Dear Alumni, Colleagues and Friends,

Greetings from Rolla once again! The campus is brimming with students - enrollment is now over 7,400. The good news is that the new residential colleges, a remodeled TJ Hall, and several renovated fraternities and sororities have allowed us to accommodate all the students without putting them in hotels like we did in the early 80’s. Ceramic and Metallurgical Engineering both have healthy enrollments (104 MetE and 101 CerE Fr/Soph/Jr/Sr) – a number we can barely handle in terms of lab facilities and placement. We are over capacity right now since many of the labs need to be run throughout the week as compared to once an afternoon with the lab groups all together. We’re hurting for equipment and faculty time. With 17 faculty our student:faculty = 12:1, and while that is desirable, it doesn’t pay the bills. This has been true for 50 years now – it’s still our strong research program that allows us to justify our stand-alone existence. Only two ABET-accredited CerE programs and seven MetE programs remain in the country – S&T is the only university that still offers both. This focus is paying off for our students – this past May we had a 100% placement rate, and record starting salaries ($63K MetE, $64K CerE). Yet our labs are expensive to run, and no state funds are forthcoming to maintain and replace equipment. This past year we dodged a bullet – despite receiving a 7.1% cut in state funding, the growth in enrollment coupled with increases in tuition and fees allowed us to not receive any cuts in the department’s budget. If we had received 7.1%, the entire operating budget of MSE would have been wiped out, leaving only the S&W of the faculty and two staff.

The good news is that everything we’re in charge of is going fantastic! This newsletter reports on many of the important issues that affect student success, our #1 priority. Almost every measure we gauge ourselves on is on the increase, including enrollment, scholarships awarded, placement and average starting salaries, research productivity, and student and faculty awards and recognitions. This is a direct result of the quality of our students, staff and faculty. I know you will enjoy reading about all the great things going on.

This year many distinguished alumni and leaders came to the department to give lectures, most notably Ken Gielow (MetE ’70, ’71), the Thomas J. O’Keefe Lecturer, and Diran Apelian, the Golick Lecturer. Both gentlemen gave inspiring seminars to the students. This fall Ben Winter (’80 MetE) will give the 3rd O’Keefe lecture – details are herein. We hope to see you there! You would be proud of the student groups and all of the service activities they do to inspire the next generation of engineers and scientists. It’s no wonder they won national awards again. Thanks again to Bill Horst (’51 MetE) and his wife Ann for endowing the Thomas J. O’Keefe Student Professional Fund – having a budget allows them to strategically plan activities throughout the year.

The Phonathon will be held a little later this year: October 27th, 30-31st, and November 1-3rd. As always, we’ll have a hard-working group of students calling for your help. Last year the Metallurgy and Ceramics departments raised a total of $79,290, up 22%. Thank you for helping the future generations of Metallurgical and Ceramic Engineers! Thanks also go out to all of the alumni who have helped the department in so many ways, including sponsoring senior design projects, scholarship support, coming to our spring banquet, attending the reception at the convention, being at the Career Fair, delivering departmental seminars, etc.. I mean it when I say MSE would not exist without your strong support. Funding from alumni endowments provided over $328K in scholarships this year, and also generated over $100K to help run the department. We will never forget that, and neither will future generations of students who grace the halls of Missouri S&T.

This past year has been an enjoyable one for me as Chair, and I know the same can be said for the students, staff and faculty. Please stop by when you can! We hope this newsletter finds you and yours in good health & spirits.

Wayne Huebner
September 2011
Happy Graduates

♦ The past two semesters almost all of MSE graduates had a job when they walked across the stage, 100% in May.

♦ Average starting salary of MSE 10/11 graduates:
  
  Met: $63,000
  Cer: $64,880

At the career fair held on September 27th over 200 companies came to campus to recruit students. Of these ≈50 were seeking CerE and MetE students.

The accompanying figures show where the CerE and MetE graduates have been employed over the last ten years. Most of our students head to industry, although with the downturn in the economy many more stayed in school to pursue a graduate degree.

First Positions: Ceramic Engineering BS, 2000-2010

First Positions: Metallurgical Engineering BS, 2000 - 2010

2011 Freshman Demographics

- Women 22%
- Men 78%
- 79% Missouri
- 20% out-of-state
- 1% international
- 18 years old - ave. age
- 11% minority students
- 8% underrepresented minority students: American Indian, Hispanic/Latino, African American
- 24% first-generation college students
May 2011 Commencement
Professional Degree recipients
* Paul I. Fleischut, B.S. MetE, ’85
  Partner, Patent Attorney at Senniger Powers, LLP
* Dr. Paul Angel, B.S. CerE, ’85, M.S. CerE, ’87
  NASA Glenn Research Center
  Roadmap Manager for Materials
* Philip D. McPherson, B.S. CerE, ‘83
  Senior VP and General Manager
  Saint-Gobain Containers, Inc.

MSE Alumni Support the Students!
♦ Metallurgy scholarships: $195,725
♦ Ceramic scholarships: $133,225
♦ MSE undergrads also received over $125,000 in scholarships from professional organizations
  (FEF, WAAIME, AIST, SWACerS, Copper Club, Modern Casting…)

FEF: Foundry Education Foundation
AIST: Association for Iron & Steel Technology
WAAIME: Women’s Auxiliary to the American Institute of Mining, Metallurgy and Petroleum Engineers
SWACerS: Southwest Section of the American Ceramic Society

MSE Students Awarded $7,500 in National WAAIME Scholarships
Joseph Brookshire
David Hengst
Kaley McLain
Stephanie Mieth-Martin
Catherine Mohrmann
Lee Swaim
Allison Tengblad

♦ WAAIME: Women’s Auxiliary to the American Institute of Mining, Metallurgy and Petroleum Engineers
♦ $24K total awarded to S&T students

AIST Scholarships
MetE students were again the top university in North America in receiving scholarships from the steel industry through the AIST Foundation. Each received the follow scholarships:
Jennifer DeHaven AIST Foundation Premier Scholarship ($20,000 - $10,000/year for 2 years)
Andrew S. Etzold Ferrous Metallurgy Education Today Scholarship ($10,000 - $5,000/year for 2 yrs)
Allison Tengblad Ferrous Metallurgy Education Today Scholarship ($10,000 - $5,000/year for 2 yrs)
Collin Welshymer Ferrous Metallurgy Education Today Scholarship ($10,000 - $5,000/year for 2 yrs)
Jonathon Turner Ferrous Metallurgy Education Today Scholarship ($10,000 - $5,000/year for 2 yrs)

2011-12 Student Group Leaders
American Foundry Society
President: Sonny Tengblad
Vice President: Laura Kraus
Secretary/Treasurer: Calum Learn
Faculty Advisor: Dr. Von L. Richards

Alpha Sigma Mu
President: Roger Rettig
Vice President: Laura Bartlet
Secretary/Treasurer: Lucas Damoah
Faculty Advisor: Dr. J.W. Newkirk

Gaffer’s Guild
President: Liz Reidmeyer
Vice President: Caasi Coley / Becca Mullen
Secretary: Sam Rothove
Treasurer: Ethan Faber
Events Director: Chase Applegate
Faculty Advisor: Dr. Mary Reidmeyer

Material Advantage
Chair: Britni Snow
Vice-Chair (Met): Sonny Tengblad
Vice-Chair (Cer): Catie Mohrmann
Treasurer: Andrea Els
Secretary: Scott Pisark
Social Chair: NEED
Historian: Jeff Britton
Webmaster: Sarah Hunter
Faculty Advisor: Greg Hilmas

Keramos
President: Catie Mohrmann
Vice President: Angela Iler
Secretary: Libby Buchert
Treasurer: Megan Gilbert
Herald: Ryan Wilkerson
History Committee Co-Chairs: Andrea Els & Jeff Josken
Nomination Committee Chair: William Meier
Faculty Advisor: Dr. Bill Fahrenholtz

Phonathon 2011
October 27, 30, 31 & November 1-3, 6
MetE Students win National Scholarships at the FEF Conference

Carl Loper Scholarship
Spencer Nast, MetE ’11

Robert V. Wolf Scholarship
Tony Wilshire, MetE ’11

Richard Frazier Scholarship
Andrew Merritt, MetE ’11

FEF College Industry Conference

The 63rd annual conference was held in November in Chicago. Over 225 industry executives, students (74), and key professors were in attendance. In total $35,000 in scholarships and awards were presented.

Professor Von Richards is a FEF Key Professor, and makes sure our students always are in the hunt for CIC and FEF scholarships and awards!
Keramos & Material Advantage Groups win National Awards at MS&T

The Missouri S&T “Miner Mayhem” team placed second in the TMS 2011 Materials Bowl Competition.

Team members Scott Pisarik, captain, Andrea Els, Andrew Merritt, and Chris Ferguson earned $500 for our Material Advantage chapter. The competition started with 15 teams that were eliminated over the course of six rounds. Those teams included: California Polytechnic State University, Washington State University, Boise State University, University of British Columbia, University of Idaho, New Mexico Institute of Mining & Technology, University of Alabama, South Dakota School of Mines & Technology, Colorado School of Mines, Florida International University, Georgia Institute of Technology, Ohio State University and University of Florida.

Best Poster Award:

Krista Kalac, “Effects of Rare Earth Additions to the Solid Solubility of Zirconium in Magnesium Alloys.”

Fall 2010 Phonathon

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<th>CerE</th>
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<tr>
<td>Average Pledge with Match</td>
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Joyce Erkiletian Retires

After 35 years of dedicated service to the students and faculty of Materials Science and Engineering, Joyce retired at the end of September. You can imagine the panic that spread amongst the faculty when she let us know back in the spring. Joyce could be used as poster child for what an Administrative Assistant means to the success of a department. She always performed her duties efficiently, accurately, and with a smile. Well over 1000 students have benefitted from her ability to always solve scheduling problems and awarding scholarships on time. She trained six Chairmen, namely Harry Weart, Bob Wolf, John Watson, Ron Kohser, Dick Brow and Wayne Huebner. All of us marveled at her ability to keep MSE out of trouble by instantaneously providing even the most obscure information. We did our best to find the magic combination of salary and begging necessary to keep her here – she did say that for $40/hour she would consider staying. Anybody with deep pockets out there? Everyone is happy for Joyce – she has certainly earned this achievement!

Teneke Brown Joins the Department

Filling Joyce’s shoes will not be an easy task, but MSE has found a winner! In September Teneke Brown joined the department, and has been working side-by-side with Joyce learning the ropes. I’m unhappy to report Joyce immediately taught her the truth about the Chairman and the faculty, so needless to say she is doing well. Teneke brings a wealth of S&T experience to the department, having worked in the Accounting office prior to joining the department. If you happen to visit please say hello to her. Welcome Teneke!
New Academy Scholars inducted at the Spring Mines and Metallurgy Academy

Erica Ronchetto  CerE  Andrew Merritt  MetE

New Academy Member Michael Moats inducted at the Spring Mines and Metallurgy Academy Meeting

Chris Ramsey  Former MetE Professor  Michael Moats  MetE, ’92 & ’95

04/14/2011

The Mines & Metallurgy Academy was established in 1995 with the mission of recognizing outstanding alumni, counseling and advising university leadership, promoting the goals and programs of the departments, and providing a mechanism whereby individual members may support the departments. Today, the Academy has close to 100 members, representing ≈1% of our living alumni. Members are nominated and selected based on their pre-eminence in their chosen field or profession.

Peaslee named to the Executive Board of the AIST

Vice-President for 2011-2012

Kent Peaslee  Kenneth J. Iverson Steelmaking Chair

The Third Annual Dr. Thomas J. O’Keefe Lecture

Benjamin Winter  MetEng, B.S. ’80
Vehicle Line Executive  Minivan and Carryover C/D Segment  Chrysler Group LLC

“The Sustainable Metallurgist”

October 6th, 2011

The AIST Metallurgy Technology Division has selected the paper:

“Inclusions and Nozzle Clogging during Billet Continuous Casting Process,” Jianwei Gao, Mujun Long, Yufeng Wang, Xiangjun Zuo, Lifeng Zhang

to receive the 2010 Jerry Silver Award for Best Paper at the MS&T Conference on Tuesday, October 19, 2010

The award is presented to the author of a process metallurgy or product applications technical paper judged to be the best of class by the AIST Metallurgy – Rolling and Processing Technology Committee.
Cotton candy-like fibers repair wounds

Hard-to-heal open wounds may have met their match in the form of a cottony glass material developed at Missouri University of Science and Technology, Rolla. The glass fiber material could become a source of relief for diabetics fighting infections. It also could be used by battlefield medics or emergency medical technicians to treat wounds in the field.

In a recent clinical trial, the material was found to speed the healing of venous stasis wounds in eight out of the 12 patients enrolled in the trial. Details about the trials and the material were published in the May issue of the American Ceramic Society’s Bulletin magazine.

The material – a nanofiber borate glass – was developed in the laboratories of Missouri S&T’s Graduate Center for Materials Research and the Center for Bone and Tissue Repair and Regeneration, says Dr. Delbert E. Day, Curators’ Professor emeritus of ceramic engineering and a pioneer in the development of bioglass materials. Day and his former student, Dr. Steve Jung, developed the material over the past five years.

Other bioactive glass materials are formed from silica-based glass compositions and have been used primarily for hard-tissue regeneration, such as bone repair. But Day and Jung experimented with borate glass, which early lab studies showed reacted to fluids much faster than silicate glasses.

“The borate glasses react with the body fluids very quickly” when applied to an open wound, says Day. “They begin to dissolve and release elements into the body that stimulate the body to generate new blood vessels. This improves the blood supply to the wound, allowing the body’s normal healing processes to take over.”

Clinical trials at Phelps County Regional Medical Center in Rolla began in the fall of 2010 with 13 subjects. One dropped out early in the process. All suffer from diabetes and had wounds that had been unhealed for more than a year.

Depending on the severity of the wound, Day says the wounds can heal within a few weeks to several months after the material is applied. “Within a few days, most patients see an improvement,” he says.

The material is produced at Mo-Sci Corp., a glass technology company founded by Day. Jung is a glass scientist at the company and holds bachelor’s and master’s degrees in ceramic engineering and a Ph.D. in materials engineering from Missouri S&T.

“Rolla is extremely fortunate to have the three key ingredients needed to take research from the idea stage to the commercial product stage,” says Day, who also invented TheraSphere, a glass product now used to treat patients with liver cancer at more than 100 sites worldwide, including Barnes Jewish Hospital in St. Louis. “We have the university, which provides the research expertise, Phelps County Regional Medical Center for the clinical trials, and Mo-Sci for the manufacturing and commercialization.”

Day foresees expanding the clinical trials to include patients with other types of wounds, such as burn victims.

Festschrift Planned for Prof. Delbert Day

The Glass and Optical Materials Division of the American Ceramic Society will be meeting in St, Louis, MO May 20-24, 2012. As part of the program, a Festschrift is being organized to celebrate the research career of Delbert E. Day, Professor Emeritus of Ceramic Engineering at Missouri S&T. Technical sessions are being organized that highlight Prof. Day’s long and productive career, including sessions on phosphate glasses, the mixed alkali effect, glass nucleation and crystallization behavior, and bio-glasses. Alumni, colleagues and former students who would like to participate in the meeting, or who would like to support it, are encouraged to contact Prof. Richard Brow (brow@mst.edu). Information on the meeting can be found on the ACerS website at http://ceramics.org/meetings/2012-glass-optical-materials-division-spring-meeting.
AFS 115th Metalcasting Congress, April 5-8th, 2011

MetE Students and Faculty receive AFS Best Paper Awards:

Molding Methods and Materials Division:
D. Kline, S. Lekakh and V. Richards, “Improving Investment Casting Mold Permeability using Graphite Particles”

Steel Division:
L. Bartlett, K. Peaslee and D. Van Aken, “Effect of Phosphorous and Silicon on the Precipitation of K-carbides in the FE-30Mn-9%Mn-9%Si-0.9%C-0.5%Mo Alloy System”

A Record year for MSE Research Expenditures

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<th>S&amp;T</th>
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<td>44.7</td>
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<tr>
<td>11</td>
<td>7.59</td>
<td>?</td>
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The 22nd A. Frank Golick Lectureship

Dr. Diran Apelian
Howmet Professor of Mechanical Engineering and Director of the Metal Processing Institute at WPI

April 21st & 22nd, 2011

MSE Faculty honored at February Missouri S&T Awards Banquet

- Faculty Excellence Awards (5 awards campus-wide)
  - Matt O’Keefe
- Research Award (10 awards)
  - Greg Hilmas
  - Bill Fahrenholtz
  - Lifeng Zhang
- Service Award (5 awards)
  - Bill Fahrenholtz
- Faculty Achievement Award (5 awards)
  - Mary Reidmeyer

Van Aken named Academy Professor at the Spring Mines and Metallurgy Academy Meeting
MSE Faculty Members Take On National Leadership Positions

Two faculty members in the Materials Science and Engineering Department at Missouri S&T are taking on leadership positions in two significant national materials organizations.

Professor Kent D. Peaslee, F. Kenneth Iverson Steelmaking Chair and Curator’s teaching Professor of Metallurgy is the First Vice-President of the Association for Iron & Steel Technology (AIST). In May, 2012, Kent will take over as President at the AISTech 2012 conference in Atlanta, Georgia. The AIST is the largest international non-profit organization focusing on advancing the technical development, production, processing and application of iron and steel. AIST membership is comprised of over 13,000 individuals worldwide and includes iron and steel producers, suppliers, academics and students. AIST was established in 2004 through the merger of the Iron and Steel Society of the AIME and the Association of Iron and Steel Engineers. Kent will be the first academic appointed president and will be succeeding the current president R. Joseph Stratman, Executive Vice President, Nucor Corp. Kent’s emphasis with AIST has been improving the partnership between industry, suppliers and universities through forming the Industry-University Relations Committee which he chaired from 2004 to 2010, increasing AIST’s support of faculty and students interested in the steel industry and development of continuing educational courses for international audiences. Kent developed the curriculum for Making, Shaping and Treating of Steel 101: an AIST professional education course that has been taught to over 500 students in the U.S. and internationally. This summer, Kent was one of the instructors teaching the course for AIST in Sydney, Australia at the University of New South Wales. AIST has since developed a series of Making, Shaping and Treating Steel courses based on the success of MS&T 101.

Professor Richard K. Brow, Curators’ Professor of Ceramic Engineering, becomes the Vice-President of the American Ceramic Society in October 2011, and President of ACerS in October 2012 at the MS&T’12 meeting in Pittsburgh. Founded in 1898, ACerS currently is home to more than 9,500 scientists, engineers, researchers, manufacturers, plant personnel, educators, students, marketing and sales professionals from more than 70 countries. The American Ceramic Society advances the study, understanding and use of ceramic and related materials. Dick has previously served as a member of the ACerS Board of Directors and as chair of the ACerS Glass and Optical Materials Division. He intends to promote the value of ceramic science and engineering education to the ACerS community, and to expand international outreach activities, with an emphasis on increasing collaborations with ceramic researchers, manufacturers and educators in the western hemisphere.

FeMet design project under the direction of Lifeng Zhang at the Missouri University of Science and Technology.
From left to right: Matthew Wilson, Brandon Ensor, Kyle Bevans, Jamie Fitzgerald, Scott Pisarik, Matthew Chott, Stephanie Martin, and Luke Walker.

Professor Mark Schlesinger spearheads fifth edition of Extractive Metallurgy of Copper (with Met Alum Matt King)

This new edition revises and updates the classic reference providing fully updated coverage of the copper production process, encompassing topics as diverse as environmental technology for wind and solar energy transmission, treatment of waste byproducts, and recycling of electronic scrap for potential alternative technology implementation. The authors examine industrially-grounded treatments of process fundamentals and the beneficiation of raw materials, smelting and converting, hydrometallurgical processes, and refining technology for a “mine-to-marke” perspective - from primary and secondary raw materials extraction to shipping of rod or billet to customers. The modern coverage of the work includes bath smelting processes such as Ausmelt and Isasmelt which have become state-of-the-art in sulfide concentrate smelting and converting.
Wiley Publishes New Edition of Kohser Text

John Wiley & Sons has recently released the new 11th edition of DeGarmo’s Materials and Processes in Manufacturing, a text co-authored by J T. Black of Auburn University and our own Ron Kohser. The book continues the tradition begun by E. Paul DeGarmo, a professor at the University of California-Berkeley, in 1957 when he sought to compile a descriptive text to expose students to engineering materials and the processes used to convert them into finished manufactured products. The initial chapters, about 250 pages, present the principles and properties of engineering materials, while the remainder of the text’s 1240 pages cover processes related to casting, forming, machining, joining, and surface finishing. An expanded and updated chapter presents the additive processes being used in both rapid prototyping and direct-digital manufacturing. Additional chapters cover aspects of manufacturing systems, lean engineering, automation, quality control, nanofabrication and microelectronic manufacturing.

While the hardbound edition carries a typical textbook price, Wiley will be offering the new edition as a “lifetime eBook” for $49.95. It will join the current 10th edition at www.wiley.com/go/engineeringvalue (the book is listed under Mechanical Engineering).

Foundry Education Foundation Trustees held their annual meeting at Missouri S&T
April 26 and 27 2011

The Trustees of the Foundry Education Foundation held a two-day meeting at Missouri University of Science and Technology. Missouri S&T has the largest certified FEF program in the US. The luncheon meeting included a presentation by the Chancellor Dr. John Carney, about the importance of the metal casting program to the university. During the meeting we had a tour of the MSE facilities related to metals casting, including an iron pouring demonstration. This was followed by committee breakout sessions and a dinner meeting at Matt’s Steakhouse. During that meeting Allison Tengblad, president of the student chapter of AFS, gave her impressions of having visited the education committee of FEF. Also during the dinner meeting Professor Kent Peaslee gave an update on the state of metallurgical education from the national perspective.

Students pouring iron during the FEF trustees visit.

Dr. Carney discussed the importance of the foundry program to the university.

Vice Provost Schwartz discussed the undergraduate education perspective on the foundry program.

Incoming AFS Student Chapter President Allison Tengblad talked about her impressions from participating in the trustees’ education committee meeting.

MSE Fall Picnic

September 20, 2010

Wiley publishes new edition of Kohser Text.

Students pouring iron during the FEF trustees visit.
Forty-three high school students spent the week of July 24-29 on the S&T campus learning about the career opportunities in metallurgical and ceramic engineering as part of our eighth ASM/MST Materials Camp. The participants, who will be entering either their junior or senior years of high school, came from twelve different states [Arkansas, California, Connecticut, Illinois, Iowa, Kansas, Missouri, Ohio, Oklahoma, Pennsylvania, Tennessee, and Texas].

During their stay, they heard presentations on: Materials Engineering as a Career Field (Dr. Huebner), Biomaterials (Dr. Rahaman), Aerospace Materials (Dr. Newkirk), Thin Films and Materials Characterization (Dr. O’Keefe), Forensic Metallurgy (Dr. Ramsay), Engineering Ethics (Dr. Kohser), High-Temperature Materials (Dr. Fahrenholtz), and Materials Research on the S&T Campus (Dr. Huebner). The students spent 8-10 hours working on small group projects under the guidance of department faculty, grad students, and undergrads. Project areas included: evaporative pattern metal casting, colored glass, piezoelectrics, high-temperature materials, metallurgy of various quality hammers, metallurgy of various grades of bolts, strengthening brass, electron microscopy of laptop computer components, kiln casting, coatings and films, and strengthening glass. Activities and demonstrations occurred in a variety of laboratory facilities, including the High Temperature Materials Lab, Friction Stir Processing Lab, Foundry, Electron Microscopy Lab, Mechanical Testing Laboratory, and Ceramic Processing Lab. On Tuesday afternoon, the group toured Rolla’s Mo-Sci Corporation (Dr. Day’s business), where the students learned of various aspects and applications, both medical and industrial, of glass microspheres. A field trip to St. Louis included a tour of the Carondelet Division of Metal-Tek Corp., an iron foundry, and Verallia North America (formerly Saint-Gobain Containers) a glass bottle manufacturing facility, both in Pevely, Missouri.

Our infamous “Walk-on-Water” contest was held on the final evening of the program. Seven six-man teams were challenged to design and build “shoes” that would attach to their feet and allow a member of their group to walk upright across the university’s indoor swimming pool. The teams could spend up to $50 on materials for their “shoes” which needed to address the features of buoyancy, stability and propulsion. No prior testing was allowed – a one-time succeed-or-fail. While most observers anticipated universal failure, two teams actually made it across the width of the pool. Most of the others were phenomenal flops, but all had fun trying, and everyone learned a bit about engineering design and materials.

ASM requires that all of its Materials Camps be totally FREE to the participants! Financial sponsorship for this summer’s program came from ASM International, two divisions of Nucor Steel (Yamato and Decatur), Chevron, the campus’ Jackling Fund, and the MSE department. Co-directors continued to be Dr. Ron Kohser and Dr. Mary Reidmeyer.

If you know of students who will be entering their junior or senior years of high school next fall that could benefit from an exposure to materials engineering, information and application materials can be found at both the ASM International web site (www.asminternational.org then click “Foundation” at the bottom of the page, and then “Students Materials Camps”) and the department site (http://mse.mst.edu then click “Academic Programs” and then “ASM Summer Camp”).
Mark your calendar, we will be calling.

November 1-3, 6, 9, 12
October 27, 30, 31 & November 1-4

Phonathon 2011