

October 12, 2012



New members inducted into Pi Tau Sigma

Pi Tau Sigma, the International Mechanical Engineering Honor Society, recently inducted 32 new juniors and seniors into the [Iowa State Chapter](#), some of whom are shown in the picture above. This honor society has 150 chapters and over 100,000 members nationally, and focuses on service and leadership development.

The Iowa State Chapter plans industry visits, plant tours, lab tours, career building seminars, social activities with students and faculty, and outreach to K-12 students in the community, such as the Boys and Girls Club, to help inspire a new generation of students in math, science, and engineering. Questions on Pi Tau Sigma can be referred to current president [Daniel Diaz](#), co-president [Ravi Kolakaluri](#), or faculty adviser [Terry Meyer](#), associate professor in mechanical engineering.

ME welcomes six new faculty members

Six new faculty have joined the mechanical engineering department. Learn more about their stories below!

[Ganesh Balasubramanian](#)

Assistant Professor

[Sourabh Bhattacharya](#)

Assistant Professor

[Caroline Hayes](#)

Department Chair

[Alberto Passalacqua](#)

Assistant Professor

[Cris Schwartz](#)

Associate Professor

[Mark Wright](#)

Assistant Professor

Heindel's fluids laboratory featured on CoE YouTube channel

Kelkar speaks at international conference

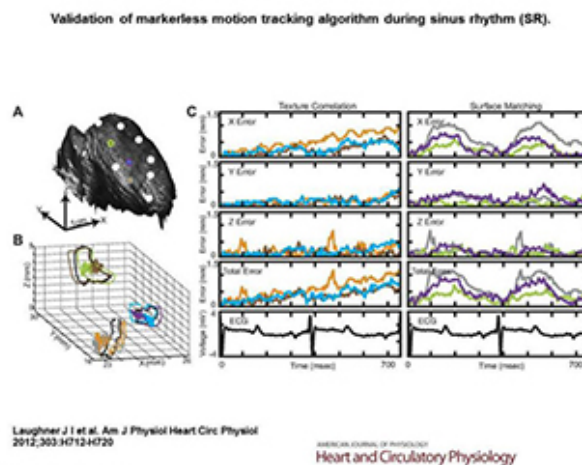
Atul Kelkar, professor in mechanical engineering, spoke at the Turing 100 International Conference on Computing Science. The conference was held at Lovely Professional University in Punjab, India, from September 16-17. Kelkar spoke on "Modeling, Simulation, and Integrated Design of Complex Dynamic Systems for Challenges, Benefits, and Trends."



Kelkar

More than 1,000 researchers participated in the conference, which was aptly named for the father of computer science, Alan Turing. The conference has led to further collaborative research projects between Kansas State University, Iowa State University, IBM Research Labs and Pentagon Research Centre. Shashi K. Gadia, associate professor of computer science at Iowa State, also presented at the conference.

Zhang's work featured in medical journal's "Image of the Week"



An image from the collaborative paper "Mapping cardiac surface mechanics with structured light imaging" by Jacob I. Laughner, William and Virginia Binger Assistant Professor of Mechanical Engineering **Song Zhang**, Hao Li, Connie C. Shao, and Igor R. Efimov was featured as the "Image of the Week" for the American



Engineering groups address national need to add more female insight to the field

With women representing only 13 percent of the engineering workforce, leaders and students in the College of Engineering at Iowa State are actively supporting and developing initiatives to encourage females in the discipline.

The Department of Mechanical Engineering led the charge, establishing **Women in Mechanical Engineering (WiME)** in 2007. The group began under the direction of **Jonathan Wickert**, Iowa State's Senior Vice President and Provost, who was ME chair at the time.

WiME uses a team approach for leadership, with several students working together to help plan and coordinate activities. Their approach, like the other groups, gives everyone an equal voice, shares responsibilities, and creates a positive environment where students feel they can make a difference.

WiME supports a program called Chat with ME, which brings in visiting female faculty and professionals to talk with women, and tours of labs and companies are arranged whenever possible.

"The involvement students have with outreach at local middle schools is a big part of WiME," says **Baskar Ganapathysubramanian**, assistant professor in mechanical engineering and WiME faculty liaison. "Many people could explain what a doctor or a lawyer does, but when it comes to engineering, they aren't sure. We absolutely need to start getting young girls educated about and interested in engineering." ([Full story](#))

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Journal of Physiology - Heart and Circulatory Physiology. The following is an accompanying description of the image.

Validation of markerless motion tracking algorithm during sinus rhythm (SR). A: anterior surface of the right ventricle (RV) labeled with 10 points (7 white and 3 bicolored). B: 3-D trajectories of bicolored points. For each bicolored point, 3 trajectories are plotted based on the 3 tracking methods employed: manual tracking (black), texture correlation (brown, orange, blue), and surface matching (gray, purple, green). Colored dots at the centroid of each trajectory represent Euclidian error for each motion-tracking algorithm. C: absolute error in X, Y, and Z directions and total error for each bicolored point over 2 cardiac cycles.

The image was posted on the American Journal of Physiology - Heart and Circulatory Physiology's [Facebook page](#) on September 27. An [abstract](#) and [full text](#) of the paper can be found on the website of the American Journal of Physiology - Heart and Circulatory Physiology.

Upcoming Events

October 12 – [Open listening session to review the central services research enterprise](#)

October 12 – [VRAC Tour](#)

October 13 – [Cyclone Family Weekend Tailgate](#)

October 16 – ME Seminar: Maria Gini, University of Minnesota, "[Why robots are more than software agents](#)," 11 a.m., 2004 Black

October 16-17 – [Science: Becoming the Messenger](#)

Oct 18 – [Modeling the Directed Self-assembly of Polymers for Lithographic Applications](#)

Oct 23 – [Teaching and Practicing Entrepreneurship: How Do We Meet the Opportunities and Challenges of Entrepreneurship Today?](#)

Oct 23 – [Education at Scale: The Rise of the Rockstar Teacher](#)

Do you have department news you'd like to share?
Please e-mail news items for InCYde Mechanical Engineering to [Alex Rausch](mailto:Alex.Rausch).