



June 2007 MEMS-NanoTech SEMINAR

presented and sponsored by:
**THE NORTH AMERICA TAIWANESE ENGINEERS' ASSOCIATION'S
~SIG MEMS-NANOTECH~**

PRESENTATIONS:

“Challenges for NEMS/MEMS Technology Development”

DATE: Thursday, June 21, 2007

TIME: 6:30 PM

LOCATION: Squire Sanders Law Firm 600 Hansen Way, Palo Alto,
CA 94304

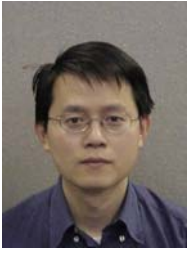
REGISTRATION: FREE for NATEA members, \$5 for non-members, pizza/
soft drink

RSVP: Kevin Yeh <kevinyeh@sbcglobal.net>

Abstract

Nano/Micro-electromechanical Systems (MEMS/NEMS) have drawn significant research and development efforts in academes and industrial over past decades. In this presentation, NEMS/MEMS technologies in materials, processing, packaging, and reliability, are firstly introduced. A few of the most significant applications, such as inertial/pressure sensors, RF MEMS, optical MEMS, bio/medical systems, and nanotechnology, will be briefly reviewed. Specifically, MEMS for wireless communication (or RF MEMS) and Sensor Network applications are discussed in details including two types of piezoelectric MEMS devices developed in Intel. Finally, key challenges for NEMS/MEMS technology development and how they compare to IC technology in terms of material diversity, manufacturing/processing requirements, packaging schemes, reliabilities, and scalability, will be discussed.

Biography



Dr. Li-Peng Wang is a principal investigator of MEMS Sensors Strategic Research Project (SRP) in Intel Research, Intel Corporation. He is responsible for funding, planning, operation and technical directions of the project. He is also a staff research scientist of Novel Memory Technology Group in California Technology Group, Intel Corporation, where he is leading the development of thin-film materials as memory media. Dr. Wang received his Ph.D. in Engineering Science from The Pennsylvania State University, University Park. He is well recognized in the area of functional materials – ferroelectric and piezoelectric thin films – for MEMS, Nanotechnology, and Nanoscience applications, ranging from wireless communications, bio/chemical sensing, nonvolatile memory, and sensor network. He has co-authored numerous papers in refereed journals and conferences and has 12 patents granted and 14 in pending. He has been serving as technical program committee members and session chair of international conferences and as reviewers of international journals. Dr. Wang received two Intel divisional recognition awards for his excellent research and development in MEMS.