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The Electrical and Computer Engineering Program presents
ECEN Seminar Series

Test and Reliability Challenges in Forthcoming Technology Nodes

Said Hamdioui
Delft University of Technology Computer Engineering Laboratory

Wednesday, 19 December 2012, 12 – 1 p.m.

Lecture Hall 144

Light lunch will be served

Technology scaling has advanced CMOS technology since sixties. Nevertheless, It is well recognized that such scaling has a physical, if not economical, end and it is getting closer to it. This talk will address this scaling and its impact on design, test and reliability of VLSI systems both for near and long terms. First the basics of scaling will be covered, together with its impact on integration density, performance and power. The technology outlook will be analyzed in order to extract the challenges wrt design, test and reliability both for near and long terms. IC realization process will be (re)defined while considering the technology trends. Possible ways for the realization of future systems will be discussed.

Professor Hamdioui received the MSEE and PhD degrees (both with honors) from the Delft University of Technology (TUDelft), Delft, The Netherlands. He is currently co-leading dependable-nano computing research activities within the Computer Engineering Laboratory of TUDelft. Prior to joining TUDelft, Hamdioui worked for Microprocessor Products Group at Intel Corporation (CA, USA), for IP and Yield Group at Philips Semiconductors R&D (France) and for DSP design group at Philips/ NXP Semiconductors (Nijmegen, The Netherlands). His research interests include dependable nano-computing and VLSI Design & Test (defect/fault tolerance, reliability, security, nano-architectures, Design-for-Testability, Built-In-Self-Test, 3D stacked IC test, memory test, defect oriented test, etc.) Professor Hamdioui published one book and co-authored over 100 conference and journal papers. He is strongly involved in the international test technology community. He delivered dozens of keynote speeches, distinguished lectures, and invited presentations and tutorial at major international forums/conferences and at leading semiconductor companies. Hamdioui is a Senior member of the IEEE. (http://www.ce.ewi.tudelft.nl/hamdioui/)

FOR MORE INFORMATION:

Noha Ezzat
noha.ezzat@qatar.tamu.edu
+974.4423.0152

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