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TOPIC:

Semiconductor Innovation: Looking for new solutions to old problems

ABSTRACT:

Exponential growth in our industry has been achieved by continual improvement and disruptive innovation. Over past 5 decades semiconductor industry has managed to innovate and solve problems to sustain an exponential growth, however the road head is very challenging to say the least. In this talk I would highlight some of the examples from past and look forward to the future. Engineers and scientists would have to be more innovative then every before to stay ahead of the challenges!

PROFILE:

Ravi Todi received his B.S. degree in Electrical Engineering from Mumbai University, India, in 2002 and M.S. degree in Electrical and Mechanical Engineering from University of Central Florida in 2004 and 2005 respectively, and his doctoral degree in Electrical Engineering in 2007. His graduate research work was focused on gate stack engineering, with emphasis on binary metal alloys as gate electrode and on high mobility Ge channel devices. His research interest includes semiconductor process integration and device technology, non-conventional CMOS scaling and nano and bio devices. In 2007 he started working as Advisory Engineer/Scientist at Semiconductor Research and Development Center at IBM Microelectronics Division focusing on high performance eDRAM integration on 45nm SOI logic platform. Starting in 2010 Ravi was appointed the lead Engineer for 22nm SOI eDRAM development. For his many contributions to the success of eDRAM program at IBM, Ravi was awarded IBM's Outstanding Technical Achievement Award in 2011. Ravi Joined Qualcomm as Staff Engineer responsible for 20nm and 16/14 nm product developments. Ravi had authored or co-authored over 60 publications, has 8 issued US patents and over 20 pending disclosures. He is a Distinguish Lecturer for IEEE Electron Devices Society and serves as Editor for IEEE Transactions on Electron Devices.