ME Alumni to be honored during 2012 Homecoming
At the 2012 Honors and Awards Ceremony, two distinguished mechanical engineering alumni will be recognized by the Iowa State University Alumni Association and the College of Engineering. The event, which is celebrating its 81st year, is open to the public and will be held at Benton Auditorium in the Scheman Building on Friday, October 26, at 1:30 p.m.

Leia Guccione is the recipient of the Outstanding Young Alumni Award by the ISU Alumni Association. During her time at Iowa State, she was one of the most involved, engaged, and accomplished students on campus, so it is no surprise she has become one of ISU's most involved, engaged, and accomplished young alumni. Guccione graduated with a double major in mechanical engineering and political science from Iowa State in 2004.

As a naval nuclear engineer on the U.S.S. RONALD REAGAN, Lieutenant Guccione led a diverse 40-person organization of technicians and supervisors responsible for the ship’s main machinery room and associated main propulsion turbines, electrical generating turbines, pure water distilling units, air compressors, and associated pumps and support equipment. (Read Lt. Guccione's story)

Sadanand D. Joshi is the recipient of the Anson Marston Medal by the College of Engineering in recognition of his outstanding achievement in advancing engineering technology. Dr. Joshi received his Ph.D. in mechanical engineering from Iowa State in 1978.

Dr. Joshi, president and founder of Joshi Technologies International, Inc. (JTI), is widely known for his contributions to developing horizontal well technology to produce crude oil and natural gas. Author of the best-selling book Horizontal Well Technology, which was published in 1991, Joshi also co-authored Geological Aspects of Horizontal Drilling with R. D. Fritz and M. K. Horn, published that same year. He has had nearly 50 technical papers published with the Society of Petroleum Engineers (SPE), American Society of Mechanical Engineers (ASME), Petroleum Society of Canadian Institute of Mining, and other industry organizations. (Read Dr. Joshi's story)

Avendano presents at MAES Symposium
Alex Avendano, junior in mechanical engineering, presented a research poster at the MAES Symposium 2012, held October 10-13 in Las Vegas, NV. Avendano presented a poster on a research project he completed at Iowa State University as part of the 2010 SPEED Program. The research, "Surface Coverage of Double Thiolated Molecules on Microsurfaces for Microcantilever Sensors," was completed at the mechanical engineering department under the guidance of Pranav Shrotriya, associate professor of mechanical

Researchers double down on heat to break up cellulose, produce fuels and power
Iowa State University engineers Song-Chang Kong, left, and Nicholas Creager are studying a new bio-oil gasifier. Kong is holding samples of bio-oil that can be vaporized by the machine. Creager is holding the system's reactor, which can operate at temperatures exceeding 1,800 degrees Fahrenheit. Photo by Bob Elbert.

Iowa State's new bio-oil gasifier uses heat and pressure to convert bio-oil into a synthesis gas that can be used to make transportation and boiler fuels. The gasifier was built as part of a two-year, nearly $1 million grant from the U.S. Department of Energy. Another three-year, $450,000 grant from the Iowa Energy Center will allow researchers to study and refine bio-oil gasification.

Song-Chang Kong, associate professor of mechanical engineering who’s leading the latter project, will build a computer simulation model of bio-oil gasification. The model will take into account changes in temperature, pressure and biomass. It will allow researchers to understand, predict and ultimately improve the gasification process.

"The physics and chemistry will be behind all these models and images," Kong said. "This is a very new area to study. We can use these models as a tool to understand what will happen as this technology is scaled up."

"We hope to be able to use cellulosic biomass as opposed to using corn grain for the production of fuels," said Robert C. Brown, the director of Iowa State’s Bioeconomy Institute, an Anson Marston Distinguished Professor in Engineering and the Gary and Donna Hoover Chair in Mechanical Engineering. “This helps us move toward cellulosic biofuels.” (Full story)

Levitas' research featured in prominent journals
Denise Wright leaving the department

After five and a half years with the ME Department and seven years with the university, administrative specialist Denise Wright is leaving and making an exciting move out west to Seattle.

Of her time in the department, Denise said: “I have appreciated getting to know all of the faculty and staff, and I’ve enjoyed all of the humor and kindness of my coworkers. This truly has been a positive work experience for me, and I feel I’ve grown professionally working with such wonderful mentors and colleagues.”

A reception will be held in her honor on November 2 from 10 a.m. to noon in 2004 Black. Best wishes to Denise as she moves on to a bright future in Seattle!
Upcoming events

October 30 – Seminar: Probabilistic Methods in Cancer Biology
November 6 - Seminar: New Tools for Bayesian Inference in Complex Physical Systems
November 8 - Learning to Think Like Scientists: Does Our Future Depend on It?
November 9 - VRAC Tour
November 13 - Seminar: Challenges and Opportunities in Design of Large-Scale Complex Engineered Systems

“Thank you, Ted, for many years of support and mentorship.”
“Thanks for all your hard work in making the ME department a better place to work.”
“Thank you, Ted, for your leadership and efforts to improve our department.”
“Ted: Thanks for your great service to the department as interim chair. Wish you all the best in your future endeavors.”

Department of Mechanical Engineering
2025 Black Engineering Building, Ames, IA 50011
515 294-1423, isme@iastate.edu

Do you have department news you'd like to share? Please e-mail news items for InCYde Mechanical Engineering to Alex Rausch.