

**THURSDAY
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**Scaife Hall Auditorium
Room 125**

4: 00 PM



Vivek Subramanian
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Vivek Subramanian received his PhD in electrical engineering from Stanford University in 1998.

Dr. Subramanian co-founded Matrix Semiconductor, Inc., in 1998. Since 2000, he has been an Assistant Professor in the Department of Electrical engineering and Computer Sciences at the University of California, Berkeley. His current research focuses on organic electronics for display, low-cost logic, and sensing applications. He has authored more than 60 research publications and patents.

Dr. Subramanian is a member of the Institute of Electrical and Electronic Engineers (IEEE) and has served on the committees for the Device Research Conference and the International Electron Device Meeting. In 2002, he was nominated to Technology Review's list of top 100 young innovators (the TR100), and his work at Matrix Semiconductor was nominated to the Scientific American SA50 list for visionary technology. In 2003, he was invited to the National Academy of Engineering's "Frontiers of Engineering", and was awarded a National Science Foundation Young Investigator Award (CAREER).

For more information:

<http://www.ece.cmu.edu/seminar/index.php>

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ELECTRONICS EVERYWHERE: ORGANIC CIRCUITS ON PLASTIC, PAPER AND EVEN CLOTH!

The skyrocketing cost of silicon fabs has led to the exploration of alternative material systems targeted at penetrating the ultra-low cost consumer appliance market. Organic semiconductors have received substantial attention in recent years due to their low potential cost, ease of fabrication, and versatile material system. In particular, organic semiconductors have made substantial progress in the arena of flat-panel displays, and the first organic semiconductor-based display products have recently entered the marketplace. In the future, organic semiconductors may see increased use in flexible low-cost display, high-brightness high-resolution displays, low-cost electronics applications, and in numerous sensing and actuating applications.

In this presentation, I will discuss the state of the art of organic semiconductor technology and will discuss the potential future of this dynamic field of research. I will introduce various technological challenges that lie ahead and will discuss potential methods for overcoming the same. Finally, I will discuss novel applications of organic semiconductors in various non tradition systems including clothes, food packaging, and various other systems driven by cost and/or integrated display, computation, and sensing requirements.