

Massachusetts Institute of Technology
Department of Physics

Condensed Matter Theory Seminar

"Floquet conformal field theory"

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Abstract: Given a generic two-dimensional conformal field theory (CFT), we propose an analytically solvable setup to study the Floquet dynamics of the CFT, i.e., the dynamics of a CFT subject to a periodic driving. A complete phase diagram in the parameter space can be analytically obtained within our setup. We find two phases: the heating phase and the non-heating phase. In the heating phase, the entanglement entropy grows linearly in time, indicating that the system keeps absorbing energy; in the non-heating phase, the entanglement entropy oscillates periodically in time, i.e., the system is not heated. At the phase transition, the entanglement entropy grows logarithmically in time in a universal way. Furthermore, we can obtain the critical exponent by studying the behavior of entanglement evolution near the phase transition.

12:00pm noon
Tuesday, April 17, 2018
Duboc Room (4-331)

Host: Zhen Bi