Ethics and Integrity in Research

Abstract: All researchers including graduate students are called upon to help make new discoveries, thereby advancing the state of the art in science and engineering. But with this exciting endeavor also comes an awesome responsibility: to preserve scientific integrity. What does this mean? For one thing, it means that data are honestly evaluated and reported. It means that contributions to the work are properly attributed. And it means that any pressures arising from potential conflicts of interest are acknowledged and eliminated if at all possible. In short, research must be conducted in an environment that preserves its integrity and enhances its quality.

In this presentation, we will motivate the importance of doing research with integrity. We will discuss what it takes to make ethical decisions and work through several case studies that exemplify the types of issues that may arise.

Bio: Jay Gore is the Reilly University Chair Professor and Associate Head for Graduate Studies. He obtained the Ph.D. from Penn State and a postdoc cert. from Aerospace Eng. at the Univ. of MI. Jay is a Fellow of the ASME, the AIAA and the International Combustion Institute. In 2017, he was felicitated by the Chief Minister of Maharashtra for his contribution to the MIT World Peace University. In 2013-2014, he received the Purdue ME Discovery award; McMaster University Café X on Global Energy Grand Challenge; the MRS award in Nano-materials. His prior recognitions include the Best Paper in HT literature from ASME and the NSF Presidential Young Investigator Award. His research interests are in energy, sustainability, fire, biomedical sensing, and foreign policy. Dr. Gore started the SURF program and has served as the Associate Dean of Engineering for Research and Entrepreneurship and was the first Director of Purdue Energy Center.

Bio: Peter Meckl serves as Assistant Head for Facilities and Staff in Mechanical Engineering. He obtained the Ph.D. in Mechanical Engineering from MIT in 1988. He joined the faculty in the School of Mechanical Engineering at Purdue University in 1988, where he was promoted to Professor in 2008. Dr. Meckl's research interests are primarily in dynamics, control, and diagnostics of electromechanical systems. His teaching responsibilities include undergraduate courses in systems modeling, measurement systems, and control, and graduate courses in advanced control design and microcontrollers. Dr. Meckl attended a workshop on Integrating Ethics into the Curriculum with Michael Davis at IIT in August 2002 and he has taught the Ethics session in ME 290 for many years. He also teaches ME 492, Technology and Values.

Reception: 4:00 – 4:30 in ME 2137