



MECHANICAL ENGINEERING



MECHANICAL ENGINEERING DEPARTMENT NEWSLETTER

SPRING 2008 ♦ VOLUME II

Welcome to the Spring 2008 semester publication of our ME departmental newsletter. This is published at the start of each semester to highlight faculty, staff, and student accomplishments. With time, the ME department plans for this newsletter to become a quarterly publication. In between newsletters, please visit our website @ www.me.msstate.edu. If you have comments or questions about this newsletter, please let me know. Judy Schneider, schneider@me.msstate.edu, 662-325-9154



CHANGES IN THE ME DEPARTMENT

THE ME DEPARTMENT MOURNS THE LOSS OF PROFESSOR BRUCE CAIN

This past August, the ME department lost one of our long time faculty members. Dr. Bruce Cain was born in Texas into a military family that eventually settled in Bruce's proclaimed home of Mississippi. He graduated from MSU in 1979 with a BS degree in Nuclear Engineering. While at MSU, Bruce received a 4-yr Army ROTC scholarship, served as a U.S. Army ROTC Cadet, president of the Army ROTC Honorary National Society of Scabbard and Blade, was a ROTC distinguished Military Graduate and received the Legion of Valor's Bronze Cross for Academic Achievement. After being on active duty, he worked as a research officer with the U.S. Army Construction Engineering Research Laboratory in Champaign, Ill.

While in Champaign, Bruce received his MS degree in 1987 and his PhD in 1989 from the University of Illinois with a major in Nuclear Engineering and a minor in Material Science. In August 1989, Bruce returned to MSU as an assistant professor of Nuclear Engineering and joined the ME department in 1993. Bruce was promoted in 1996 to associate professor in the ME department.

Students will remember Bruce as the faculty advisor of the ASME chapter whose achievements were recognized in 2006 as the outstanding faculty advisor of the ASME SE Region. On many days, Bruce could be found working with the students in the laboratory classes on topics of instrumentation and data acquisition techniques.



Dr. Bruce Cain

The ME department will long remember Bruce's energy and compassion about everything that he taught.

THE ME DEPARTMENT WELCOMES

Mr. Richard Jackson, who was previously an undergraduate working with Luke Nason, has been hired as the computer specialist for the ME department.

Ms. Maria Felicelli joined ME as a Web Developer. She is in charge of the ME Website and printed materials. Her artistic flair is evident in the ME Newsletter and the ME Webpage.

This spring marks the full time return of Ms. Chris Emplaincourt to the ME department. Ms. Chris who suffered a mild stroke this past fall, has made an excellent recovery. We are all very happy to have her back.

ACCOMPLISHMENTS OF NOTE:



We are exceptionally proud of all the members of the ME department, and we want to congratulate those who have been recognized on a national level for their great achievements.

OUR FACULTY

- ◆ Dr. John Berry was elected as a Fellow of the American Society of Mechanical Engineers.
- ◆ Dr. S. Felicelli received the Best Paper Award from the American Foundry Society,

at the 111th Metalcasting Congress last year, co-authors S. Felicelli, E. Escobar and C. Pita.

- ◆ Dr. Rand German presented the Invited Keynote Speech on “Modeling of Materials Processes - The Difficult Problems with Particulates,” at the 50th Jubilee Celebration and Int’l Conf. on Advanced Manufacturing Technologies (ICAMT). The Conference was held in Durgapur, West Bengal, India, on Nov. 28 Dec. 1, 2007

- ◆ Dr. Mark F. Horstemeyer was awarded the 2008 SAE Ralph R. Teetor Educational Award, which he will receive at the SAE World Congress in April, 2008.

OUR STUDENTS

- ◆ Mr. Nelson Fumo, Mr. Jeremy Childers, and Mr. Chad Wheeley have passed the training and examination to become a Department of Energy PSAT & PHAST Qualified Specialist.

RESEARCH AWARDS (RECENT GRANTS EXCEEDING \$75 K):



- ◆ NASA-MSFC IPA Grant, “Weld Process Theoretician and Analyst,” PI-Schneider (2/18/08-2/17/09).

- ◆ MS Technology Alliance, “Evaluation of a Micro-CHP Facility Operating on a Multi-Fuel Stirling Engine,” PI-Mago, Srinivasan, Chamra (10/01/07-5/31/08).

STUDENT PRESENTATIONS (AT FALL 2007 CONFERENCES):



- ◆ Hastings, W.C., Schneider, J.A., “Cryogenic Temperature Effects on the Mechanical Properties of Carbon and Synthetic fibers,” SAMPE/Fall Conference, Oct. 29-Nov. 1, 2007, Cincinnati, OH.

- ◆ J. B. Weathers, B. T. Marvel, K. K. Srinivasan, P. J. Mago, W. G. Steele, “Error Propagation in Heat Release Analysis of Pilot Ignited Natural Gas Combustion,” ASME-IMECE, Nov. 11-15, 2007, Seattle, WA.

- ◆ J. K. Thompson, S. J. Park, F. Findik, A. Antonyraj, “Novel Methodology to Quantify Tool Wear in Powder Metallurgy,” 2007 International Conference on Powder Metallurgy and Particulate Materials, Metal Powder Industries Federation, May 14, 2007, Denver, CO.

- ◆ T. Puz, J. J. Oakes, “Binder Optimization for the Production of Tungsten Feedstock in PIM,” 2007 International Conference

on Powder Metallurgy and Particulate Materials, Metal Powder Industries Federation, May 14 2007, Denver, CO.

- ◆ T. E. Puz, A. Antonyraj, M. T. Tucker, J. J. Oakes, S. J. Caldwell, “Powder Infused Putty Materials and Their Possible Applications,” “Weird PM: Next Generation Materials, Processes and Applications, 2007 International Conference on Powder Metallurgy and Particulate Materials, Metal Powder Industries Federation, May 15 2007, Denver, CO.

- ◆ Wheeley, C., Emplaincourt, M. C., Hodge, B.K., “Using Biomass to Replace Natural Gas for Hydronic Heating in a Greenhouse Complex”, Southern By Products & Renewable Energy Conf., Philadelphia, MS, April 2007, and the American ACEEE Summer Study on Energy Efficiency in Industry, White Plains, NY, July 2007.

ALUMNI FOCUS ON MR. ROBERT D. HUNTER, BSME '73:



While we are extremely proud of all of our graduates, we would like to occasionally take the opportunity to brag about the success of some of our former students. After graduating #1 in his ME class at MSU, Rob received his Doctor of Law degree from Cornell University in 1976. Rob practiced Law at Lange Simpson for 23 years before accepting the position of General Counsel for Altech, Inc. and its subsidiaries in 1999. Rob can always be counted on to be a guest lecturer to our students on product liability.

In addition to successful defenses of manufactures in trials around the country, a few other notable achievements in Rob’s career include:

- ◆ Represented the last 5 Governors of Alabama;
- ◆ Instrumental in the drafting and passage of Alabama’s 1987 Tort Reform legislation and 1992 Workers’ Compensation Reform;
- ◆ Lead counsel for Alabama in the long running Higher Education Desegregation Case while in private practice and later on a pro bono basis.