



Speaker: Sam Evens
University of Notre Dame

Wednesday, September 28, 2016
3:00 PM
258 Hurley Hall

Title: Algebraic geometry of the complex Gelfand-Zeitlin system

Abstract:

I will discuss some joint work with Colarusso on the complex algebraic version of the Gelfand-Zeitlin integrable system for $\mathfrak{gl}(n)$ and $\mathfrak{so}(n)$. In particular, I will explain how using notions from invariant theory facilitates extension of known results from $\mathfrak{gl}(n)$ to $\mathfrak{so}(n)$. In particular, the invariant theory quotients $\mathfrak{gl}(n) \rightarrow \mathfrak{gl}(n)//GL(n-1)$ and $\mathfrak{so}(n) \rightarrow \mathfrak{so}(n)//SO(n-1)$ are flat morphisms, and current questions focus on the structure and degenerations of the fibres of this morphism.