

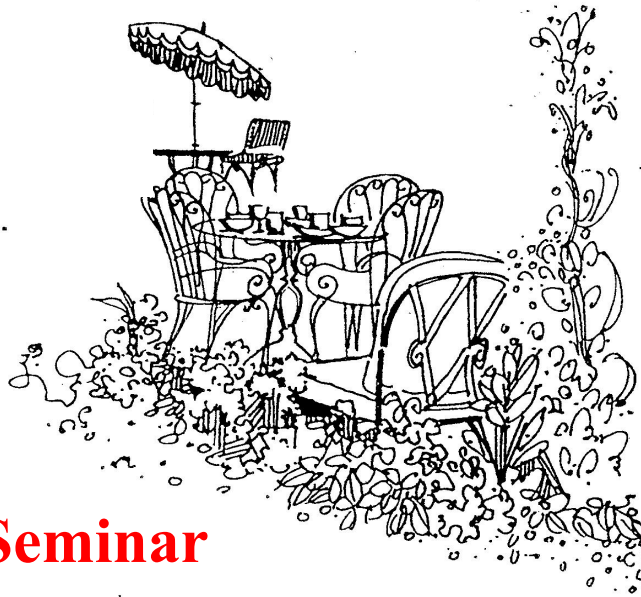
Chez Pierre

Presents ...

Monday, November 30, 2015

12:00pm

MIT Room 4-331



Chez Pierre Seminar

Nigel Cooper

University of Cambridge-UK

” Topological Kondo Effect with Majorana Fermions“

The Kondo effect is a striking consequence of the coupling of itinerant electrons to a quantum spin with degenerate energy levels. While degeneracies are commonly thought to arise from symmetries or fine-tuning of parameters, the emergence of Majorana fermions has brought to the fore an entirely different possibility: a "topological degeneracy" which arises from the nonlocal character of Majorana fermions. In this talk, I shall explain that nonlocal quantum spins formed from these degrees of freedom give rise to a novel "topological Kondo effect". This leads to a robust non-Fermi liquid behavior. This effect leads to several unique transport signatures in mesoscopic superconducting systems, which would demonstrate the non-local quantum dynamics of Majorana fermions.