PHYSICS AND ASTRONOMY
SEMINAR

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"Entanglement Entropy in Gapped Systems"

Abstract

Entanglement entropy is a useful order parameter characterizing phases in quantum field theories in various dimensions. For example, it can capture confinement/deconfinement and quantum phase transitions. The analytic computations, however, are limited to special cases such as conformal and free field theories. In this talk, I would like to elucidate various properties of entanglement entropy in gapped systems by using both field theoretic and holographic approaches. I will also discuss how entanglement entropy behaves under a perturbation of CFT by a relevant operator and point out that the perturbative calculation may fail depending on the conformal dimension.

Thursday, August 28, 2014
11:00 a.m.
Elliott Building
Room 160