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Wednesday, September 7
7:00am - 8:00am

Micro-Electro-Mechanical Systems

J. C. Chiao, Ph.D.
Associate Professor of Electrical Engineering
UTA

Micro-Electro-Mechanical Systems (MEMS) are the integration of mechanical elements, sensors, actuators and electronics on a common silicon substrate. They are fabricated using micromachining processes that selectively etch away parts of a silicon wafer or add new structural layers to form mechanical and electromechanical devices. This combination of silicon-based microelectronics with micromachining technology will make possible the realization of complete "systems-on-a-chip" that will revolutionize nearly every product category. In this presentation, Dr. Chiao will describe the principles of MEMS devices and explore potential applications in sensors, communications and medicine.

Jung-Chih Chiao received his Ph.D. degree in Electrical Engineering at the California Institute of Technology. From 1995 to 1997, he served as a Research Scientist with Bell Communications Research. He joined the Department of Electrical Engineering, University of Hawaii - Manoa as an Assistant Professor in 1997 and became an Adjunct Professor in 2001, while also serving as a Product Line Manager and Senior Technology Advisor for Chorum Technologies. Dr. Chiao joined UTA in September 2002. Dr. Chiao has published 82 technical journal and conference papers. He is one of the authors for the book "Active and Quasi-Optical Arrays" and the editor for the SPIE proceedings "Device and Process Technologies for MEMS and Microelectronics." He holds one patent and has 13 pending patents in RF MEMS, MEMS optical and liquid crystal

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