Undergraduate Math Club
Winter 2007
2nd floor Nesbitt Common Room
Thursday, March 8, 4:10-5:00pm
(free pizza and pop, as always)

Noether's Theorem
The role of symmetry in theoretical physics

Brian Jennings

Abstract

Noether's Theorem is a generalization of the correspondence between conservation laws (conservation of energy, conservation of linear momentum, etc.) and symmetries or invariants of a physical system (invariants of a system with respect to time translations, space translations, etc.). We'll look at one version of the theorem for classical mechanical systems, and then look at several other correspondences for both classical and quantum systems.