



Speaker: Edward Burkard
University of Notre Dame

Monday, November 4, 2013
4:00 PM
229 Hayes-Healy Hall

Title: From Classical Mechanics to Symplectic Geometry

Abstract:

Starting with Newton's Second Law of Motion, we will talk about how to evolve classical mechanics into symplectic geometry. After that, we will talk about two well known items in symplectic topology: the nonsqueezing theorem and Arnold's conjecture on fixed points. This talk is intended to be at a fairly basic level, and more of an overview than anything else. Depending on the audience, some knowledge of manifolds may be assumed (at the level of the Basic Topology course).

[1] D. McDuff & M. Salamon, "Introduction to Symplectic Topology." 2nd edition. Oxford Mathematical Monographs, Oxford Science Publications, 1998

[2] L. Polterovich, "The geometry of the group of symplectic diffeomorphisms." ETH Lectures in Mathematics, Birkhauser, 2001