Department of Mathematics
University of Notre Dame

Ethan Addison - University of Notre Dame

GRADUATE STUDENT GEOMETRY SEMINAR

Guest Speaker: Ethan Addison
University of Notre Dame

Date: Friday, August 28, 2020

Time: 3:00 PM

Location: Zoom

Zoom Link: https://notredame.zoom.us/j/96302373523
Password: 286777

Lecture Title:

Cohomology of Almost Complex Manifolds

Abstract

Going back over a century to questions raised by Hirzebruch, there has been interest in extending the notion of the Hodge numbers $h^{p,q}$ to almost complex manifolds. After introducing the necessary preliminaries of almost complex geometry, we briefly discuss certain efforts to understand the relationship between almost complex structures and the classical de Rham Cohomology and then prioritize recent work by Cirici-Wilson which defines a Dolbeault Cohomology theory for almost complex manifolds, including some harmonic theory for these spaces as well. As an application, we will consider the case of nearly Kähler manifolds.