The Conference

The semiconductor industry faces significant challenges to continue increasing performance and functionality of information processing. New and improved metrology and characterization is required to support these advances in density and functionality. We bring together scientists and engineers interested in all aspects of the characterization technology needed for nanoelectronic materials and device research, development, and manufacturing. All approaches are welcome: chemical, physical, electrical, magnetic, optical, in-situ, and real-time control and monitoring. The conference summarizes major issues and provides critical reviews of important semiconductor techniques needed as the semiconductor industry moves to silicon nanoelectronics and beyond.

The conference will consist of formal invited presentation sessions and poster sessions for contributed papers. The poster papers will cover new developments in characterization and metrology especially at the nanoscale.

Organizing Committee

- Amal Chabli, CEA-Leti
- Luigi Colombo, TI
- Michael Current, Current Scientific
- Alain Diebold, CNSE, SUNY Albany
- Ajey Jacob, Global Foundries
- Scott List, Intel
- Shifeng Lu, Micron
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- Ulrich Mantz, Zeiss
- Bob McDonald, formerly of Intel (Treasurer)
- Lori S. Nye, formerly of Brewer Science, Inc.
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- Victor Vartanian, ISMI
- Ehrenfried Zschech, Fraunhofer Institute for Ceramic Technologies and Systems

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Sponsorship Opportunities

If you are interested in becoming a sponsor, contact us at erik.secula@nist.gov

Organizer

and a team of international experts

www.nist.gov/pml/div683/conference/

First Announcement!

2017 International Conference on Frontiers of Characterization and Metrology for Nanoelectronics (FCMN)

March 21-23 2017
Monterey Marriott
Monterey, California

www.nist.gov/pml/div683/conference/

2017 FCMN

Call for Papers

Papers are solicited to address materials and device characterization and metrology for:

450 mm; 3D IC Analysis / Metrology;
III-V on Si for Advanced CMOS;
Alternative Gate Dielectrics;
Breakthroughs in Electron Microscopy;
Breakthroughs in Lithography;
Channel Engineering;
CMOS, Extreme CMOS, Beyond CMOS;
Critical Analytical Techniques;
Defects; Device Manufacturing;
Diagnostics; Embedded or Buried Interfaces;
Flexible Microelectronics;
Graphene and 2D Materials and Devices;
Heterogeneous Integration;
Hybrid Structures;
In-Situ, Real-Time Control and Monitoring;
Integrated Metrology;
Interconnects; Internet of Things;
Lab-on-a-Chip; Magnetics;
MEMS/NEMS Metrology Applications;
Modeling/Simulation;
More than Moore;
Nanoelectronics Materials and Devices;
Nanoscale Electrical and Optical Measurements;
Non-Destructive Atomic Scale Methods;
Novel Measurement Methods, Breakthroughs;
Organic Electronics;
Reliability; RAM; Si Photonics;
Spectroscopic Properties for Novel Materials for Nanoelectronics; Spintronics;
Synchrotron and Neutron Techniques;
Thin-Films; Ultra-Shallow Junctions;
Wafer Manufacturing and New Substrate Materials

Abstracts

Camera-ready abstracts of 2-3 pages must be received by Nov. 14, 2016. The template is available in the "Author Instructions" section of the conference website. A cover page must include the name, address, telephone number, and e-mail address of the contact author. Please be sure also to include a list of 3-6 key words in the appropriate section at the end of the abstract. Your abstract should include at least one figure and/or table presenting data. Notice of acceptance of papers will be given by Dec. 19, 2016.

Accepted abstracts will appear in the conference's extended abstract book, which will be available on-line and distributed at the event.

Address all abstracts to the conference publications coordinator, Erik Secula (erik.secula@nist.gov). Please send Microsoft Word or Adobe PDF files. If e-mail is not a practical option, please contact Erik Secula at (301) 975-2050 to make alternative arrangements.

Sponsors/Exhibitors

Sponsorship and exhibiting opportunities are available. If you are interested, please contact Erik Secula (erik.secula@nist.gov) for details!

Hotel Details

Blocks of rooms are available at the Monterey Marriott Hotel starting at $169.00 plus applicable state and local taxes. This special room rate will be available until Feb. 27, 2017, or until the group block is sold-out, whichever comes first. On-line reservations will be available soon.

Registration

Registration for the conference includes coffee breaks, lunches, evening events, and an extended abstract booklet with CD-ROM. Registration fee details and on-line registration will be available soon!

Background

With the semiconductor industry moving beyond standard silicon and further into nanoelectronics, the introduction of new materials and novel devices using innovative processing and assembly brings formidable metrology challenges. We are in an era where nanotechnology is driving us toward ever smaller, faster, cheaper, and more complex devices. Innovative metrology and characterization methods are required.

The 2017 FCMN is the eleventh in a series that began in 1995. It emphasizes the frontiers and innovation in characterization and metrology of nanoelectronics. The proceedings for the first eight previous conferences were published as hardcover volumes by the American Institute of Physics, New York. The most recent publication, Frontiers of Characterization and Metrology for Nanoelectronics: 2015, was an extended abstract book, which was distributed at the 2015 conference and posted on-line. The proceedings and presented slides for most of the previous entries are available free-of-charge at www.nist.gov/pml/div683/conference/archives.cfm.