Chapter-Sponsored Events on Campus

Clemson University

This semester, our chapter decided to hold a welcome back ice cream social for anyone within the department as an opportunity for old friends to see each other again and to recruit new members. To add a fun science twist to this event, the ice cream was made using liquid nitrogen. This liquid nitrogen ice cream social involved about ten of our members, and we used homemade ice cream mix and liquid nitrogen to make vanilla ice cream. Instead of using an ice cream machine we just blended the mixture with liquid nitrogen until it was the right consistency. It was delicious!

In an attempt to get everyone to relax around mid-term exams, a bowling night at the student union was suggested to put everyone at ease. For this event, four bowling lanes, one ping-pong table, and a pool table were rented out for three hours on a weeknight, and all of the MA members were invited to attend. This turned out to be a really fun event that helped everyone relax around a stressful time in the semester.

The Clemson University Material Advantage Chapter invited Prof. Seetharaman from Carnegie Mellon to give an undergraduate seminar 12 – 13 October 2011. During this visit, Dr. Seetharaman gave a talk on “Interfacing Chemical and Physical Metallurgy to both the Materials Advantage student chapter (26 students attending) and a course on materials manufacturing (MSE 319, 91 students). Both of these talks were provided by an AIST fellowship (Elliot Lectureship) awarded to Dr. Seetharaman.
First, we sent information about the program to top high school students through all schools in the country, particularly those specializing in science as a priority area. Students selected by POSTECH upon recommendation by their schools received letters of invitation to POSTECH.

Those selected were introduced to the campus life and the fundamental research methods in materials science and engineering. Finally, we arranged their meetings with the leading academic staff in the Department of Materials Science and Engineering as well as with POSTECH graduate school students.
Iowa State - Oobleck Sidewalk

Each year, the Iowa State University Chapter of Material Advantage (ISU MA) organizes an Oobleck Sidewalk, much to the delight of the children in the area. “Oobleck” is a simple mixture of approximately equal parts cornstarch and water. This combination is interesting because it is a non-Newtonian fluid and shear thickens. When pressure is applied, the Oobleck comes together like a solid; without any pressure, it flows like a liquid. An 8’x4’ wood frame filled with Oobleck makes a sidewalk where it is possible to run across without any trouble, or go slowly and sink down into it. Of course, it’s always fun to pick it up and play with it as well. All that’s necessary other than the wood frame is:

- Approximately 10 cases of cornstarch (easily preordered at Walmart)
- Access to water
- Five gallon buckets (to mix batches of Oobleck in)
- Plastic sheeting (to line the wood frame)
- Small plastic kiddie pool (to wash hands and feet off in)
- Hand towels (to dry off with)
- Trash bags (for disposal)
ISU MA members enjoy the Oobleck Sidewalk as much as the kids do (evident in the photos). Hopefully you will too!

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The University of British Columbia

The University of British Columbia Materials Engineering Joint Student Chapter (JSC) of Materials Advantage hosts a wide variety of events on campus that cover both the social and technical aspects of student life. Over the last year we have hosted competitions and social events such as, “The Materials Engineering Pumpkin Carving Contest” and “Gingerbread Material House Building” along with technical seminars. Our technical seminar series this past year included a Materials Engineering oriented industry night. On January 26, 2012, the JSC hosted “The 4th Annual Materials Engineering Industry Night”. Over the last couple of years this has become one of the largest events that the JSC organizes. The event was a big success, attended by 96 students, faculty, and industry professionals. Three presenters, each with their own unique career path in the Materials Engineering profession, shared their knowledge and perspective with the students. In addition, the students had a chance to mingle with the industry guests over refreshments and receive helpful tips regarding career and personal development. The chapter received positive feedback from students, faculty and industry guests, and is looking forward to the events 5th anniversary next year.
Figure 1. Students listening intently during the first of three presentations during “The 4th Annual Materials Engineering Industry Night”.

Figure 2. Students, faculty and industry guests mingling during “The 4th Annual Materials Engineering Industry Night”.

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Indian Institute of Technology, Kanpur

The MA @ IIT Kanpur has made a whopping growth of 60% during the Fall 2009 Membership Challenge pushing the total membership count to 53 that let the MA @ IIT Kanpur to win the award of “Most Students Recruited” along with a prize of 500 USD from the Material Advantage charter. Towards the same, MA @ IIT Kanpur has organized host of activities on a big scale such as (Flyers shown):

1. **Occhiolìino 2011:** A Micrography Contest with participation of more than 112 entries in various sections of optical-, SEM-, TEM- and other- (such as Raman, AFM, etc) micrography techniques.

First two winners will receive Attractive prizes in each category & Certificates to all the selected entries.
“Occhiolino 2011”
Micrography Contest
19TH OCTOBER 2011

Categories

- Optical Microscopy
- Scanning Electron Microscopy
- Transmission Electron Microscopy
- Special Techniques (AFM, STM, Fluorescence)

First two winners will receive Attractive prizes in each category & Certificates to all the selected entries.

Display at LHC Foyer - 3:00-6:00 pm

3. **MA Xtempore ’12**: an extempore competition in which participants were given some interesting topics to speak upon for 3 minutes. Topics given for the competition were such that one could speak both technical and philosophical about them.

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The student members of MA Student chapter of IIT Madras presented talk on Nanotechnology to high-school students of Kendriya Vidyalaya High School in Chennai on 13th Feb. It was brief talk on nanotechnology. About 100 students with 6 faculty members of the school were present.

The talk comprised of explaining the nano-length scale through various comprehensible examples in day today life. The revolution in Nanotechnology in all field of sciences and engineering were explained. The predictions of advances in Nanotechnology by eminent scientists and use of Nano particles in ancient ages were also elucidated. The range of fields for nanoparticles from medicines to mechanical systems and how mankind has benefited by them was the main attraction of the talk. The nanotechnology in nature such as lotus-leaf effect, lizards walk (gecko tapes) etc was presented.

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