Colloquium

Benjamin Smith, McGill University

October 10, 2012
2:00
HH3017

Singular G-monopoles

Abstract:

Monopoles are solutions to a particular differential equation loosely considered by physicists as magnets with only a single pole. These objects are often considered physically unrealizable, yet their existence is undeniable and abundant in mathematics. In fact, the solution space of singular monopoles has very rich and interesting geometric structure. The goal of this talk will be to introduce the work of B. Charboneau and J. Hurtubise in the case that G is the complex general linear group and give the general overview on how the solution space was described. I will then try and discuss some difficulties which arise when proving the same theorem in a more general context (i.e. when G is an arbitrary complex reductive Lie group).