

Massachusetts Institute of Technology
Department of Physics

Condensed Matter Theory Seminar

“Topological ground-state degeneracy in an isolated one-dimensional gas of spinless Fermions”

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Abstract: In this talk I will show that spinless Fermions, hopping on a 1D lattice, may exhibit Majorana-like ground state degeneracy in the presence of strong pair hopping. The degeneracy is associated with boundaries between two gapless phases: a single mode Luttinger liquid and a liquid of pairs, gapped to single particle excitations. I will present the low-energy theory capturing the transition between these phases and show evidence of ground state degeneracy using a DMRG simulation.

12:00noon
Tuesday, September 22, 2015
Duboc Seminar Room (4-331)