



**Idaho State  
University**

**Mathematics  
and Statistics**

# **Undergraduate Colloquium**

## **The Data Science Labs: Applications of Mathematics**

**Dr. Kaitlyn Hood**  
Purdue University

At Purdue, students want to see applications of the math they are learning in their undergraduate math classes. We have designed a sequence of one-credit Data Science Lab courses to address this student interest and to train students to work with data. In this talk, we will show a few of the labs from the courses, including how to use interpolation to build a distance measurement tool. We will show how to use Green's Theorem to measure the area of a 2D object with a planimeter. We will use Fourier analysis to build a theremin and probability to estimate the value of pi. We can even use matrix multiplication to detect edges in images. This talk will include video demonstrations from the Data Science Labs at Purdue University.

**Tuesday, April 23**

**3:00 pm**

**PS 307 (or) Zoom, ID 83918530990**

*For colloquium guests, refreshments begin at 2:30 pm in PS 307.*