CECS
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CECS/CS Joint Seminar

"Power Challenges in the Smart, Connected World (aka Why haven't we have solved the Power problem yet!"

Dr. Vivek Tiwari

Director of Platform Technology Strategy & Management
Intel Corporation

Friday, April 27
11:00 a.m.- 12:00 p.m.
Donald Bren Hall 6011

Abstract: Power consumption issues have been an intense area of research and development for close to three decades now. Power analysis and optimization has moved from "yet another design metric" to something that shapes the technology industry in every segment of computing and communication. During this period the awareness of the underlying metrics for the cause and effects of power consumption has moved from a small set of domain experts to almost everyone associated with the technology industry including Wall Street analysts! It is no longer disputed that power consumption is the limiter to what can be delivered through integrated circuits. And yet the power problem remains fundamental to all design activities and is far from being a "solved problem". In this talk Vivek will provide a brief primer on the sources of power consumption in ICs and the effect of system design. As someone who has been associated with this field for well over two decades, Vivek will relate the technical aspects of power consumption with the broader trends in computing industry and discuss the need for continued attention to power consumption in traditional as well as emerging areas of design.

Biography: Vivek Tiwari is the Director of Platform Technology Strategy & Management in the Client Computing Group at Intel. His current focus is on Power, Performance and Battery Life. In his 21 years at Intel, Vivek has held a variety of technical and program leadership roles. He was previously the Director of the Software Program Office in the Visual and Parallel Computing Group, responsible for the SW planning and execution coordination of Intel's 3D Graphics, Media and Display Software. Prior to that Vivek was the Director of Silicon and Platform Program Execution and drove program and ramp management for several generations of Intel's flagship CPUs and client platforms . In the first part of his career at Intel, Vivek was in R&D, developing tools and techniques for analyzing and reducing power consumption in Intel's products as part of the Low Power Design Technology group. Vivek is the recipient of the Intel Achievement Award (2008), SIGARCH Influential ISCA Paper Award (2015) and Best Paper Award at ASP-DAC (1995).
He has authored or co-authored chapters in 7 books and 9 journal papers and holds 7 patents. He has served on the Technical and Executive Committees of the International Symposium on Low Power Electronics and Design (ISLPED) and on the Technical Program Committees of the Design Automation Conference, VLSI Design Conference and Design Automation and Test Europe. He served as the Technical Chair for ISLPED'04 and General Chair for ISLPED'05.
Vivek received a B. Tech degree in Computer Science and Engineering from the Indian Institute of Technology, New Delhi, India in 1991, and a Ph.D. in Electrical Engineering from Princeton University in 1996.

Hosted by: Professors Nikil Dutt and Ardalan Amiri Sani