

GRADUATE STUDENT SEMINAR

Guest Speaker: Marco Radeschi
University of Notre Dame



Date: Monday, December 2, 2019

Time: 4:00 PM

Location: 117 Hayes-Healy Hall

Lecture Title:

Virtual Isometric Immersions, and Applications

Abstract

Isometric immersions of manifolds into Euclidean space always exist by the Nash Embedding Theorem, and they have multiple applications throughout geometry. In this talk, we provide a generalization of such immersions, called virtual immersions, in which extrinsic geometry still works as usual, except the second fundamental form is not necessarily symmetric anymore. In fact, we show that there are cases of virtual immersions whose second fundamental form is skew-symmetric. We apply this new tool to study the relationship between topology and index of minimal hypersurfaces in compact symmetric spaces (such as projective spaces and Grassmannians).