# **Physics Department Colloquium**

# Dr. Mukti M. Rana, Associate Professor/ Chair

# **Department of Physics & Engineering**

#### **Delaware State University**

# Title: Inspired by Nature – A Spider Web Design for Reducing Thermal Conductance of Uncooled Infrared Detectors and Current Research Opportunities at DSU

Uncooled infrared detectors are used in the defense and security, firefighting, surveillance, border protection and other military applications. They are also used in biomedical applications such as breast cancer detection and driver's aid. The performance of these uncooled detectors is limited by the degree of isolation between the sensing layer and the substrate, among others. In this talk, I will present a spider web-like structure which will reduce the thermal conductance between the sensing layer and the substrate. I will also talk about current research and educational opportunities at the Optical Science Center for Applied Research at DSU.

Date: Tuesday, February 2, 2016

Time: 12:30 PM - 1:30 PM

Where: Science Complex P-317

