



Speaker: Mike Perlman
University of Notre Dame

Wednesday, September 27, 2017

3:00 PM

258 Hurley Hall

Title: Regularity of Pfaffian Thickenings

Abstract:

Let S be the coordinate ring on the spaces of $n \times n$ complex skew-symmetric matrices. This ring has a natural action of the general linear group $GL_n(\mathbb{C})$, and we study the Castelnuovo-Mumford regularity of ideals $I \subseteq S$ that are invariant under this action. In particular, we compute the regularity of basic invariant ideals and large powers of ideals of Pfaffians. As a consequence, we characterize when these ideals have linear minimal free resolution. This work is inspired by the recent results of Raicu, who solved the analogous problem in the case of generic $n \times m$ matrices with a $GL_n(\mathbb{C}) \times GL_m(\mathbb{C})$ -action.
