



Bose Colloquium

16 December 2016

4:00 p.m.

Fermion

Speaker:

Prof. Sanjay Banerjee

*Cockrell Family Regents Chair Professor & Director, Microelectronics
Research Center, University of Texas, Austin*

Title:

Electronics in Flatland

Abstract:

2D materials such as graphene, transition metal dichalcogenides and topological insulators have opened up avenues in beyond-CMOS device concepts. We will discuss our work involving single or many-particle 2D-2D tunneling, leading to transistors with negative differential resistance. We also explore spintronics in these systems for novel logic and memory devices. We will also discuss the use of these materials in less esoteric, but more practical high frequency, mechanically flexible FETs for IoT applications.
