

Colloquium

University of Notre Dame
Department of Mathematics

Speaker: Mona Merling

Johns Hopkins University



Will give a lecture entitled

Manifolds, group actions and algebraic K-theory

Date: Friday, December 8, 2017

Time: 4:00 PM

Location: 129 Hayes-Healy Hall

Departmental Tea: Tea in Room 257 (lounge in Hurley Hall) at 3:30 p.m.

Abstract:

Quillen's algebraic K-theory of rings and schemes has deep connections to problems in number theory, and Waldhausen's A-theory, an extension of algebraic K-theory to spaces, is central to the classification of diffeomorphisms of manifolds. I will discuss how to encode the extra information given by a group action on the input of algebraic K-theory. I will focus on a joint project with C. Malkiewich aimed at constructing an equivariant generalization of A-theory in the case when the input is a space with group action, which should have rich geometric applications by analogy with the non-equivariant case. This project fits into a long-term research program aimed at establishing a chain of homotopy-theoretic constructions that relate the behavior of compact G-manifolds to that of their underlying equivariant homotopy types.