

Message from Department Head

Summer is officially here. I confess that I do enjoy the quiet hallways. However, by the end of summer I am looking forward to having the students back again. As you will see in the pages of this newsletter, the students, faculty and staff have been recognized widely this semester with a variety of awards. I am proud of our students and the caliber of work they produce. We had 22 students make the journey to the 2017 IISE Southeast Regional Conference held at the University of Florida. Of the 13 university chapters represented at the conference, MSU had the largest number of students in attendance. The faculty continue to excel at research generating approximately \$4M per year in research expenditures over the last four years. We also broke a record with the publication of 32 refereed journal papers in 2016, many of which include student authors. Don't hesitate to contact me if I can be of service. Thank you for your support and encouragement.

Hail State!
John



Spring 2017 Graduates

Doctoral:

- **Aaron Hoskins** – “Best longitudinal adjustment of satellite trajectories for the observation of forest fires (BLASTOFF): A stochastic programming approach to satellite system design.”
Advisor: Hugh Medal
- **Johnathon Huff** – “Development and analysis of system and human architectures for critical infrastructure vulnerability assessment.” Advisor: Hugh Medal with Brian Smith as Co-Advisor.
- **Sushil Poudel** – “Models and algorithms to solve a reliable and congested biomass supply chain network designing problem under uncertainty.” Advisor: Mohammad Marufuzzaman with Linkan Bian as Co-Advisor.

Master's Thesis:

- **Suyogya Bhandari** – “The role of system of systems in additive manufacturing.” Advisor: Linkan Bian with Raed Jaradat as Co-Advisor.
- **Will Bullington** – “Modified ant colony algorithm for dynamic optimization: A case study with wildlife surveillance.” Advisor: Mohammad Marufuzzaman with Brian Smith as Co-Advisor.
- **Dean Harrison** - “Study of distracted pedestrians’ behavior when using crosswalks” Advisor: Lesley Strawderman
- **William Quintero Restrepo** - “A framework for describing and assessing process capability for the automated creation of 3DCAD platforms for ETO products” Advisor: Brian Smith

Master's Non-Thesis: Nicholas Jones

Undergraduates: Leigh Ayers, Tylon Beckwith, Christopher Cullum, Jack Francis, Lance Gillespie, Christopher Havard, Kelley Kohler, Christopher Ladner, William Leonard, Madelyn Lukens, Miandra Maiers, Marlon Martin, Christopher Miceli, Joshua Mosby, Zac Nagy, Gita Ramakrishnan, Logan Reeves, Matthew Sommerman, Vanda Spencer, William Thomas, and Quadra Townsend.

Faculty & Staff News

- **Linkan Bian** was selected to receive the 2017 Institute of Industrial and Systems Engineers (IISE) **Manufacturing & Design Division Outstanding Young Investigator Award**. This award recognizes Dr. Bian's technical contributions to the Manufacturing and Design Division community. This award was presented at the national conference in Pittsburg, PA in May."
- **Richard Moore**, ISE Building Services Coordinator, won the **BCoE Staff Award** for AY17. He was recognized for his dedicated service to the Bagley College of Engineering and the Department of Industrial & Systems Engineering.
- **Brian Smith** was elected to serve as President-elect of IISE: Society for Engineering and Management Systems for the period 2017-2018. He will then serve as president the following year. Brian previously served on the SEMS Board from 2013 to 2016. In his role on the Board, Brian served as the ISERC Engineering Management conference track-chair multiple times.
- **Hugh Medal** was elected to the Board of Directors for the Operations Research Division of the Institute of Industrial & Systems Engineers (IISE). He will serve on the board for the period 2017 to 2019.

Alumni News

- **Jeff Herren** was recognized as a **2017 Distinguished Fellow** in the Bagley College of Engineering. Jeff graduated from MSU in 1979 and later earned an MBA in finance from George Washington University. He is the current CEO of Herren Associates, a company he started in 1989 which was named as one of INC Magazine's 500 fastest growing private companies and as one of the 50 fastest growing companies by the Washington Business Journal. While Herren Associates, Inc. has enjoyed steady growth, Jeff acknowledges he is still learning and is quick to credit his MSU experience as an industrial engineering undergraduate with the confidence to launch an entrepreneurial career. He was also the recipient of the inaugural GovStar Award by Smart CEO Magazine. Jeff is picture in the center with Dr. Keith (Dean) on the left and Dr. Bonner (Provost) on the right.
- **Todd Gandy**, a 1989 MSU-ISE graduate, joined the ISE Advisory Board this semester. Todd is currently employed by Cisco Systems as a Regional Sales Manager and has over 20 years of experience selling and creating information technology solutions for enterprise and federal customers. Todd is a native of Huntsville, Alabama where he currently resides. He has been married to Amy Gandy for 26 years and they have 3 children (Abby, Anna, and Parker) and one dog (Frodo). In his spare time Todd enjoys water skiing, gourmet cooking, college football, bourbon and wine.



Student Highlights

- **Jack Francis**, ISE senior, was awarded first place in the Student Technical Paper competition at the IISE Southeast Regional Conference held at the University of Florida. This conference is composed of students from 13 universities across the southeastern region. His paper, "Supply Chain Cost Analysis for Additively Manufactured Biomedical Implants," was selected from among all the student entries. Given his first place win for the region, Jack was invited to make his presentation at the national IISE conference held in Pittsburg, PA this past May. Jack was also recognized as the J. Ron Walsh Outstanding Senior for the 2017-2018 academic year.



- ISE seniors, **Kelley Kohler** and **Max Mosley**, were two of the six seniors in the college selected to be inducted into the **Bagley College of Engineering Student Hall of Fame**. The Bagley College Student Hall of Fame was established in 2007 to recognize student who display high academic achievement and exemplary leadership skills while engaging in work experiences and student activities. Kelley and Max are in the center of the photo above.



- **Alex Calhoun** received the **Undergraduate Student Research Award** for the Bagley College of Engineering at a banquet hosted by the Office of Research and Economic Development. Alex is a junior in the ISE department and has been involved in research since her arrival at MSU as a freshman. She has supported and/or directed four studies under the direction of Dr Kari Babski-Reeves, one of which has resulted in a journal publication that was also featured as an extended abstract reprint in the February issue of the IISE Magazine.

Student Highlights (continued)

- **Mojtaba Khanzadeh's** (PhD student) conference paper was selected as one of the four finalists for the Best Student Paper competition within the Quality Control and Reliability Engineering (QCRE) Division of IISE. As a finalist, Mojtaba made a presentation of his paper at the national conference in Pittsburgh, PA this past May. Based on his paper and presentation, Mojtaba received the 2017 QCRE Best Student Paper Award for his paper entitled: "Using Melt Pool Thermal Profiles to Predict Porosity in Additive Manufacturing." Dr. Linkan Bian serves as Mr. Khanzadeh's research advisor.



- **Roy Jafari** (PhD student) was one of two students to receive a 2017 Diversity Award from the MSU President's Commission on the Status of Minorities. This award recognizes individuals who demonstrate a significant commitment to enhancing diversity at MSU. Roy is pictured second from the left, next to President Keenum.



Student Highlights (continued)

- The MSU-ISE team, True Maroon Engineers, comprised of **Kennedy Brown**, **Jack Francis**, and **Ryan Stallcup**, finished 2nd place in the P&G Case Competition at the IISE Southeast Student Regional Conference. This competition was composed of individual teams representing 13 universities from across the southeast.
- An essay written by **Madeline Crow**, now an ISE sophomore, was selected as the first place winner for the Freshman Maroon Edition Essay Competition. Her essay entitled “It’s a Mutual Decision is archived in the university’s institutional repository (<https://ir.library.msstate.edu/>). Madeline is in the center of the picture.



- Winners of the J. Ron Walsh Outstanding Industrial Engineering Awards for the 2017/18 academic year are:
 - Outstanding Senior Award – **Jack Francis**
 - Outstanding M.S. Student Award – **William Bullington**
 - Outstanding Ph.D. Student Award – **Sushil Poudel**
 - Outstanding Distance Ph.D. Student Award – **Michael Sherwin**
 - Outstanding Research Paper Award – **Deb, Shuchi**, Carruth, D., Sween, R., Strawderman, L., & Garrison, T. (in press). Efficacy of Virtual Reality in Pedestrian Safety Research. Applied Ergonomics.
- Pictured below are the 22 MSU-ISE students that attended the IIE Southeastern Regional Student Chapter Conference at the University of Florida.



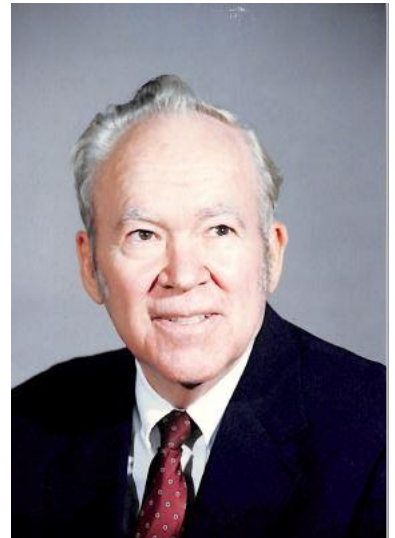
Student Highlights (continued)

- The photography work of **Trey Wallace**, an ISE senior, was on display this past March at the university's Visual Arts Center Gallery. The photography exhibit entitled 'Children of the Mountain Kingdom' featured a series of photographs Trey took during his work with the Reclaimed Project in South Africa. You can view his work at www.treywphotography.com



Professor Jesse Oswalt

- It is with regret that I share the passing of **Jesse Harrell Oswalt**. Professor Oswalt was one of the co-founding faculty of the department. Jesse completed a degree in Mechanical Engineering from Mississippi State and a Masters of Science from Georgia Tech. While in school at Mississippi State University, he left school to serve in World War II. Prof. Oswalt worked for the Mississippi Dept. of Vocational Rehabilitation during and following his tenure as faculty member at Mississippi State. In his retirement, he was often seen helping out his sons at Oswalt's Building Materials, Inc. in Mathiston, Ms. Since 1995, Jesse Oswalt and his family have been funding the Jesse Oswalt Scholarship for ISE undergraduate students. Professor Oswalt will long be remembered for his work in helping to establish and grow the department.



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

Contact: usher@ise.msstate.edu or 662-325-7624

LinkedIn Aside from the ISE website, the best way to stay on top of the latest news about ISE students, faculty, and the department is to join the [Mississippi State University Industrial & Systems Engineering](#) LinkedIn group. There are nearly **700** MSU ISE alumni members in that group, so it is a great way to reach out to other ISE Bulldogs. (Use the link: <http://bit.ly/msu-ise>)

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Your support makes a difference...

We wanted to be sure you know that when giving to the University, it is possible for you to make gifts directly to the ISE Department through the MSU Development Foundation. However, this requires that you explicitly specify that your gift is for the Department of Industrial & Systems Engineering.

The gifts that we receive from alumni, corporate sponsors, and other partners directly impact the student, staff, and faculty of the department. The ISE department needs your help with:

- scholarships and fellowships for recruiting and retaining students,
- funding access to state-of-the-art technology through equipment purchases for enhancing classroom and laboratory experiences,
- support for student leadership groups, and
- professorships to attract and retain top-caliber faculty.

These programs are not supported through state appropriations and therefore, are not possible without your help. Such gifts are an investment in the future, helping us to achieve excellence in the classroom and laboratory. You can use the form on the next page to contribute to these programs. You can also contact John Usher (662-325-7624; usher@ise.msstate.edu) or Bennett Evans, Director of Development (662-325-0386; bevans@bagley.msstate.edu) to learn about other ways to support the department.

If you want to make a donation online you can go to msufoundation.com and click on the "Give Now" link at the top right of the screen. When specifying the "Designation" select "College/School/Preferred Area." When a new screen comes up, type "Systems Engineering" and select "Industrial & Systems Engineering (310506)". The account 310506 should appear as the "Selected Designation."

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