

The Department of Mechanical Engineering presents:

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Friday, February 12th
11:10AM-12:00PM
Bourns Hall A265

Graphene: Quantum Transport in a 2D Membrane

Abstract: Graphene, a two - dimensional single atomic layer of carbon, has recently emerged as a promising candidate for electronic materials, as well as a new model system for condensed matter physics. It also has the double identity of an extraordinary conductor and the thinnest isolated membrane. In this talk I will present our results on both of these aspects: (1) our observation of novel transport phenomena in graphene, including coherent interference of multiply-reflected charge waves and properties of p-n-p junctions in zero and high magnetic fields; and (2) our work on ripple formation and manipulation on suspended graphene sheets. I will conclude the talk with a brief discussion on the fascinating prospect of strain-based graphene engineering.

Bio: Dr. Lau obtained her B.A. from the University of Chicago and her Ph.D. from Harvard University. Before joining UCR in 2004 as an assistant professor, she was a research associate at Hewlett-Packard Laboratories in Palo Alto, CA. Her research interests center on the thermal, electrical and mechanical properties of carbon nanomaterials.

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