

IEEE KITCHENER-WATERLOO

IEEE MTT-Chapter Presentation

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[Metallic MEMS for RF, Bio, and Photonics Applications](#)

Abstract

In this talk, UTD's research activities on various MEMS/NEMS will be presented. UTD's MEMS technology is primarily based on polymer/metal-based micromachining processes. Recent development in SU-8-based ultraviolet (UV) lithography-based processing and electron-beam lithography techniques for MEMS and NEMS will be presented. Emphasis of the talk will be given on the applications of such process techniques to various MEMS research areas. Examples of applications include “on-chip air core spiral/solenoid/toroidal inductors”, “on-chip tunable inductors”, “metallic microgrippers and their applications to microassembly”, “sub-micron metallic thermal actuator”, “microneedle array for transdermal drug delivery”, “active/passive mixing in microfluidics”, and “silicon-based nano-photonic crystal devices” which shows giant negative refraction.

BIOGRAPHY

Dr. Jeong-Bong (J-B.) Lee received the M.S. and Ph.D. degrees from Georgia Institute of Technology in 1993 and 1997 respectively. In January 1999, he joined the Louisiana State University as an assistant professor in the Department of Electrical and Computer Engineering. He moved to UTD (University of Texas at Dallas) in May 2001 as an assistant professor. His current research interests include RF MEMS, Bio MEMS, nano-photonic devices technology. He is a recipient of National Science Foundation's CAREER AWARD in 2001.

DATE: Tuesday February 22, 2005

TIME: 2:00 pm

LOCATION: EIT 3142, University of Waterloo

Invited by Professor Mansour E&CE Department