



SISC 2017

48th IEEE Semiconductor Interface Specialists Conference



Bahia Resort Hotel, San Diego, CA
December 6–9, 2017 (Tutorial: December 6)
www.ieeesisc.org



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Call for Papers

The SISC is a workshop-style conference that provides a forum for device engineers, solid state physicists, and materials scientists to discuss topics of common interest, formally through invited and contributed presentations, and informally during various events including poster and rump sessions. The SISC is sponsored by the IEEE Electron Devices Society, and will be held in 2017 right after the IEEE IEDM.



The program includes talks and poster presentations (*theory and experiment*) from all areas of semiconductor interface science and technology, including but not limited to:

- **SiO₂ and high-k gate dielectrics** on Si and their interfaces
- **Insulators on high-mobility and alternative substrates** (SiGe, Ge, III-V and III-N, SiC, etc.)
- MOS gate stacks with **metal gate electrodes**
- Stacked dielectric layers for **non-volatile memory**
- **Oxide and interface structure**, chemistry, defects, and passivation: theory and experiment
- **Electrical characterization, performance and reliability** of MOS-based devices
- **Surface cleaning technology** and impact on dielectrics and interfaces
- Dielectrics on **nanowires/-tubes and graphene**
- **Oxide electronics and multiferroics**
- **Interfaces in photovoltaics**, e.g. Si passivation
- **2D materials and devices** and their interfaces
- Interfaces in **semiconductor lighting and optical communications**
- Interfaces and surfaces in **biotechnology such as bio-sensing**

Confirmed invited speakers

- **Prof. Joerg Appenzeller**, Purdue U.
2D Tunneling FET
- **Prof. Suman Datta**, Notre Dame U.
Novel selectors and Phase FETs
- **Dr. David Ginley**, NREL
Photovoltaic materials, Devices and interfaces by design
- **Dr. David Hemker**, LAM Research
Enabling Continued Device Scaling: An Equipment Supplier's Perspective
- **Prof. Cheol Seong Hwang**, SNU, Korea
Ferroelectric HfO₂ - Materials fundamentals, switching, wake-up, and applications in electronics and energy
- **Prof. Evan Reed**, Stanford U.
Leveraging machine learning to screen 2D van der Waals materials
- **Prof. Mark Reed**, Yale U.
Field effect transistor biosensors
- **Dr. Nirmal Ramaswamy**, Micron Technology
Emerging memories: High density integration challenges

Wednesday evening Tutorial – free to all registered SISC attendees

- **Prof. Lars Samuelson**, Lund U., Sweden
Semiconductor nanowires and their interface properties enabling photovoltaics and lighting applications

A **Best Student Presentation Award** will be given in memory of E.H. Nicollian.

Abstract submission deadline August 14, 2017

Abstract submission, previous technical programs, contact information, etc.: <http://www.ieeesisc.org>

