Title: Metrology Workshop Sponsored by the National Nanotechnology Infrastructure Network (NNIN)

Date/Time: Monday, July 28, 8:30 AM – 4:30 PM

Location: University of Texas (UT) Microelectronics Research Center (MRC)
Meet at the conference registration desk at the Renaissance Austin Hotel at 8:30 AM for transportation to UT

Cost: $160

Description: The Microelectronics Research Center at the University of Texas is a world-class cleanroom facility that performs education and research in materials and devices of interest to semiconductor integrated circuits and optoelectronics (http://www.mrc.utexas.edu/).

During the workshop, UT experts will demonstrate the need for Atomic Force Microscopy (AFM), Profilometer, Scanning Electron Microscopy (SEM), Optical Microscope, Transmission Electron Microscopy (TEM), and Ellipsometer, to explore the micro to nanoscale material properties.

Participants will compare analysis performed on AFM vs. Profilometer and SEM vs. Optical Microscope on patterned wafers. Participants will have the opportunity to see deeper than atomic level with the MRC's TECNAI TEM. Ellipsometry will reveal the optical property of film as thin as a few nanometers. The participants, under the supervision of a UT expert, will manipulate equipment and make their own SEM images of carbon nanotubes.

This workshop is sponsored in part by the National Nanotechnology Infrastructure Network (http://www.nnin.org), an NSF-funded program including 13 of the top university nanotechnology facilities in the country.

Presenter:

Marylene Palard is a Research Associate and the Program Manager of the National Nanotechnology Infrastructure Network (NNIN) at the Microelectronics Research Center (MRC) at The University of Texas at Austin. She received her Ph.D. in physics at Orsay University (Paris, France) in 1997. Her PhD work was an experimental TEM study of the growth of silicide precipitates in silicon wafer, under ions/electrons beams implantation/irradiation. From 1998 to 2000 she joined, as a process Engineer, the Research & Development laboratory of UNAXIS for plasma display panel fabrication. While at UNAXIS, she installed Plasma Enhanced Chemical Vapor Deposition (PECVD) production systems in Japan and Taïwan. From 2000- to 2003, she was a Device Engineer in the 5th largest semiconductor manufacturer world-wide: ST Microelectronics. Her goal was to control and improve the production yield of the 6" wafer plant. Since 2004, as NNIN Program Manager, Dr. Palard supports the MRC users in process fabrication and characterization. She is developing mold process on the Electron Beam Lithography system for the Step and Flash Nano-Imprint Lithography (SFIL™) tool. She is the NNIN technical liaison for Nano-imprint technology.