The Spring 2008 Condensed Matter Seminar series presents:

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A new large N phase transition in bi-dimensional Yang-Mills theory

Monday, April 21

4:00 P.M.

304 Robeson Hall

Bi-dimensional SU(N) gauge theory is a simple but not trivial model which has many connections with other different theories among them string theories, statistical mechanics and random walk theories. In this seminar I am going to introduce a new large N phase transition in YM_2 which appears when the theory is defined over a surface with the topology of a sphere. The transition is the analogous of the cut off phase transition in the context of random walks theory. Exploiting the relations with fermion system and string theories I describe the properties of the different phases.