

**Title: Energy Harvesting for Wireless Sensors**

**Speaker: Dr. Shashank Priya, Material Science & Engineering, UTA**

**Date: Friday, Feb 17, 2006**

**Time: 10 am - 12 noon**

**Venue: WH 413**

**Abstract:**

Vast reductions in the size and power consumption of CMOS circuitry have led to focused research efforts on small and efficient power sources for wireless sensor nodes. Much of the current emphasis has been on developing on-site generators that transform an available mechanical energy into electrical energy. This presentation describes the developments made in the area of piezoelectric based micro-generators for powering sensor nodes and compares the technology with other available choices.

**Biography:**

Dr. Priya received his B.Sc. in Physics from Allahabad University, India, B.S. and M.S. degrees in metallurgy from Indian Institute of Science Bangalore, India and Ph.D. degree in materials engineering from Pennsylvania State University, PA, in 1996, 1998, 2000 and 2003 respectively. He is currently asst. professor in the department of materials science and engineering, University of Texas at Arlington (UTA). Prior to joining UTA, he was a senior transducer design engineer at American Piezo Ceramics International (APCI), Mackeyville, PA. Prior to joining APCI, he worked as group leader of piezoelectric transformer division at International Center for Actuators and Transducers, PA. His research interests include piezoelectric and ferroelectric devices, energy harvesting, ceramic processing, ceramic composites, physics of electronic materials, high power devices and micro electromechanical devices. He has authored 45 publications in international journals and 5 patents. He is member of American Ceramic Society, Materials Research Society, Metals, Materials and Metallurgical

Transactions Society, American Society of Metals and Metallurgical Society of India. He is recipient of the TMS Shri Ram Arora International Award of the year 2002, Vidya Bharti, IIM gold metal for the year 1999-2000 and K. K. Mallik Gold Medal for the year 1999-2000.