

MS&T'11[®]

Material Advantage Student Wrap-Up

Over 960 students attended the **MS&T '11 conference in Columbus, Ohio, 16-20 October 2011**. In addition to the technical sessions, students had the opportunity to participate in and attend many Material Advantage activities.

Student programs kicked off with the **Material Advantage Chapter Leadership Workshop** on Sunday, 16 October. Over 65 chapter leaders learned about the four partnering societies and the major benefits each organization offers. They learned how to manage a Material Advantage chapter and shared ideas on how to increase membership and raise funds.

Students also competed in the **Material Advantage Student Speaking Contest** semi-finals, where contestants were narrowed down to four participants for the finals. All contestants received \$300 for travel expenses. The winners of the 2011 student speaking contest were:



Winner

Parul Koul

University of Illinois, Urbana-Champaign
"Hex Mesh Degradation Investigation"

1st Runner-Up

John Solomon

Iowa State University
"A Biologically Active Ceramic - Ceramic Composite for Use in Orthopedic Applications"

2nd Runners-Up

Charles Forman

Virginia Tech
"Surface Characterization of a High-Performing Superconducting Radiofrequency Niobium Accelerator Cavity"

Ian Zeller

Clemson University
"Modification of PVDF Fibers with PNIPAM Containing Nanogels"

The contestants in the semi-final round were evaluated by a volunteer panel of judges: Connie Herman - Savannah River National Laboratory, Jared Weaver- Vesuvius Research, Geoff Brennecka - Sandia National Laboratories, and Dana Goski - Allied Mineral Products, Inc. The judges for the final round included: Brian Gilmore - Texas Instruments, RFAB, Cathleen Hoel - GE Global Research, and Anne Stocksdales - Rolls Royce.

Also on Sunday, entries for the undergraduate poster competition were displayed. Judging took place on Monday. On Tuesday, the poster entries for the graduate student poster contest were judged. The winners of the 2011 student poster contests were:

Material Advantage Graduate Student Poster Competition:

First Place: **Julie Drexler**, The Ohio State University

Second Place: **Jin Luo**, University of Kentucky

Third Place: **Haruhiko Atsumi**, Osaka University

The winners were selected by a volunteer panel of judges consisting of: Samrat Choudhuri - Los Alamos National Laboratory, Dengqi Bai - SSAB, Pello Uranga - CEIT, Alex Cozzi - Savannah River National Laboratory, Shawn Allan - Ceralink, Inc.

Material Advantage Undergraduate Student Poster Competition:

First Place: **Rafael A. Soler-Crespo**, University of Puerto Rico - Mayagüez Campus

Second Place: **Nick Fries**, Iowa State University

Third Place: **Laura Van Steenhuyse**, Iowa State University

Honorable Mention: **Blake Whitley**, University of Alabama

Honorable Mention: **Blair Wendt**, Colorado School of Mines

The winners were selected by a volunteer panel of judges consisting of: Jeff Schoonover - GE Global Research, Kelly Dallas - ArcelorMittal, Ian Sadler - Miller Centrifugal Casting, Kristen Brosnan - GE Global Research, Jared Weaver - Vesuvius Research.



While the semi-final round of the speaking contest was under way, two additional programs were offered for the students. First was the **Material Advantage Career Forum**, where representatives from different materials-related careers introduced themselves to the students. The representatives talked about their backgrounds and career decision that led to their current positions. The students had the opportunity to ask questions of the panel to assist them in the difficult task of making their own career decisions.

The Career Forum Panel included:

Kelly Dallas - Project Manager, ArcelorMittal USA
Ed Sabolsky - Assistant Professor, West Virginia University
Dept. of Mechanical and Aerospace Engineering
Joe Ryan - Pacific Northwest National Lab
Dan Grice - Metallurgical Engineer, IMR Test Labs
Alexis Lewis - Naval Research Lab

Second was the **Material Advantage Graduate School Forum**, where representatives from different universities and current graduate students introduced themselves to the students. The representatives talked about their backgrounds, the pros and cons of attending graduate school, as well as the process for selecting the right program. The graduate students talked about their backgrounds, why they chose to attend graduate school, and how they made their decision to attend graduate school.





The panel included Cyndi Freeman, Director, Graduate Student Recruitment and Diversity Initiatives at The Ohio State University, and Mengtao Xie, Ph.D. Candidate in Materials Engineering, Department of Mechanical, Materials and Aerospace Engineering, from the Illinois Institute of Technology.

Third was the **Material Advantage: The Art of Networking** session. Dr. Edward D. Herderick, Applications Engineer from EWI provided information on how to network, how to get the most from networking, and the benefits networking provides.

Between the three sessions, the students were provided with the type of information they need to make informed decisions about their future.

The final activity on Sunday was the **Material Advantage Student Mixer**, always a highlight for the students. More than 550 students, most wearing their school colors, networked with each other, leaders from the four partnering organizations, representatives from companies participating in the Professional Career Pavilion, society members, and the Material Advantage staff liaisons.



On Monday, 17 October, ArcelorMittal hosted a student plant tour of their facility outside of Columbus, Oh. In all, twenty six students participated and were treated to lunch at the plant, and were able to learn first-hand about the facility, which was commissioned in 1991. The plant has an annual coating capacity of approximately 450,000 tons, utilizing two zinc pots to support the continuous production of high-quality galvaneal product primarily serving the automotive industry.



Later that evening, AIST presented the **Steel Student Recruiting Reception**. The event was attended by over 100 students who were interested in learning more about the steel industry.

"I really appreciated the opportunity to talk to recruiters from many different steel companies. Thank you so much for this great opportunity. The food was amazing from the macaroni and cheese to the ice cream sundae bar!"

- Jamie Fitzgerald, Missouri S&T

"This was a great opportunity to meet a lot of companies who I don't usually see at career fairs. It was well run and should continue in the future. Thank You."

- Alvaro Mendoza, University of Florida

"The steel recruiting reception was wonderful! I loved the way it was structured and ran. The reception was a great experience for me; both to network and to learn more about specific companies whom I had not talked to before. Thank you for organizing and putting everything on!"

- Jennifer DeHaven, Missouri S&T

In all, nine steel companies sponsored the event, including:



Tuesday, Oct. 18 included the **Material Advantage Ceramic Mug Drop Contest**. In the Mug Drop Contest, students entered their mugs, fabricated from ceramic raw materials, which were then judged on both aesthetics and breaking thresholds. The speaking contests and poster contests are organized by the Ceramic Educational Council, and the mug drop are organized by Keramos, all on behalf of Material Advantage.



The winners were:

Winner – passing @ 60 cm drop

Michelle Gervasio
Virginia Tech

Most Aesthetic Mug

Liz Reidmeyer
Missouri University of Science & Technology

The exhibit hall also included the **Career Pavilion**. Students were provided lunch and encouraged to visit the companies in the pavilion. Activities wrapped up with the **Material Advantage Student Awards Ceremony**, hosted by the Material Advantage Committee chair, Leigh Duren. The winners of Material Advantage contests were congratulated and presented with awards.



In addition to the MS&T contest awards, the 2011 **Material Advantage Chapter of Excellence Awards** were announced. All active chapters were scored based on criteria for programming, career development, service, social activities and chapter management. The 2011 Chapters of Excellence winners, winning \$400 each, were:

Missouri University of Science & Technology
Rensselaer Polytechnic Institute
University of Illinois, Urbana-Champaign
Washington State University
Virginia Tech

The **Most Outstanding Chapter Award** went to **Iowa State University**.



The Material Advantage Committee meets each year at MS&T. This committee actively participates in decision-making of the Material Advantage Student Program. Many thanks to the committee members:

ACerS

Bill Fahrenholtz, Missouri University of Science & Technology

Kevin Fox, Savannah River National Laboratory

Allen Kimel, The Pennsylvania State University

Edmund Moore, Wright-Patterson Air Force Base

Staff Liaison – Tricia Freshour

AIST

Ronald J. O'Malley, Nucor Steel - Decatur

John Speer, Colorado School of Mines

Kelly Dallas, ArcelorMittal

Stephanie Will, The TIMKEN Company

Staff Liaison – Chris McKelvey

ASM

Leigh Duren, Nichols Portland-Parker Hannifin

Jake Auliff, Sauer-Danfoss

Ryan Deacon, Johns Hopkins University

Anne Stockdale, Rolls

Staff Liaison – Candace Cunningham

TMS

Diana Lados, Worcester Polytechnic Institute

Dave Bahr, Washington State University

John Balk, University of Kentucky

Ben Poquette, Keystone Materials LLC

Staff Liaison – Bryn Simpson