

Massachusetts Institute of Technology
Department of Physics

Condensed Matter Theory Seminar

"Itinerant quantum criticality, deconfined quantum critical point,
Duality and all that"

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Abstract: Based on the recent conceptual and technical developments of quantum Monte Carlo simulations in correlated electron systems, I will present and discuss fresh results of itinerant quantum critical points, i.e., the critical phenomena arising from the strong coupling between Fermi surface and bosonic fluctuations. After that, I will also discuss the lately proposed duality relations between interaction-driven topological phase transitions and deconfined quantum critical points, which is verified via unbiased large-scale quantum Monte Carlo simulations.

Reference:

Phys. Rev. X 7, 031058 (2017)

Phys. Rev. X 7, 031052 (2017)

11:00am
Wednesday, January 31, 2018
Low Room (6C-333)

Host: Liang Fu