



DEPARTMENT OF  
**MATHEMATICS  
AND STATISTICS**

## **COLLOQUIUM**

**Speaker:** Dr. Larrain-Hubach, University of Dayton

**Title:** Decay of Instantons on Taub-NUT space

**Date:** Friday, October 6, 2017

**Room/Time:** Meet-n-Greet: 2:30 p.m. Room 222 MM

Talk: 3:00 p.m. Room 224 MM

**Host:** Dr. Qingbo Huang

### **ABSTRACT:**

Instantons are a generalization of harmonic functions, defined over complete four-manifolds, which are used in the standard model to study strong and weak nuclear interactions. In this talk, I will define them and give some of their basic properties. In particular, I will review some recent results concerning their pointwise decay on a particular four-manifold called "The Taub-NUT Space".

### **SPEAKER BIO:**

Dr Larrain-Hubach is currently an assistant professor at the University of Dayton. He obtained his Ph.D. from Boston University in 2012 and then spent four years as a postdoctor at the University of Arizona.

His research areas include differential geometry and mathematical physics.