

Massachusetts Institute of Technology
Department of Physics

CONDENSED MATTER THEORY SEMINAR

“Grand-canonical Renyi Entropy”

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Abstract: We construct a new class of entropy measures by extending the usual definition of Renyi entropy to include a chemical potential. These charged Renyi entropies measure the degree of entanglement in different charge sectors of the theory and are given by Euclidean path integrals with the insertion of a Wilson line encircling the entangling surface. We compute these entropies for CFTs with holographic duals, where they are related to entropies of charged black holes with hyperbolic horizons. We also compute these entropies in free field theories.

12:00 noon
Tuesday, October 8, 2013
Duboc Seminar Room
Room 4-331