



Metrology for Beyond CMOS

San Francisco, Hilton Towers
Dec 14th and 15th (day after IEDM)

DAY ONE – 14th December 2006

8:00 - 8:30 a.m.	Breakfast & Registration
	Opening Remarks
Focus Topic 1: Future Metrology Needs for Beyond CMOS	
8.30 – 9.00 a.m.	Mike Garner (Intel) – <i>“Metrology Challenges for Alternate State Variable Characterization”</i>
9:00 – 9:30 a.m.	Alain Diebold (SEMATECH) – <i>“Metrology for Nanoelectronics: The Impact of Nano-Sized Dimensions on Characterization and Metrology”</i>
9.30 – 10.00 a.m.	Jack Martinez (NIST) – <i>“Metrology Needs for the Post-CMOS Era”</i>
10:00 - 10:30 a.m.	BREAK
Focus Topic 2: Advanced Probing and Imaging Methods at the Nanoscale, Chair: Jo Stohr (Stanford)	
10:30 – 11:00 a.m.	Ross Harder – <i>“Strain Mapping in Crystals on the Nanometer Scale using Coherent X-ray Diffraction”</i>
11:30 – 12:00 p.m.	Olav Solgaard (Stanford) - <i>“Time resolved Atomic Force Microscopy”</i>
12:00-1:30 p.m.	LUNCH
1:30 – 2:00 p.m.	Craig Prater (Veeco) – <i>“Quantitative nanoscale mechanical property measurements by atomic force microscopy”</i>
2.00 p.m. – 2.30 p.m.	Maarten Rutgers (Asylum Corporation) – <i>“Advanced Nanometer Scale Electronic Characterization of Semiconductors”</i>
2:30 – 3:00 p.m.	David Muller (Cornell) – <i>“3-Dimensional Imaging and Spectroscopy of Nanodevices”</i>
3.00 – 3.30	Wenbing Yun (Xradia Corporation) - <i>“X-ray imaging with nanometer scale resolution: status and pathways”</i>
3.30 – 4.00 pm	BREAK
4.00 p.m – 4.45 p.m.	Roundtable Discussion
4.45 p.m – 6.30 p.m.	Poster Session
6:30 p.m.	Dinner

DAY TWO – 15th December 2006

8:30 - 9:00 a.m.	Breakfast
Focus Topic 3: Novel Measurement Methods at the Nanoscale, Chair:	
9:00 – 9.30 a.m.	Sunil Sinha (UCSD) – “ <i>Characterization of Interface morphologies with X-ray diffuse scattering</i> ”
9:30 – 10:00 a.m.	Eric Isaacs (Argonne) – “ <i>Dynamics at the Nanoscale (tentative)</i> ”
10:30 - 11:00 a.m.	Break
11.00 – 11.30 a.m.	Vinayak Dravid (Northwestern) – “ <i>Seeing the Invisible: Scanning Near-Field Ultrasound Holography (SNFUH) for Non-Destructive Nanoscale Imaging of Buried and Embedded Structures</i> ”
11.30 – 12.00 a.m.	Alex De Lozanne (University of Texas) – “ <i>Characterization of magnetic and ferroelectric materials with low temperature scanning probe techniques.</i> ”
12:00 – 1:00 p.m.	Lunch
Focus Topic 4: Nanometrology techniques with ability for defect detection and defect repair at the nanoscale - Chair: P.Peumans	
1:00 – 1:30 p.m.	Mehmet Sarikaya (U Washington) - <i>Directed Assembly of Nanomaterials using Genetically Engineered Peptides and Applications to Nanoscale Metrology</i>
1.30 p.m. – 2.00 p.m.	Phil Collins (UC Irvine) - <i>Quantitative Identification and Modification of Point Defects in Carbon Nanotube Circuits</i>
2:00 – 2:30 p.m	Andre DeHon (U Penn) – <i>Strategies for Tolerating Highly Defective Fabrication</i>
2.30 – 3.00 p.m	Roundtable Discussion + Meeting Wrap Up
3:00 p.m.	Light Snack and Workshop Adjourned