

Speaker: Bart Van Steirteghem

Title: Examples of Alexeev and Brion's invariant Hilbert scheme

Abstract: Let G be a complex reductive algebraic group and let V be a finite-dimensional representation of G . In 2003 (published 2005) Alexeev and Brion introduced the invariant Hilbert scheme, which generalizes the multigraded Hilbert scheme of Haiman and Sturmfels to nonabelian G . It parametrizes the G -stable closed subschemes of V whose ring of functions has fixed finite multiplicities as a representation of G . I will discuss examples of this Hilbert scheme (for nonabelian G) due to Jansou, Jansou and Ressayre, Bravi and Cupit-Foutou, and Papadakis and myself.