

Abstract Submitted  
for the MAR16 Meeting of  
The American Physical Society

**Highly entangled tensor networks** YINGFEI GU, DANIEL BULMASH, XIAO-LIANG QI, Stanford University — Tensor network states are used to represent many-body quantum state, e.g., a ground state of local Hamiltonian. In this talk, we will provide a systematic way to produce a family of highly entangled tensor network states. These states are entangled in a special way such that the entanglement entropy of a subsystem follows the Ryu-Takayanagi formula, i.e. the entropy is proportional to the minimal area geodesic surface bounding the boundary region. Our construction also provide an intuitive understanding of the Ryu-Takayanagi formula by relating it to a wave propagation process. We will present examples in various geometries.

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Date submitted: 06 Nov 2015

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