

April 29, 2013

Be sure to check out the

DESIGN EXPO

April 30, 2013
12-4pm Howe Hall Atrium

The Spring 2013 Design Expo will be held in Howe Hall Atrium from 12-4 p.m. Students will present their team design projects from ME 270, ME 415, and ME 466, and sponsored club teams will showcase their latest designs. Examples of projects at this year's event range from micro-economy kit products for developing economies and corporate sponsored projects to lunar mining robotics. Students from Industrial Design and Electrical Engineering, EE 492, will make a guest appearance to display a collaborative project with students from ME 415 and ME 466. **Erin MacDonald** and **Ross Morrow** lead the event, and **Jim Heise** helps with outreach and setting up the event. The Design Expo is open to the public.

Hayes selected for Emerging Leaders Academy

ME Department Chair and Lynn Gleason Professor of Interdisciplinary Engineering **Caroline Hayes** is among the ISU faculty and P&S staff members who have been selected for the Emerging Leaders Academy (ELA). ELA is a leadership development program for faculty and staff established by the Office of the Executive Vice President and Provost. It aims to enhance the leadership abilities of employees currently serving in leadership roles or those who aspire to such positions in the future. The 2010 ELA class participates in monthly leadership sessions. Throughout the year, the participants' learning experiences will focus on leadership research, theory, and practice; an in-depth look at Iowa State's past, present, and future strengths and challenges; and a semester-long mentoring experience with a current Iowa State leader.



Hayes

Pranav Shrotriya, ME associate professor and associate chair for graduate studies and research, graduated from the 2012 ELA class, which wrapped up in December.

Grant award announcements

PI: Gloria Starns

Title: Everyday Examples in Engineering (E3)

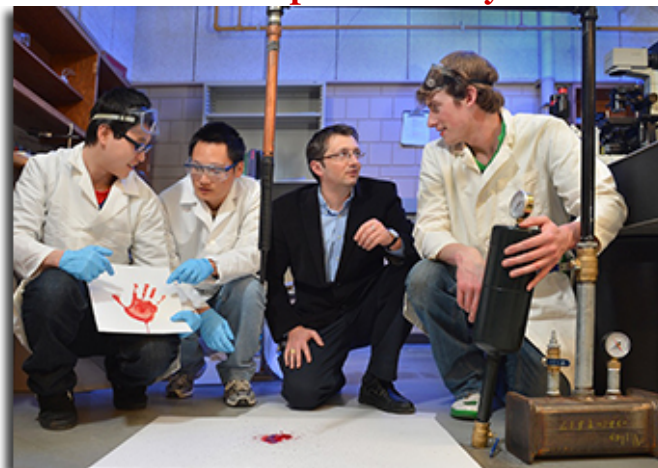
Award Amount: \$2,000

Awarding Agency: National Science Foundation

The purpose of the grant is to bring everyday examples of

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Attinger working to put more science behind bloodstain pattern analysis



A research team led by **Daniel Attinger**, an associate professor of mechanical engineering, has been given a US Department of Justice grant to further develop the science of bloodstain analysis in forensics. The team is working to understand the physics behind the impact and drying of blood drops. It is also working to develop portable tools that crime-scene investigators can use to analyze and interpret bloodstains. ([Full story](#))

Veishea 2013: "A Timeless Tradition"



Faculty, staff and students of the ME Department walked in the Veishea parade on Saturday, April 20. Photos of the event can be found on the ME [Flickr site](#), and more photos from the College of Engineering's involvement with Veishea can be found on the college's [Flickr site](#).

ME alumnus named 2013 STATEment Maker

Each year, the Iowa State University Alumni Association names STATEment Makers to recognize the early personal and professional accomplishments and contributions to society of young alumni (graduates 32 years of age and under). These individuals have made differences in their own lives, the lives of

engineering into first year engineering classrooms with the ultimate goal of retaining those students beyond the first year of engineering. To receive this grant, Dr. Starns proposed six activities to be used in ME 160 and ME 170 classes for one year, attended two webinars, and shared ideas for the activities in a faculty meeting.



Starns

PI: Eliot Winer

Title: Factory of the Future Study, Data Visualization for Hypersonics and SOM Visualization Parallelization

Award Amount: \$294,301

Awarding Agency: Boeing



Winer

The purpose of the study is to look at advanced virtual reality, augmented reality, and mobile technologies for improving the manufacturing and design processes for military aircraft at Boeing.

PI: Sriram Sundararajan**Co-PI: Pranav Shrotriya**

Title: REU Site – Research Experiences in Microscale Sensing, Actuation and Imaging (MoSAlc)

Website: www.me.iastate.edu/mosaic

Award Amount: \$119,927

Awarding Agency: National Science Foundation



Sundararajan

This Research Experience for Undergraduates (REU) site grant will engage a cohort of 10-12 undergraduate students annually in summer research experiences in the area of Microscale Sensing, Actuation and Imaging (MoSAlc) within the Mechanical Engineering Department at ISU. The students will pursue fundamental investigations in the area of design and manufacture of sensors, actuators and smart materials as well as “state-of-art” imaging and diagnostic systems. Project examples include design and analysis of high temperature MEMS pressure sensors, high efficiency organic solar cells, electroactive polymeric actuators, nanomechanical sensors for biological agents, atom probe tomography and high spatiotemporal resolution 4-D imaging. The existing faculty expertise and research infrastructure in the Mechanical Engineering Department at Iowa State University will provide the necessary guidance, mentoring and cohort-based social and educational activities to enhance students’ hands-on experiences, science and engineering knowledge base as well as communication and team-based skills.

A unique and differentiating component of this REU site from its existing version (2009-2012) will be an increased focus on recruiting community college students and an interaction component with middle school teachers. The potential impact of the REU site is in providing a diverse pool of undergraduate students from 4-year colleges, community colleges and incoming freshman with a) a research experience in topics that are of national interest; b) an appreciation for cross-disciplinary nature of such research; c) an appreciation of the ethical implications of engineering research and; d) a fostering environment for career development. These efforts are expected to encourage participants to pursue graduate school education and careers in R&D and academia.

others, their communities, and/or their professions through ambitious efforts that reflect the scholarly, entrepreneurial, or service-oriented spirit of an Iowa State University education.

This year’s STATEment Makers includes engineering alumnus **Jacob Cline** (BSME’04). ([Full story](#))

ME senior honored with Wallace E. Barron All-University Senior Award

Mechanical engineering senior **Szuyin Leow** received the Wallace E. Barron All-University Senior Award at the annual Iowa State University Alumni Association Winter Board Luncheon. Established in 1968, the award recognizes outstanding seniors who display high character, outstanding achievement in academics and university/community activities, and promise for continuing these exemplary qualities as alumni. It is named for Wallace E. “Red” Barron (Class of ’28), who served as director of alumni affairs at Iowa State from 1937 to 1968. Awardees receive recognition and the Official Iowa State University Ring, compliments of the ISU Alumni Association.



Leow

ME graduate student attends Energy Innovation Summit

Le Chen, graduate student in mechanical engineering, attended the 2013 Energy Innovation Summit in February. The summit aims to showcase innovative energy solutions and to encourage collaborations in energy field. Le was accepted to a special student program of the summit, which offered an opportunity for 70 selected graduate students to network with companies and other students with similar backgrounds.



Chen

During the summit, Le spoke with entrepreneurs, researchers, and students, and attended a variety of panel sessions that discussed the push of energy innovation technologies into the market place. She also attended interesting keynote presentations given by successful policymakers, entrepreneurs, and researchers. Among them, Le liked the presentations given by Dr. Steven Chu and Dr. Hans Rosling best. Another section of the summit Le enjoyed was called the Future Energy Pitching Session. It offered eight early-stage startups an opportunity to present their technologies to a panel of top venture capital investors. Le enjoyed her time at the summit learning about all of the innovative technologies presented.

Upcoming events

April 30 – [Design Expo](#), Howe Hall Atrium, 12 to 4 p.m.

May 1 – [Energy Policy Seminar: Harnessing Electric Vehicle Demand Flexibility](#), Room 0013 Curtiss Hall, 12 to 1 p.m.

May 8 – Retirement reception, Ron M. Nelson, 2:30 to 4 p.m., 2004 Black

May 10 – Graduate College Commencement

May 11 – Undergraduate Commencement, ME Department Reception, 8:30 to 10:30 a.m., Great Hall of the Memorial Union

May 31 – Deadline for entries of [Iowa NSF EPSCoR Student Poster Competition](#)