

Colloquium

University of Notre Dame
Department of Mathematics

Felix Janda - University of Michigan

Speaker: Felix Janda

University of Michigan

Will give a lecture entitled

Enumerative geometry: old and new



Date: Wednesday, January 29, 2020

Time: 4:00 PM

Location: 229 Hayes-Healy Hall

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

Abstract:

For as long as people have studied geometry, they have counted geometric objects. For example, Euclid's Elements starts with the postulate that there is exactly one line passing through two distinct points in the plane. Since then, the kinds of counting problems we are able to pose and to answer has grown. Today enumerative geometry is a rich subject with connections to many fields, including combinatorics, physics, representation theory, number theory and integrable systems. In this talk, I will show how to solve several classical counting questions. I will then move to a more modern problem with roots in string theory which has been the subject of intense study for the last three decades: The computation of the Gromov-Witten invariants of the quintic threefold, an example of a Calabi-Yau manifold.