

UNL Department of Physics and Astronomy & Nebraska Center for Materials and
Nanoscience present:

Spin and Charge Transport in 2D Materials and Heterostructures

PRESENTED BY
JEANIE LAU,
**Ohio State
University**



THURSDAY
SEPTEMBER 12
4:00 PM
IN JH 136

Refreshments will be
served in the JH 1st
Floor Vending Area at
3:30

ABSTRACT

Low dimensional materials constitute an exciting and unusually tunable platform for investigation of electronic, thermal, optical and mechanical properties that are often dramatically different from their bulk counterparts. Here I will present transport measurements of high quality few-layer two-dimensional materials, including few-layer graphene, phosphorene and InSe devices. For instance, we have observed robust long distance spin transport through the antiferromagnetic state in monolayer graphene, symmetry-protected topological phases in few-layer graphene, and quantum oscillations and quantum Hall effect in few-layer phosphorene and InSe devices.

Bio

Chun Ning (Jeanie) Lau is a Professor in the Department of Physics at The Ohio State University. She received her BA in physics from University of Chicago in 1994, and PhD in physics from Harvard in 2001. She was a research associate at Hewlett Packard Labs in Palo Alto from 2002 to 2004, before joining University of California, Riverside in 2004 as an assistant professor. She was promoted to associate professor in 2009 and full professor in 2012. Starting January 2017 she moved to The Ohio State University. She was the recipient of NSF CAREER award and the PE-CASE award in 2008. Her research focuses on electronic, thermal and mechanical properties of nanoscale systems, in particular, graphene and other two-dimensional systems.