COLLEGE OF ENGINEERING

SEMINAR ANNOUNCMENT

"Multifunctional and Multi-Source Energy Harvesting: The Development of Autonomous Low-Power Electronics"

Presenter: Steve Anton, Assistant Professor, Mechanical Engineering

Abstract

Energy harvesting technology aims to create autonomous power sources for low-power electronic devices through the conversion of ambient energy into usable electrical energy using smart materials. Energy harvesting systems, which typically operate in the microwatt to milliwatt range, have applications in a wide variety of areas such as providing permanent power supplies for civil and aerospace infrastructure monitoring, security and surveillance sensing systems, implantable biomedical devices, environmental monitoring, autonomous vehicles, and personal electronics, among others. In this seminar, I will discuss the development of both multifunctional and multi-source energy harvesting concepts, which aim to address the issues with conventional harvesting systems by creating more robust solutions to energy harvesting problems. Additionally, future research topics in this area will be discussed.

About the Speaker

Steve Anton is a newly appointed assistant professor in the Department of Mechanical Engineering at Tennessee Technological University. Dr. Anton received the B.S. degree in Mechanical Engineering from Michigan Technological University (2006), and M.S. and Ph.D. degrees in Mechanical Engineering from Virginia Polytechnic Institute and State University (2008 and 2011, respectively). Following his graduate work, Dr. Anton held a two year postdoctoral position at Los Alamos National Laboratory. His research interests include multifunctional and multisource energy harvesting using various transduction mechanisms, and structural health monitoring and damage detection and prognosis. His work in energy harvesting aims to create autonomous power supplies for low-power electronic devices, such as wireless sensors and embedded biomedical devices, by scavenging ambient energy surrounding the device.

Date: October 22, 2013 - Tuesday
Time: 12 P.M. – 1 P.M.
Bring your own lunch; beverages and snacks to be provided.
Location: Prescott 225