

Massachusetts Institute of Technology
Department of Physics

Condensed Matter Theory Seminar

“Renormalization Group Analysis of Dirac Electrons in Solids”

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Abstract: The relativistic quantum electrodynamics is revealed in Dirac materials by renormalization group analysis. Three-dimensional Dirac fermions in solids realize the situation that the speeds of electron and light have the same values in the infrared limit. In this talk we will describe a system of this intriguing phenomenon and the procedure of renormalization group analysis. The examples are the quantum phase transition of 3D topological insulators and pyrochlore iridates. We will also discuss the effects of renormalization group on some anisotropic systems.

12:00 pm
Friday, November 8, 2013
Duboc Seminar Room
Room 4-331

Host: Tim Hsieh/Chong Wang