**Monday June 29 at 12:00pm**

Speaker: Jeff Greensite

Title:  What is a "spontaneously broken" gauge symmetry?

Subtitle:  The Higgs phase as a spin glass, and excited states

of elementary fermions.

Abstract

    I will show that there is a close analogy between spin glasses and the Higgs phase of a gauge Higgs theory, with the Higgs field in the fundamental representation of the gauge group. The Higgs and confinement phases are distinguished both by symmetry breaking (as determined by a gauge theory version of the Edwards-Anderson order parameter), and by qualitatively different types of confinement.  I will also show some preliminary numerical data which suggests the existence of stable excitations of the bosonic fields surrounding static fermions in the Higgs phase of a gauge Higgs theory.