Thursday, September 16th
Scaife Hall Auditorium
Room 125

4:30 p.m.
Refreshments at 4:00 p.m.

K.-T. Tim Cheng
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Cheng received his Ph.D. degree in Electrical Engineering and Computer Science from the University of California, Berkeley in 1988. He worked at Bell Laboratories in Murray Hill, NJ, from 1988 to 1993 and joined the faculty at the University of California, Santa Barbara in 1993 where he is currently Professor of the Electrical and Computer Engineering Department. He was the founding director of UCSB’s Computer Engineering program (1999-2002) and Chair of the ECE Department (2005-2008). He has been a visiting professor at University of Tokyo, Japan, National TsingHua University, Taiwan, and Peking University, China. His current research focuses include VLSI test, design verification, silicon debug, and multimedia computing.


Test's Changing Role in the Late-Silicon Era

Abstract:

Test will continue to play a critical role in the late-silicon era, but it must be part of a total system validation and reliability solution, instead of an isolated task solely for the purpose of ensuring individual component quality. Traditional test solutions have been application-and system-independent, which results in increased demand for test resources at the component level that may not ultimately contribute to system quality and robustness. Also, test must share the same DFX (Design for X) resources with other critical quality assurance tasks -- where “X” includes verification, post-silicon validation, testability, fault diagnosis, and yield improvement -- for overall cost reduction and quality improvement. In this talk, I will show specific examples and trends in both digital and mixed-signal/RF domains to illustrate the changing role of test.

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