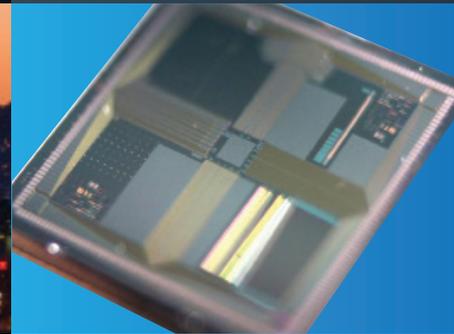


# 2014 Panel Discussion at IEDM

The 60th Annual Technical Meeting of the Electron Devices Society

Hilton San Francisco  
Union Square  
December 15-17, 2014



**Tuesday, December 16 - 8:00-10:00pm**  
**Continental Ballroom 4-6**

## 60 Years of IEDM and Counting

Did we push silicon-based devices for integrated electronics to the ultimate and what does the future hold?

Silicon semiconductor technology has dominated the microelectronics industry for many decades and has fueled major innovations in logic, memory, analog/mixed signal, sensors, MEMS/NEMS, to name a few. Gordon Moore's prediction in 1965, now known as Moore's Law, has been successfully predicting the evolution of IC chips. Semiconductor companies have been delivering more performance for less cost. Semiconductor technology has become a part of our daily lives, expanding beyond computing to other applications, such as communication, entertainment, environment, healthcare, and energy.

However, future silicon-based device scaling is beginning to reach practical and fundamental limits. To go beyond these limits, novel materials and devices are being aggressively studied for all of these applications. This panel will discuss the major technological innovations that have been well documented over the past 60 years at IEDM, and our panelists will attempt to look into their collective crystal ball for predictions about the next 60 years of semiconductor technology development.

**Moderator:** Krishna Saraswat, Stanford University

**Panelists:** Jesus del Alamo, MIT

Chenming Hu, University of California, Berkeley

Hiroshi Iwai, Tokyo Institute of Technology

Yoshio Nishi, Stanford University

Kurt Petersen, Co-founder of several MEMS companies

Philip Wong, Stanford University

## IEDM 2014 Highlights

### Plenary Presentations

*"SiC MOSFET Development for Industrial Markets"*

*"Are 3D Atomic Printers Around the Corner?"*

*"Research into ADAS with Driving Intelligence for Future Innovation"*

### IEDM Luncheon Speaker

#### T.J. Rodgers

Founder/President/CEO,  
Cypress Semiconductor

### Entrepreneurs Luncheon Speaker

#### Kathryn Kranen

Former President/CEO,  
Jasper Design Automation



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