

Chez Pierre

Presents ...

Thursday, February 11, 2016

10:00AM

MIT Room 4-331

Special Chez Pierre Seminar

Romain Vasseur

University of California-Berkeley

”Universality far from equilibrium: from integrability to many-body localization“

In this talk, I will discuss how the concepts of quantum criticality and universality can emerge at very high energy, far from thermal equilibrium. After discussing examples of universality in quantum quenches — the abrupt change of a control parameter in a quantum system, I will review the physics of many-body localized systems that fail to self-thermalize in isolation. I will then describe the new types of nonequilibrium phase transitions that can arise in the presence of many-body localization, and introduce novel effective renormalization group approaches to capture their universal critical properties.

