

Message from Department Head

Given that 2012 has come to a close, I wanted to let you know some of what is happening in the department. Our enrollment this past Fall semester included 177 undergraduate students and 86 graduate students (33 MS and 53 PhD). Over the last year, the number of students that graduated included 30 undergraduates, 7 masters students, and 5 doctoral students. A look at the thesis and dissertation titles (on page 2) demonstrates the interesting research taking place within the department. Our research expenditures last year increased to over \$3M. This represents the hard work of the faculty and staff to continually grow our research program. We have two new faculty that joined us this past year, Hugh Medal and Mengqi Hu, and a brief introduction to each is included in this newsletter.

I want to personally express my appreciation for the continuing, significant support of our alumni and friends. Our success is also a function of your time, money, and the history of your own success. Please continue to encourage students you meet to join us. You are the best advertisement of our program. If you are ever in town, please stop by and say hello.

Best Wishes,

John M. Usher, Ph.D., P.E.

Student Highlights

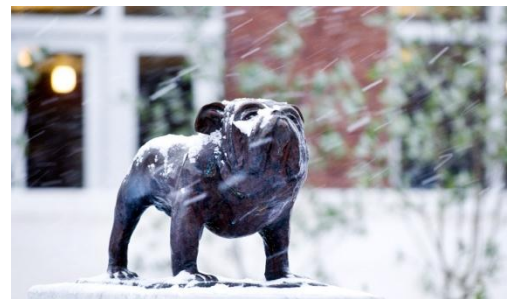
- **Christopher Collins** named to the Bagley College of Engineering **Student Hall of Fame**.
- **Sunny Patel** selected for the **Dorman Blaine Congressional Fellowship** program. He will be serving on Capitol Hill during Spring semester 2013
- **Mohammad Marufuzzaman's** research poster, entitled "A Carbon Sensitive Biofuel Supply Chain Network Problem," was awarded 3rd place at the **4th Annual Transportation Workshop** (Faculty Advisor: Dr. Sandra D. Eksiglu).
- Due to the hard work and dedication of the students, both the **IIE and HFES Student Chapters** received a **Bronze Award** for their chapter's organization and activities.

Anniversary Celebration

Friday & Saturday, April 19-20

The ISE department is celebrating our 50th Anniversary! To commemorate the event, please join us for an anniversary celebration during Super Bulldog Weekend. On Friday, April 19, we will host an informal mixer where you can meet and greet ISE friends and family. On Saturday, April 20, we will host an open house at McCain Engineering Building from 9:00am-noon, with facility tours, refreshments, displays, and a distinguished panel of speakers at 11:00am.

The department is rich in history, and this milestone serves as a chance for us to celebrate with students, faculty, staff, and friends who have made the department what it is today. Please plan to join us!



MSU-ISE awarded a Tier 1 University Transportation Center

Dr. Burak Eksioglu, Associate Professor of Industrial and System Engineering, has been awarded a \$3.5M grant from the U.S. Department of Transportation (USDOT) to establish a **Tier 1 University Transportation Center (UTC)**. After a very competitive selection process, USDOT awarded ten Tier 1 UTCs, each of which will try to advance U.S. technology and expertise in the many disciplines comprising transportation through research, education, and technology transfer. The theme of the UTC at MSU will be to promote the development of an integrated, economically competitive, efficient, safe, secure, and sustainable national intermodal transportation network by integrating all transportation modes for both freight and passenger mobility.

The name of our UTC is the **National Center for Intermodal Transportation for Economic Competitiveness (NCITEC)**. In its first year, NCITEC will be carrying out projects in areas including but not limited to: intermodal transportation options for older adults in rural areas, impact of intermodal-related risk to the design of biofuel supply chains, highway safety fundamentals, analyzing traffic layouts, performance measures for freight transportation, disaster protection of transport infrastructure, economic impact of short line railroads, and simulation modeling of intermodal supply paths.

2012 Research Graduates

Doctoral:

- **Kylie Nash**, Spring 2012, “Mental schema accuracy: Investigating the impact of schemas on human performance and technology usability.” Advisor: Lesley Strawderman.
- **Hossein Parsa**, Spring 2012, “A stochastic process study of two-echelon supply chain with bulky demand process incorporating cost sharing coordination strategies.” Advisor: Burak Eksioglu.
- **Huseyin Tunc**, Spring 2012, “Replenishment cycle inventory policies with non-stationary stochastic demand.” Advisor: Burak Eksioglu.
- **Douglas Grabenstetter**, Fall 2012, “Improving the quality of scheduling decisions for the engineering function.” Advisor: John M. Usher.

Master’s Thesis:

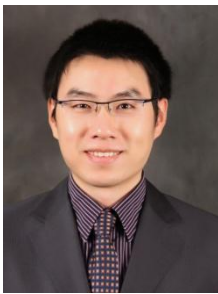
- **Ray Purnell**, Spring 2012, “Understanding managerial decisions about global sourcing: offshoring and reshoring of production.” Advisor: Allen Greenwood.
- **Daniela Gonzales**, Summer 2012, “Identifying factors and quantifying their impact on transportation costs of pre-processed biomass.” Advisor: Sandra Eksioglu
- **Chase Boothe**, Fall 2012, “The effects of prototype testing medium on the user’s overall perception of usability and ability to detect usability flaws.” Advisor: Lesley Strawderman.

Master’s Non-Thesis: Ashley Britten, Seyed Hosseini, Jose Rodriguez, and Martha Smith

Faculty Highlights

- **Dr. Burak Eksioglu** received the Bagley College of Engineering **Research Award**.
- **Dr. Sandra Eksioglu** received the MSU Alumni Association **Outstanding Graduate Student Mentor Award**, as well as the Bagley College of Engineering **Hearin Faculty Excellence Award**.
- New service roles in the department include **Dr. Kari Babski-Reeves** serving as the **ISE Graduate Coordinator** and **Dr. Lesley Strawderman** as the **Undergraduate Coordinator**.

New ISE Faculty



Dr. Mengqi Hu received his Ph.D. in Industrial Engineering from Arizona State University in 2012. He has also received his M.S. and B.S. degrees in Material Science and Engineering

from Huazhong University of Science and Technology, China, in 2006 and 2008, respectively. He joined the Department of Industrial and Systems Engineering as an Assistant Professor in August 2012. His main areas of interests are complex system modeling, simulation and optimization, meta-heuristic algorithm, intelligent decision support (collaborative decision and multi-criteria decision), and system informatics, with applications in energy systems, healthcare systems, and manufacturing systems. Dr. Hu is a member of the Institute for Operations Research and the Management Sciences (INFORMS), and the Institute of Industrial Engineers (IIE).



Dr. Hugh Richard Medal holds a Ph.D. (University of Arkansas, 2012), M.S. (University of Arkansas, 2008), and a B.S. (North Dakota State University, 2006) in Industrial Engineering. He joined the

Industrial and Systems Engineering Department at Mississippi State University as an Assistant Professor in 2012. Hugh is interested in the applied optimization research topics: transportation logistics, supply chain design and management, and network optimization. In particular, he examines how to optimally design and protect networks that are vulnerable to disruptions (e.g., supply chains and transportation systems) and how to optimally interdict networks that are a threat to society (e.g., infectious disease contact networks). Hugh's teaching interests include transportation and logistics, supply chain management, and stochastic optimization.

Visit us at: <http://www.ise.msstate.edu>

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