

Massachusetts Institute of Technology
Department of Physics

Condensed Matter Theory Seminar

“Low Energy Effective Theories for non-Fermi Liquids”

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Abstract: In this talk, I will discuss about two examples of non-Fermi liquids which can be understood in controlled manners. The first example is based on a dimensional regularization scheme, where the co-dimension of Fermi surface is extended such that the Yukawa coupling between a critical boson and Fermi surface is stabilized at a finite but small value. In the second example, I will discuss about chiral non-Fermi liquid states in two space dimensions, which can be realized on the surfaces of stacks of quantum Hall layers. Although the theories flow to strongly interacting field theories at low energies, one can prove the stability of the states and extract exact critical exponents thanks to chirality.

12:00 pm
Tuesday, November 19, 2013
Cosman Room (6C-442)