aerospace and Defence Product Manager for Granta Design Ltd, developers of the CES materials information management system. It had struck him working in his previous positions that (often) those who have materials data do not know what to do with it while those who do not have it, do not know where to get it. Working for Granta, his role is to understand the frustrations of the engineering community with regard to materials information within some of the largest materials intensive organizations in the world.

Previous to his employment at Granta, Dr. Marsden was from 1998-2000 the Principle Materials Specialist at FEA Ltd., developers of the LUSAS Finite Element Systems. From 1996-1998 he was a Research Scientist at DERA Farnborough. From 1987-1996 at the University of Surrey, he obtained his Degree, Ph.D. and post-doc experience investigating the growth of damage in a variety of systems, principally fiber reinforced composites.

2004 ASMI/SAMPE Scholarships Awarded

Each year the local chapters of ASMI and SAMPE (Society for the Advancement of Material and Process Engineering) award scholarships to two local university students. This year's awards went to **Jennifer Fino** and **Peter Hess**. Jennifer is pursuing a B.S. in Materials Engineering from California Polytechnic State University, San Luis Obispo. She has already worked 2 summers at Nitinol Devices and Components in Fremont, CA where she has made significant contributions, including co-authoring several publications. Jennifer plans to continue on to graduate school, and is interested in a career in biomedical engineering research. Peter already has a B.S. in Materials Engineering from Rensselaer Polytechnic Institute, and a M.S in Materials Engineering from Stanford University. He is currently pursuing a Ph.D. in Material Engineering at Stanford, where he is researching fatigue crack propagation behavior in Zr-based metallic glasses and their composites. Peter's goals include a career in research, possibly in the area of failure analysis. Both Jennifer and Peter have been invited to attend the April 21 joint ASMI/SAMPE meeting, where the scholarships will be presented.

The scholarship recipients were selected by a committee comprised of representatives from both ASMI and SAMPE chapters. The committee's selections reflect a careful consideration of the applicants' demonstrated accomplishments, potential, and seriousness of purpose relative to a Materials Technology career. The quality of all candidates this year was exceptionally high, making the final selection very difficult!

The ASMI/SAMPE Joint Student Scholarship award was created to encourage undergraduate and graduate students to further their career in Materials Science or Engineering. In 2001, the chapters decided to raise the scholarship to \$2,000 per student (from \$1,000 in previous years) in order to demonstrate their strong commitment to education in materials

Congratulations Jennifer and Peter!

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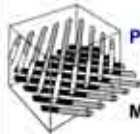
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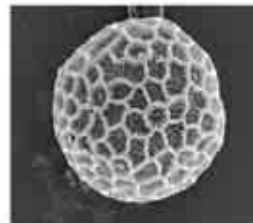
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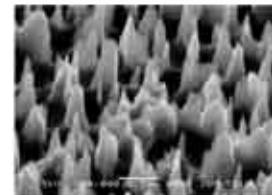
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Upcoming Events

- Apr 14:** IEEE-CPMT, "Packaging & Board Assembly Technology Trends and Their Impact on the Supply Chain". Visit cpmt.org/scv/
- Apr 15:** AIAA, "Men Into Space". Visit www.aiaa-sf.org
- Apr 20** AIChE, "Hydrogen Economy and Fuel Cells". Visit www.aiche-norcal.org
- Apr 22:** ACS, "Mad Cow Disease and the Chemistry of Rogue Proteins". Visit www.scvacs.org/Local_Folder/din_mtg.html
- May 12:** IEEE-CPMT, "Ultra-Small Miniaturization Technology". Visit cpmt.org/scv/

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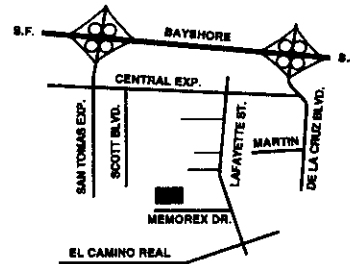
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Chapter Information & Upcoming Activities

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Vice Chair:

Ramas Raman (408)567-0941

Treasurer:

Richard Chung (408)924-3927

Secretary:

Stacy Ewert (408) 742-2521

Executive Committee

Mark Alexander (831)338-4790

Paul Fojas (510)538-7309

Ed Francis (408)653-1700

Dave Himmelblau (408)743-7893

Alfred Kwong (408)248-1916

Fred Landry (650)508-8700

Mingwei Li (650)966-5735

Lou Wirtz (408)756-0621

Shari Yokota (650)594-4065

Special Positions

SVEC Rep:

Ed Kaminski (408)241-4842

Newsletter Editor:

Scott Dickerson (408)986-3655

Thanks to our ASMI-SCV Sustaining Member:

CSU - Fresno Henry Madden Fresno

Would your company like to support the chapter by being a sustaining member? To find out more, contact Fred Landry at fred@altairusa.com.

Executive Committee Meetings: ASM-SCV Executive Committee meetings are held in September, October, January, March and May. Any member can attend! Call Jacques Matteau at (415)640-4948 for meeting times and locations, and to reserve a seat at the table.



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2004-2005 Election Slate

April is traditionally the month when we announce the candidate slate for our annual election of Chapter Officers and new Executive Committee members. This year the Nominating Committee presented this slate, which is again a mixture of new and familiar faces. Voting will be done in person at the May meeting, or by mail-in ballots which will be printed in the May newsletter.

Officers	Executive Committee
Chair: Ramas Raman	Jodi Iwata (SJSU Student Rep)
Vice Chair: Stacy Ewert	William Kaiser
Treasurer: Mark Alexander	Len Migliore
Secretary: Fred Landry	John Stringer
	Jie Zhang

Science Fair Report

Each year ASMI-SCV and the local SAMPE chapter field a team of Special Judges to the *Synopsis Silicon Valley Science and Technology Championship*. As usual, the judging team was impressed by the research and hard work done by the students. We'd like to thank **Bob Elliott** for organizing and coordinating the ASMI/SAMPE judging effort, **Lou Wirtz** for wrangling the judges at the event itself, and the ASMI members who gave their time and expertise to assist with the judging: **Mark Alexander, Frank Crossman, Scott Dickerson, Mr. and Mrs. John Ferrante, Paul Flowers, Jack Jew, Bill Kaiser, Denny Majchrowicz, Dave Himmelblau, and Al Kwong**. We'd also like to thank **Lenny Migliore** for preparing the award certificates. Above all, we'd like to congratulate the winners! This year each organization (ASMI and SAMPE) gave out 1st, 2nd, 3rd place awards and Honorable Mentions at both upper and lower grade levels. The awards were presented by **Bob Elliott** at the Awards Ceremony on Sunday, April 4. The ASMI Special Award winners are as follows:

Lower Grade Level (Grades 6-8):

1st (\$100) - Sonny Gandhi - *Corked Bats Make a Difference!*

2nd (\$75) - Sarah Brown - *Shuttle Tile Impact Zone*

3rd (\$50) - Christi Prater - *What Chemical Can Be Used to Reduce the Freezing Point of Ice Water?*

Upper Grade Level (Grades 9-12):

1st (\$100) - Todd Karin - *Calcium Oxalate as a Protector of Marble*

2nd (\$75) - Joanna Estrada, Stephen Hop, Craig Imazumi - *Thermoelectrics*

3rd (\$50) - Arianna Pham - *The Effect of Toxic Chemicals and Corrosion on PEX and Copper Pipes*

Honorable Mentions (Magazine subscription and certificate of achievement):

Lower Level:

Karina Schneider - *Will Dye Weaken Your Hair?*

Leena Suleiman - *Free Electricity*

Upper Level:

Rachel Halper - *Invention of Device to Detect Pollutants from Secondhand Smoke*

Anton Sepetov - *Solving the Mysteries of Solubility*

May 19 Meeting:

Progress in Growth of Diamond Crystals
Prof. Reza Abbaschian, FASM
May 19 is also Awards Night, Student Night,
and Elections Night!