



**SAN FRANCISCO BAY AREA
NANOTECHNOLOGY COUNCIL**

JULY 2006 SEMINAR

Subject: Nanoscale Effects of Three "ons": Ions, Electrons, Phonons

**Speaker: Arun Majumdar, Ph.D.
Professor of Mechanical Engineering, UC Berkeley**

Date: Tuesday, July 18, 2006

Time: Registration & light lunch 11:30am. Presentation & Q/A 12:00 to 1pm

Place: National Semiconductor, 955 Kifer Road, Santa Clara, CA Building 31

Cost: Members \$5. Non-Members \$10

RSVP: dhavaljb@aol.com

Web link: www.ieee.org/nano

Talk Abstract:

This talk will explore the transport and dynamics of ions, electrons, and phonons in nanostructured materials and devices. In particular, the science and engineering of nanofluidic ionic transistors and its potential impact on molecular processing technology will be discussed. Furthermore, based on the unique effects in the transport of electrons and phonons in nanomaterials, a new direction in thermoelectric energy conversion will be elucidated.

Speaker Biography:

Dr. Arun Majumdar holds the Almy and Agnes Maynard Professorship in Mechanical Engineering, University of California, Berkeley. He completed his PhD in Mechanical Engineering from UC Berkeley in 1989, and then served on the Mechanical Engineering faculties at Arizona State University (1989-92) and UC Santa Barbara (1992-96). He also serves as Director, Berkeley Nanoscience and Nanoengineering Institute; Member, Council on Materials Science and Engineering, US Department of Energy; and Member, Nanotechnology Technical Advisory Group to the President's Council of Advisors on Science and Technology (PCAST). He is a fellow of ASME and AAAS, and a member of the US National Academy of Engineering.