

## Mechanical Engineering @ Iowa State



# InCyde Mechanical Engineering May 7, 2010

This will be the last issue of *InCyde Mechanical Engineering* until August. Please continue to submit newsworthy items to [jlstrawn@iastate.edu](mailto:jlstrawn@iastate.edu) as they come up throughout the summer.

### U2 will use ME technology during performance

Those attending the Glastonbury music festival this summer will see visuals from technology used by researchers in Iowa State's ME department. The rock band U2 will project images from Song Zhang's 3-D shape measurement system and BodyViz's 3-D medical imaging technology while performing "Even Better Than the Real Thing." The U2 performance will take place on June 25 in Glastonbury, England, and will be broadcast on the BBC and via webcam. Keep an eye on <http://www.bbc.co.uk/glastonbury/> for further details.

### Teacher of the year

Jim Heise Teacher of the Year Award



Jim Heise has been honored by this year's ME seniors as Mechanical Engineering's Teacher of the Year. Each year the senior class selects the winner(s) from all faculty and lecturers who are actively teaching. Last year's winners, Ted Heindel and Greg Maxwell, were not included in the ballot as is the tradition for this award.

### Zou paper award

The American Automatic Control Council recently selected a research paper co-authored by Associate Professor of Mechanical Engineering Qingze Zou, graduate student Yan Yan, and Associate Professor of Materials Science and Engineering Zhiqun Lin for the 2010 O. Hugo Schuck Best Paper Award in the Applications category. The paper, titled "A Control Approach to High-Speed Probe-Based Nanofabrication," discussed the use of a novel iterative learning control technique in probe-based nanofabrication. In the paper, the group demonstrated that unprecedented high-speed nanofabrication of a star-pattern at the nanoscale can be accurately fabricated using their technique.

The award is given to recognize the best two papers presented at the previous American Control Conference (ACC). It includes an honorarium and will be presented to the group at the 2010 ACC during the awards ceremony on Thursday, July 1, 2010, in Baltimore, Maryland.

### ME staff earn degrees

In May, two ME staff members will receive diplomas for earning higher education degrees. Denise Birney, secretary for the Kiewit Undergraduate Student Services Center, will earn her bachelor of

### Excellence of Graduate Research

Eight graduate students received awards during the Excellence of Graduate Research Conference this spring. The conference was divided into two concurrent sessions and was supported by the Design and Manufacturing Innovation and Biological and Nanoscale Sciences research programs in the Department of Mechanical Engineering.

#### Session 1

- Hamed Attariani, 1st Place (\$400), "Continuum Simulations of the Formation of Hollow Nano-Sphere"
- Nathan Johnson, 2nd Place (\$200), "Sustainable Systems Engineering in Product Design for the Developing World"
- Chris Tourek, 3rd Place (\$100), "An Alternative Method to Determining Optical Lever Sensitivity in Atomic Force Microscopy without Tip-Sample Contact"
- Yufeng Wu, 3rd Place (\$100), "Effects of Mechanical Alloying on Al6061-CNT Composite by Semi-Solid Powder Processing"

#### Session 2

- Sergiy Markutsya, 1st Place (\$400), "Coarse-Graining Approach to Infer Mesoscale Interaction Potentials for Aggregating Systems"
- Kamran Samani, 2nd Place (\$200), "Phase Field Modeling of Melting of Aluminum Nanoparticles"
- Hari Kodali, 3rd Place (\$100), "A Computational Framework for Accelerated Performance Characterization of Organic Solar Cells"
- Lin Liu, 3rd Place (\$100), "Fabrication of Solid Oxide Fuel Cell Anode Electrode by Spray Pyrolysis"

### Markutsya wins Teaching Excellence Award

Sergiy Markutsya, studying under Associate Professor Shankar Subramaniam, received the Teaching Excellence Award from the Graduate College for spring 2010. The award recognizes the top 10 percent of graduate students for outstanding achievement in teaching. Each department or interdepartmental unit has the opportunity to select and nominate students for this award every semester.

### Zou promoted

Congratulations to Qingze Zou for being promoted to associate professor with tenure.

### Team PrISUM prepares for competition

Every two years, the PrISUM Solar Car Team competes in the American Solar Car Challenge, one of the biggest solar car races in North America. This year the race is from Tulsa, Oklahoma, to Chicago, and the PrISUM team has used what it has learned building previous cars in hopes of beating out the powerhouses of the past such as the University of Michigan and University of Minnesota. Read more about the car, the race, and the team in the *Iowa State Daily's* story available [here](#).

arts degree in human resource management from Briar Cliff University in Sioux City. She plans to take some time off and then take occasional refresher courses. Johna Wolfe, academic adviser, will receive a master of education degree from Iowa State in higher education with an emphasis in student affairs. This is her second master's degree from Iowa State.

### Summer office hours

During the summer, May 10 to August 13, 2010, the ME administrative office will be open from 7:30 a.m. to 4:00 p.m. The Kiewit Undergraduate Student Services Center will be open from 7:30 to 11:50 a.m. and 12:30 to 4:00 p.m.

### New MEGSO cabinet

Results for the 2010–2011 Mechanical Engineering Graduate Student Organization elections are in, and the new cabinet members are

- Joe Holub, President
- Ravi Kolakalvri, Vice President
- Najeeb Kuzhiyil, Treasurer
- Matthias Veltman, Board Member at Large

Do you have department news you'd like to share? Please e-mail news items for InCyde Mechanical Engineering to Jessi Strawn at [jlstrawn@iastate.edu](mailto:jlstrawn@iastate.edu)

Department of Mechanical Engineering  
2025 Black Engineering Building, Ames, IA 50010, 515 294-1423, [isume@iastate.edu](mailto:isume@iastate.edu)