

## ***GRADUATE STUDENT SEMINAR***

**Guest Speaker: Ethan Addison**

**University of Notre Dame**

***Date:*** Monday, March 25, 2019

***Time:*** 4:00 PM

***Location:*** 117 Hayes-Healy Hall



***Lecture Title:***

**The Topology of Kähler Manifolds**

***Abstract***

Kähler manifolds are a central object in geometric analysis, algebraic geometry, and mathematical physics, and as such are typically defined in analytic terms that are friendly for geometers. We will instead describe them in the language of principal  $G$ -bundles in terms of  $G$ -structures, highlighting the topological nature of Kähler geometry. Moving to the compact setting, we will briefly discuss some of the cohomological implications arising from Hodge theory as well as briefly touch on the notion of Kähler groups, i.e. finitely presented groups which arise as the fundamental group of some closed Kähler manifold.