

# WICHITA STATE UNIVERSITY

*Physics Seminar Presents Our Speaker:*

## **Dr. Gavin Davies**

Indiana University

### Neutrinos, Antineutrinos and Deep Learning with NOvA

ABSTRACT: Neutrinos are abundant fundamental particles throughout the universe; second-most only to the photon. They undergo a phenomenon called neutrino oscillation.

ground at Fermilab, IL and a 14 kton far detector in Ash River, MN.

The NOvA experiment has recently produced updated neutrino oscillation measurements as well as its first antineutrino oscillation results. At the core of NOvA's measurements is the use of deep learning algorithms for identification and reconstruction of the neutrino flavor and energy. Presented here are the latest neutrino and first antineutrino results as well as details about the convolutional neural network implementation on NOvA and further extensions of NOvA's deep learning efforts

### **Day & time:**

Wednesday, August 29, 2018  
2:00 p.m., 128 Jabara Hall  
Refreshments & Discussion Afterwards

Supported by the Eddy and April Lucas Fund, Wichita, Kansas