



**Chair's Corner**

Dear M&M Academy Members,

It is an honor to have been elected to serve as the new Chair of the Mines and Metallurgy Academy at Missouri S&T. I would like to recognize and thank Dianna Tickner for her outstanding vision and contributions while serving as Chair of our Academy during the past three years. Under Dianna's leadership we have made significant contributions in support of the students and faculty of the Departments of Geological Sciences and Engineering, Mining and Nuclear Engineering, and Materials Science and Engineering. A major contribution was our financial support for needed laboratory equipment, particularly with the establishment of the new McNutt Computer Learning Center. Communication among our members also improved with our newsletter and new website <http://web.mst.edu/~mmacademy>. Last year the Academy instituted two awards to recognize outstanding efforts by one senior and one junior faculty member. Each recipient received \$1000 plus an award certificate. The first two to be recognized under this new program were Dr. Jason Baird, Associate Professor of Mining Engineering, and Dr. Baijun Bai, Assistant Professor of Petroleum Engineering at Missouri S&T.

Those of you that attended our April 2010 Academy meeting know that Ted Ruppert was elected our new Academy Vice Chair. Ted has provided years of dedication to our Academy with his service and financial support. Ted will also remain as chair of our Student Affairs and Scholarships Committee. I look forward to working with Ted as we continue to provide the best support possible to our students and faculty. Other committee chairs for the coming year will be Greg Skannal, Nominating Committee; and Ralph Flori, Strategic Planning Committee.

Six distinguished graduates of Missouri S&T were inducted into our Academy last April. They were Dr. Curt Elmore, Associate Professor of Geological Engineering at Missouri S&T; MAJ Ryan Howell, Ph.D., Military Deputy for the Army Research Laboratory; Paul Lang, Senior Vice President for Arch Coal Inc.; Stephen Lang President and CEO Centerra Gold; Michael McCall, former Chairman and CEO of Luminant Energy; and Fred Niemeier, Vice President of Portfolio Management for Baird Capital Partners. Our Academy's strength will be increased through our new member's enthusiasm and involvement in support of our goals.

We also recognized six seniors at our spring meeting with \$500 cash awards and an engraved watch. These are special awards that are given to students who are judged by their peers as graduates with the highest potential to excel in their professional careers. Those receiving awards as 2010 Scholars were Joshua Holzhausen (Ceramic), Travis Kassebaum

(Geological), Matthew Paradise (Petroleum), Jill Groebinghoff (Mining), Shannon Stacy (Nuclear), and Hannah Terwelp (Metallurgical).

You will see attached information from our departmental chairs. A more detailed update will be given during our October meeting, including news of the new MS degree in explosives engineering that has been approved by the State of Missouri Coordinating Board of Higher Education. Enrollment continues to increase in our departments even with admission closing early for freshman students desiring to begin their engineering studies in August 2010. Those qualified undergraduate engineering students admitted after June 21 will be deferred to the spring 2011 semester.

We will receive a report on the very successful Advancing Excellence Campaign. This campaign ended June 30, 2010 with the University surpassing the \$200 million goal by nearly \$12 million. Over 85% of our Academy members were campaign donors. Money raised will be used to fund scholarships, upgrade facilities and equipment, and increase funding for research. This support has been especially critical in a time of reduced Missouri state support to higher education.

I hope to see you at our next Academy of Mines and Metallurgy meeting on Friday, October 1, 2010, the Missouri S&T Homecoming weekend. If you are able to arrive on Thursday, please plan to attend the second Dr. Thomas J. O'Keefe Lecture that will be given by Ken Gielow, MetE, 70 & 71.

Keith Wedge  
 August 2010

**M & M ACADEMY NEWSLETTER AUGUST 2010**

**Students**

**FALL 2010: Tremendous GSE Growth**

- ☘ **354 Total GSE Students**
- ☘ **260 Undergrad Students** (includes FEP)  
 62 G&G / 63 GE / 135 Petroleum
- ☘ **94 Graduate Students**  
 30 G&G / 23 GE / 41 Petroleum



**MoS&T 2<sup>nd</sup> Place Team!**  
**PetroBowl 2009 ACTE New Orleans**



**Whitney Metcalf (Petroleum)**  
**MoS&T Human Powered Vehicle Team**  
**Won Sprint Race at**  
**2010 California Competition**  
**Will seek world record in Sept 2010.**

**Research**

**Outstanding GSE Research Productivity**

- ☘ **\$1.54 Million**  
 GSE Department  
 2009 Research  
 Expenditures
- ☘ **\$1.63 Million**  
 GSE Department  
 2009 New  
 Research Awards



**Dr. Hogan and Kristen Arneson at Victoria Falls**

**Faculty**

- ☘ 17 full time tenure track faculty in GSE

- ☘ **Dr. Bob Laudon** stepped down as GSE Chair. Thanks, Bob!



**Dr. Ralph Flori** is the new GSE Chair.



**Bob Laudon**  
 (Retiring Sept 1)



**Dr. Wan Yang** is our newest G&G faculty member. A Univ of Texas grad and former Chair of Geology at Wichita State, he will teach Petroleum Geology and Sedimentology.

- ☘ **Dr. Mike Whitworth** (GE) retired.

**More GSE News**

**Field Mapping Structural Basins in the Western Desert in Egypt**



**GE 352 students take a break for a group photo during a visit to the Mayan ruins in Tikal, Guatemala.**

<b>October 1, 2010 Meeting Agenda</b>	
<b>Carver/Turner Room Havener Center</b>	
<b>8:30</b>	Continental Breakfast
<b>9:00</b>	Opening Remarks / Introductions
<b>9:15</b>	Approval of April 22, 2010 Minutes
<b>9:20</b>	Committee Reports
	<ul style="list-style-type: none"> <li>• <i>Nominating - Greg Skannal</i></li> <li>• <i>Student Affairs and Scholarships - Ted Ruppert</i></li> <li>• <i>Strategic Planning - Ralph Flori</i></li> <li>• <i>Jackling Report - Chris Ramsay</i></li> </ul>
<b>9:45</b>	Break
<b>10:00</b>	University Advancement Report - Patty Ingle
<b>10:30</b>	Department Reports
	<ul style="list-style-type: none"> <li>• <i>Samuel Frimpong</i></li> <li>• <i>Wayne Huebner</i></li> <li>• <i>Ralph Flori</i></li> </ul>
<b>12:00</b>	Working Lunch
<b>1:00</b>	Old Business
	<ul style="list-style-type: none"> <li>• <i>Dr. Thomas J. O'Keefe Lectures</i></li> <li>• <i>Website update</i></li> </ul>
	New Business
	<ul style="list-style-type: none"> <li>• <i>Election of four members-at-large to Executive Committee</i></li> <li>• <i>Committee membership assignments</i></li> </ul>
<b>2:00</b>	Open Discussion, Wrap - Up, Optional Tours Of Departments



Students

- 174 total undergrad students (up 8)  
→ 92 MetE / 82 CerE
- 62 graduate students (up 6)  
→ 14 Met / 14 Cer / 34 MSE
- 50 high school juniors and seniors attended the ASM Materials Camp during the last week of July. Activities included research projects, field trips and the "walk on water" engineering competition.



- ≈\$310K in endowed scholarships given out in AY10-11; ≈\$105K in competitive scholarships from professional organizations
- 80% placement rate in AY09-10; starting salary Met: \$59,289, Cer: \$57,100

Faculty

- The Cast Iron Division of the American Foundry Society selected the paper entitled "W.D. Peach, S.N. Leach, V. Richards and K. Peaslee, "Near Surface Machinability of Cast Iron" to receive the Best Paper Award at the Cast Expo '10 / 114th Metalcasting Congress, March 21-23, 2010, Orlando, FL
- 17 fulltime T/TT faculty (UG student:faculty ratio =10.4:1)
- Rahaman to be named a Fellow of the American Ceramic Society at the 2010 MS&T Conference in Houston
- Day to receive the 2010 Phoenix Award for Glass Person of the Year in September.



Len Rahaman



Delbert Day

- MRC renamed Straumanis – James Hall in honor of Bill James, Professor Emeritus of Chemistry



- The second Dr. Thomas J. O'Keefe Lecture will be given on September 30<sup>th</sup> by Ken Gielow, MetE '70 & '71



Research

- 3 Year average expenditures: \$6.1M (MSE generates 21.2% of the research on campus with 5.5% of the faculty).
- \$1.9M from NSF will fund the renovation of the MRC; total project ≈\$5M
- The new TEM has arrived – purchased with \$1.5M in funds from the NSF.



FEI Tecnai F20 TEM

MNE STATISTICS

- 230 Seniors, Juniors, and Sophomores, 85 FEP; 57 MS/PHD & 45 ME; Total Enrollment of 416 (4% growth over last year)
- \$320K in endowed, industry & competitive scholarships for AY2009-10
- 90% placement for December 2009 grads with \$64K starting salary; 85% placement for May 2010 grads with \$60K starting salary
- Overall, > 90% of students involved in Department, Campus and External Extracurricular Activities

2010 RESEARCH NEWS



\$430K funding for Department of Homeland Security Counter-terrorism research



\$1.7 M funding for CDC- NIOSH Mine Safety and Health Research



With Impact Tech for the \$2.4 M DOE award for Slurry Jet in Enhanced Geothermal Energy

DOE \$180K funding for S&T-Lincoln Partnership

OTHERS: \$1.75 M USNRC, USDOE, Research Board & Industry Funding for Faculty Development, Undergraduate Scholarships & other Research Initiatives

THE BEST LAB IN USA!!!



Experimental Mine voted *Best out of 30 Awesome College Labs in the Country* by Popular Science; First Nine Runner-Ups: George Wash. U National Crash Anal. Ctr.; U. AL Propulsion Res. Ctr.; H.KY U. Barton Lab; U. Maryland Space Sys. Lab; CO State Engines & Energy Conv. Lab; TTU Wind Science & Eng. Res. Ctr.; Cornell Game Design Initiative; UC Merced Dawson Lab; Carnegie Mellon Robotics Institute



2010 Mucking Competition in Australia



HucE Faculty in Radiochemistry Facility



Women in HucE with Senator Bond in DC

THE FUTURE OF NUCE!!!



Nuclear Renaissance: Celebrating the 50<sup>th</sup> Anniversary of S&T's Nuclear Engineering Program and the Nuclear Reactor  
Keynote Speaker: Dr. Stames Walker, Director of Research Programs, US Department of Homeland Security

THE FUTURE STUDENTS



2010 Nuclear Camp for HS Students



2010 Explosives Camp for HS Students



Breaking Ground for the New Missouri S&T Experimental Mine Building