KMI Theory Seminar Wednesday, July 2, 2014 5:00 pm, KMI Science Symposia (ES-635)

"Entanglement and Holography"

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Abstract:

Holography is an equivalence between an ordinary quantum field theory and a classical theory of gravity. The spacetime of the gravitational theory can be viewed as emerging out of the quantum dynamics of the dual field theory. I'll describe recent advances that suggest that entanglement plays a crucial role in encoding the emergent geometry in the field theory. These new connections may help shed light on our understanding of entanglement in strongly coupled system as well as on our understanding of the basics of holography.