

# Holographic quantum states

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In this talk I'll describe how continuous matrix product states of quantum field theories can be described in terms of the dissipative non-equilibrium dynamics of a lower-dimensional auxiliary boundary field theory. This equivalence illustrates an intimate connection between the theory of continuous quantum measurement and quantum field theory and gives an explicit construction of the boundary field theory allowing the extension of real-space renormalization group methods to arbitrary dimensional quantum field theories without the introduction of a lattice parameter.