University of Rochester
Department of Electrical and Computer Engineering Colloquium

Semiconductor Technology - Trends, Challenges, and Opportunities

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Wednesday, November 16th
11:00 AM – 12:00 PM
Computer Studies Building (CSB) 209

Abstract: The goal of this seminar is to help foster a better perspective of semiconductor technology among students and faculty. Semiconductor technology has been on an exponential growth curve that has changed our world and is now pervasive in everyday life. Changes enabled by semiconductor technology are accelerating as we advance the capability of this technology. Context will be provided for the role that is played by semiconductor technology. The driving technology trends will be covered along with the challenges we face for the future. In order to meet the challenges, innovation will be required by highly skilled people in science, technology, and engineering. If you want your innovation to change the world, semiconductor technology development could be your opportunity.

Bio: After receiving degrees in Optical Engineering and Economics from the University of Rochester in 1980, Tim Farrell joined IBM in 1982 after a brief stint with the ITEK Corporation where he was an optical subsystem designer for photo-typesetters. Tim is now an IBM Distinguished Engineer and a member of IBM's Academy of Technology. Current roles and responsibilities include that of IBM's technical advocate to the University of Rochester and as an IBM technical asset providing consul to senior executives on unit process initiatives supportive of IBM's semiconductor technology direction. Prior to that, Tim lead IBM's initiatives in Computational Scaling, the application of Computationally Based Engineering (CBE) to semiconductor technology development focusing on Computational Lithography to meet the patterning challenges of advanced semiconductor technology nodes. This initiative included a joint software development project with Mentor Graphics that leveraged IBM's global research labs for which Tim was IBM's program manager. In 2003, Tim founded and managed IBM's Computational Lithography organization made up of IBM employees, technology development partner assignees, and contractors. In addition to managing a globally diverse set of technology development partners, Tim established a remote department in Bangalore, India to foster 24 hour / day development. Throughout his career, Tim has held management and / or engineering positions in semiconductor manufacturing and semiconductor technology development. He has played a leading role in setting industry direction in lithography with multiple terms as member co-chair of Sematech's Lithography Program Advisory Group.

Light Refreshments will be provided.