



University of Missouri – Rolla Student Section Newsletter



Volume 1

March 2004

Issue 4

March and April Events

- Mar 3* – Guest Speaker Paul Worsley
- Mar 9* – Tour of South Side Machine Works
- Mar 11-13* – Regional Student Conference
- Mar 15* – ASME Scholarship Application
Deadline
- Mar 17* – General Meeting, RSC report
- Apr 7* – Elections
- Apr 14* – Parent Section Dinner Meeting, Guest
Speaker

March 3 – Guest Speaker Paul Worsley from Rock Mechanics and Explosives (ME 104, 5:30)

Stop by on March 3 to hear Professor Paul Worsley talk about the Rock Mechanics and Explosive Research Center. He has promised a multimedia event, and maybe some demos.

The Rock Mechanics and Explosives Research Center provides research services dynamics of explosive interaction with various geophysical strata, and also in the applications of high-pressure water jets. Currently the center is working on several programs, including Project ELADIN (Elimination Land Mines by Aqueous Detection Identification and Neutralization), Automated De-militarization, and START (Strategic Arms Reduction Treaty).

March 9 – Tour of South Side Machine Works

The St. Louis Section of ASME has organized a tour of South Side Machine Works on March 9. South Side Machine Works has 100 years of experience in manufacturing large gears, rerimming of gears, metallizing surfaces of all alloys, stress relieving, and repairing fractured castings, and caster segment housings. This tour will encompass fabrication, general machining, large gear machining, machine rebuilding,

Burny computerized burnouts, welding, and sandblasting.

The tour is free and begins at 6:00, so we will need to leave Rolla by 4:00. A buffet dinner will be available at 7:00 for a cost of \$10. Space is limited and reservations are required. Contact Alan Pilch (acpgeb@umn.edu) to reserve your space!



March 11-13 – Regional Student Conference

In a few short days, the ASME will send a delegation of eight students and faculty to participate in the 2004 Region VII Student Conference in Lincoln, Nebraska. The RSC provides an incredible environment for interaction and networking with students and professionals from throughout the Region. The RSC also offers four competitions for all undergraduate members of ASME.

Students that will be participating in the competitions are: Misty Mills, Oral Presentation; Dustin Mitchell, Oral Presentation, “A Comparison of the Power Output of Five Biodiesels”; Prem Midha, Web Design Competition, “Behavior-Based Control of Multiple Robots”; Angela Berring, Prem Midha, Chester Grohs, Bryan Sartin, Student Design Competition. There are still spaces available for you to attend the RSC, and also to compete in the poster competition.

The cost for three days of events, hotel room, meals, and transportation is only \$50. If you want to make a poster to compete for the \$200 prize, you need to sign up before March 4. You don't need to attend RSC to compete in this event, but we encourage you to come. If you just want to come along for some fun, you can sign up as late as March 9. Contact Alan Pilch (acpgcb@umr.edu) for more information.

March 17 –General Meeting, RSC Report (ME 104, 12:00)

This meeting will cover general ASME business and officer duties. We will also take preliminary nominations for office at this time. If you're considering taking a leadership role or just want to get more involved, you don't want to miss this meeting! We'll also tell you all about the Regional Student Conference so next year you'll want to come along.

April 7 – Elections

It's almost time for officer elections. Do you want to get involved in ASME and take a leadership role? Now is your chance! We will be giving an overview of officer responsibilities at the next few meetings, so be sure to attend.

At the career fair, one of the questions frequently asked is, "What kinds of leadership experience do you have?" ASME is handing you leadership experience on a silver platter! If the role of officer seems daunting to you, consider serving on a less challenging level, by helping post flyers, cooking at the department picnic, planning a plant trip, or any of the other multitude of tasks that must be completed for the healthy and productive operation of your Student Section!

April 14 – Parent Section Dinner Meeting, Guest Speaker

Everyone is welcome to attend this dinner and presentation by Dr. Maan H. Jawad on the Development of Super High Strength Steel. Dr. Jawad is currently the President of Global Engineering and Technology, which provides consulting services to the power and petrochemical industries. He also teaches graduate level engineering courses including Advanced Structural Analysis, Matrix Analysis, Finite Element Analysis, and Theory of Plates and Shells. Previously, Jawad was President of

Nooter Consulting Services, Vice President – Research and Development of the Nooter Corporation, and a member of the Nooter Corporation Board of Directors.

More information will be available in the April newsletter, or contact Tom Bever at 314-353-8558.

Student Section News

ASME Scholarships

Time is running out to apply for ASME Scholarships! ASME offers several undergraduate scholarships, and you can apply for most of them with one online form. The scholarships offered include:

- **Roe Scholarship** (1 @ \$10,000)
- **ASME-ASME Auxiliary FIRST Clarke Scholarships** (7@ \$5,000)
- **Green Scholarships** (2 @ \$3,500)
- **Duncan Scholarships** (2 @ \$3,500)
- **Cooper Scholarships** (2@ \$2,500)
- **Adams Scholarship** (1 @ \$2,000)
- **Beichley Scholarship** (1@ \$2,000)
- **Kugle Scholarship** (1 @ \$2,000)
- **Miller Scholarships** (2 @ \$1,500)
- **ASME Foundation Scholarships** (15 @ \$1,500)
- **Gracik Scholarships** (18 @ \$1,500)
- **Heim Scholarship** (1 @ \$1,500)
- **Sammataro PVP Division Scholarship** (1@ \$1,000)

Graduate scholarships and loans are also available. You must join ASME to be considered for a scholarship or loan, but you can fill out both applications at the same time. The application deadline is **March 15**, so don't delay!

For more information, go to web.umn.edu/~asme and click on the "Apply Now" link, or go directly to <http://www.asme.org/education/enged/aid/scholar.htm>

ASME Student Wins Manufacturing Design Competition Award

Congratulations to Troy Stull on his second place award at the ASME Student Manufacturing Design Competition in November. The competition was hosted by the Manufacturing Engineering Division of ASME at the annual International Mechanical Engineering Congress and Exposition (IMECE). Troy worked in cooperation with Briggs and Stratton on his project, entitled "Virtual Robotic Die Casting Work Cell,"

Past Events

Impromptu Design

If you missed the meeting February 4, you missed some great feats of engineering. First, we welcomed all the new members who have joined ASME since May 2003 by presenting them with their membership pin. 20 new members were at the meeting to accept their pin.



The visitors from the St Louis Section had to reschedule because of weather, so we held an impromptu design competition instead!

Students were put in teams of four, given a kit of straws, pipe cleaners, match sticks, and paper clips, from which they had to build a bridge that spanned about 12 inches and would support the most weight (measured in units of "number of marbles"). The winning design held an astonishing 196 marbles!

The winning team of Dustin Mitchell, Robert "BJ" Jordan, and Marc Hawks was given personal staplers as the prize for their accomplishment.



Soup Social

On February 5, ASME hosted their first soup social. Several members braved the cold to serve soup outside the ME Building and tell people about ASME. Lots of people stopped by, and we even had new people sign up to be members! Thanks to everyone who helped make this event successful.

Tour of Schlafly Brewery

On Wednesday, February 11, eight UMR students traveled to Maplewood, MO to meet our Parent Section and take a tour of Schlafly Brewery. Anson Heitman, Robert Jordan, Tim Johnson, Chris Reinke, and Bo Yang (of Mechanical Engineering), Josh Barcus and Paul Ganey (of Civil Engineering), and Wes Street (of Chemical Engineering) made the trip.

The tour was led by James Ottolini, Chief Engineer for the Bottleworks. This was a great opportunity to network with practicing engineers and learn a little about the micro-brewing industry. We hope you don't miss out on the next tour!

Career Conversation

On February 18, three members of the St. Louis Section of ASME came to speak. They discussed the benefits of ASME membership after graduation, and the choices that shaped their careers. They also answered questions about the importance of a Master's degree to your career and the challenges of starting your own business. This was a great opportunity to talk to professionals in the mechanical engineering field and learn about the different opportunities available to mechanical engineers. Thank you to Tom Mull, Chair of the St. Louis Section of ASME and founder of Thomas Mull and Associates consulting; John Saufnauer from Solutia; and George Bowling from Monsanto.

VIP Tour of Anheuser-Busch

by Sarah Dunn

On Saturday, February 21st, 20 students and faculty traveled to St. Louis to tour the Anheuser Busch Brewery. Mike Meyer, Senior Director of Brewing Engineering and Technology, gave us a special tour of the Brewery. Mr. Meyer is a UMR graduate, ME '75, and a member of ASME. The four hour tour took us to areas not seen by the general public, including the Corporate Tasting Room.

Mr. Meyer shared technical information about each step of the brewing process, which centered on AB's strong focus on quality. Mr. Meyer told us how AB chooses only the highest quality ingredients and utilizes the latest technologies in control systems and automation. He also shared some of the history of Anheuser Busch with us as we moved through the various buildings. There are three registered National Historic Sites on the grounds, and Anheuser Busch proudly displays three chandeliers from the 1904 World's Fair, held in St. Louis. AB has made extensive efforts to preserve the historical value of the original buildings, and new buildings have been constructed to replicate the architecture of original buildings dating as far back as 1891.



A tour of AB would not be complete without visiting the Clydesdale horses. We happened to be visiting on "Picture Day," and had our picture taken with one of the well known Clydesdales. After learning about the brewing process and taking in the historic sites, a few samples of Anheuser Busch's finest beers were tasted.

Technical Electives Forum

On February 25, ASME hosted the first MAEEM Technical Electives Forum. Dr. Brad Miller presented all of the ME and AE technical

electives that will be offered in the Fall '04 semester. Lokesh Dharani, Robert Landers, Ming Leu, Keith Nisbett, Hank Pernicka, and Harry Sauer were also present to discuss some of the details of the classes they will be teaching. About 60 students (many of them ASME members) stopped by to eat lunch provided by the department and hear about their elective choices. Thank you to Tim Johnson, Leah Rechner, Siddharth Shinde, and Narayan Sreenivasan for helping to set up before the event and clean up afterward.

Is there anything else you would like to see in this newsletter? Contact Angela Berring (acbn7d@umr.edu) with comments or ideas.

2003-2004 UMR Student Section Officers

<u>Chair</u> Alan Pilch acpgcb@umr.edu	<u>Vice – Chair</u> Misty Mills m dm5yb@umr.edu
<u>Secretary</u> Angela Berring acbn7d@umr.edu	<u>Treasurer</u> Matt Chandler m fcbp7@umr.edu
<u>Newsletter Editor</u> Angela Berring acbn7d@umr.edu	<u>Advisor</u> Dr. Brad Miller m illerba@umr.edu

ASME Sponsors EPA's 'P3' Award

ASME is sponsoring the 'P3' Award, a student design competition that will provide grants to teams of college students to research, develop, and design sustainable solutions to environmental challenges.

ASME is one of the Environmental Protection Agency's 27 partner organizations from industry, non-profit and governmental agencies to sponsor the P3 Award.

Eligible teams initially compete for \$10,000 grants. The winners will use the money to research their projects during the academic year. In 2005, the recipients will be invited to Washington, D.C. to compete for the 'P3' award, which will provide further funding for more design development and implementation.

Applications can be found at <http://es.epa.gov/ncer/rfa/>

ASME'S MEMBER INITIATIVE SYSTEM ON THE WEB

ASME'S Member Initiative System encourages any member or operating unit of ASME to propose improvements to Society policy or procedure or to make any suggestions which would improve the operation or activities of the Society.

To date, there have been 13 proposals submitted, on topics such as "ASME and Iraq Reconstruction" and "Committee on the International System of Units." To view the initiatives, as well as ASME's responses, visit the Member Initiative System web page at <http://www.asme.org/cma/mis.cfm>.

ASME Announces Conference on Nanotechnology Growth in Biotech and Medical Devices

ASME's Nanotechnology Institute will sponsor a conference on growth opportunities for the Biotech and Medical Sectors in Nanotechnology from April 15-16 at the National Academies of Sciences and Engineering in Irvine, Calif.

The conference will provide engineers, business developers, professionals from the biotech and biomedical sectors and students solutions on how to capitalize on the next wave of new technology.

Attendees to the conference will receive a tour of the Integrated Nanosystems Research Facility at the University of California, Irvine.

To register for this conference, or for more information call InfoCentral at (800) 843-2763 or visit the website at <http://www.asme.org/events/nanobio>

Don't Forget Your Online Tools for Recruitment and Retention!

Any member who needs to contact dropped members, or who would like to invite a colleague to join can find sample letters, emails, tips for in-person contacts and phone scripts online in the leadership toolbox at <http://www.asme.org/leadershiptoolbox/r&r.html>

Visit your leadership toolbox today to see what's available.

Grants Available, First-Come, First-Serve

The Board on Diversity and Outreach's Partners in Mechanical Engineering (Partners) Program provides grants to ASME Sections for innovative projects and activities that support collaboration with local sections or chapters of organizations that support women and underrepresented minority groups in engineering.

Grants are awarded on a first-come, first-served basis and range from \$500 to \$1,000, depending on the size and scope of the activity.

Applications for Partners grants may be submitted throughout the year. For additional information, go to <http://www.asme.org/communities/diversities/bdo/partners.html>

Student Activity Calendar

March

March 1 [Charles T. Main](#) nomination deadline

March 15 Deadline for [2004-05 ASME Scholarship application](#)

March 15 ASME Auxiliary Scholarship – application deadline

March 25 [Fluids Engineering Division](#) – Young Engineer Paper Contest – abstract due

April

April 15 [Summer/Fall Student Loans – Application Deadline](#)

April 16-17 [Fundamentals of Engineering Exam](#)

May

May 1 [Deadline for Pre-College Mini-Grant Applications](#)

May 16 [Student Manufacturing Design Competition – project description due](#)

May 30 [Young Design Engineers' Paper Competition – entry deadline](#)

Member-Get-A-Member Campaign

Recruit new members and receive a 'Certificate of Volunteerism!' *

50% of their 1st-yr dues will fund scholarships for ASME student members. **Any member that has been out of school 4 years or less saves up to 60% on dues.**

Campaign Details:

<http://www.asme.org/membershipdrive/2003-2004/about.html>

Up to 60% dues savings:

<http://www.asme.org/member/info.html#dues>

Manage Transition with Ease: E-mentoring

Access a network of practicing engineers right from your computer!

Ask career questions, get a real-world perspective on day-to-day issues in the workplace and learn more about other career alternatives. A mentor can help you get the right training, find the right niche in mechanical engineering, and help you transition more easily into the working world.

There are over 300 Mentors from various backgrounds: Aerospace, Biomechanics, Design Engineering, Petroleum, Power, Pressure Vessels & Piping, Nuclear Engineering, Process Industries, Engineering Sales & Marketing and more.

E-mentoring is available to all ASME members with five years or less work experience in the engineering field. So sign-up for a Mentor today!

<https://secure.asme.org/signin/ementoring.cfm>

Contribute to METoday

Share your work/life experiences, expertise and/or lessons learned through the process of building your career. We are looking for non-technical career focused articles and/or ideas geared towards Early Career professionals.

Submit proposals to youngengineers@asme.org or

ASME and JSME Announce 'ICONE 12'

ASME and JSME (The Japan Society of Mechanical Engineers) will jointly present the ICONE 12 (12th International Conference on Nuclear Engineering) from April 25-29, in Arlington, Va.

ICONE is the premier technical conference on nuclear engineering. This year's theme, Nuclear Energy – Powering the Future, reflects the future changes in the global nuclear industry.

Among the attendees will be nuclear professionals throughout the world who want to stay current on industry trends and developments.

To register, or for more information on this conference, call InfoCentral at (800) 843-2763 or visit <http://www.asmeconferences.org/icone12/index.cfm>

Winning Strategies to Career Negotiations

Tips to getting that raise, promotion or new job

Prioritize your needs. Define your overall objectives in terms of responsibilities, work environment, salary and benefits— and keep these in focus throughout the discussion.

Consider the employer's needs. The more you understand what the employer is looking for, the more effectively will you communicate your value.

Strive for mutual understanding. “Put yourself in his shoes.” If you keep in mind the other person's style and values, it's easier to overcome areas where you may disagree.

Actively listen. Focus on what is being said, rather than what you wish to say—otherwise you may miss subtle, verbal and nonverbal cues that convey the employer's needs.

Be open-minded. Believing there's just one way to arrive at a positive outcome is very limiting. Instead brainstorm several outcomes that are mutually beneficial and then keep an open mind—an unanticipated solution may present itself through dialogue.

Research salary data. Having objective salary criteria is absolutely critical. Objective data minimizes the emotion of the discussion, as well as provides third-party credibility.

Practice, Practice, ... Role-playing with a career coach, or other objective individual, will show you exactly what you are comfortable asking for and how you come across to others.

Visit ASME's Career Center at www.asme.org/jobs for more information on career building and negotiations.