

Chez Pierre

Presents ...

Monday, October 6, 2014

12:00pm

MIT Room 4-331



Chez Pierre Seminar

Antonello Scardicchio

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*"Local integrals of motion in the many-body
localized phase"*

Many-body localization is the suppression of transport in disordered, interacting systems. It is now clear that many realistic disordered spin and particle systems do possess such a phase and that this has profound implications for the system's dynamics. Recently, a characterization of the MBL phase has been proposed in terms of the existence of local integrals of motion. I will show how to build such local integrals of motion in perturbation theory in the interaction and how to find the phase boundaries. If time allows, I will also comment on the implications of this work for the performance of the quantum adiabatic algorithm.