



Speaker: Stefan Patrikis
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Wednesday, March 25, 2015
4:00 PM
117 Hayes-Healy Hall

Title: The generalized inverse Galois problem

Abstract:

The classical inverse Galois problem for a field K --the most basic case being the field of rational numbers--asks what finite groups can arise as Galois groups of extensions of K . In fact, this classical problem admits a vast generalization, which would take into account not only the finite extensions of K but also features of the topology of algebraic varieties defined by polynomial equations with coefficients in K . In this generalization, not only finite groups but also Lie (or algebraic) groups arise as the relevant symmetry groups. I will motivate this general problem and then discuss some recent progress in finding the exceptional Lie groups out in the arithmetic wild.