**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 provide guidance in how to do good research and how to avoid problems that lead to bad research. We will discuss what it takes to make ethical decisions and provide plenty of time for discussions.

**Bio:** Jay Gore is the Reilly University Chair Professor. He obtained the Ph.D. from Penn State and a postdoctoral certificate from Aerospace Engineering at the University of Michigan. He was a faculty member at the University of Maryland prior to joining Purdue in 1991. Jay is a Fellow of the ASME and a Fellow of the AIAA. In 2013-2014, he received the School's Discovery in Mechanical Engineering award; Purdue College of Engineering Celebration of Faculty Careers recognition; McMaster University Café X on Global Energy Grand Challenge opportunity; the Materials Research Society award as an invited panelist in Nano-materials synthesis; and was the Chief Guest at a Valedictory Function at his alma mater College of Engineering in Pune. His prior awards include the Best Paper in Heat Transfer literature from ASME and the Presidential Young Investigator Award. His research interests are in energy, sustainability, fire and biomedical sensing. Dr. Gore started the Summer Undergraduate Research Fellowships (SURF) program as the Associate Dean of Engineering for Research and Entrepreneurship and was the first Director of the Discovery Park Energy Center.

**Bio:** Peter Meckl 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 Rail Station in Gatewood Wing

**GRADUATE SEMINAR SERIES: ME 691**