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Abstract for an Invited Paper
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Gravity and Entanglement

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The AdS/CFT correspondence from string theory provides a quantum theory of gravity in which spacetime and gravitational physics emerge from an ordinary non-gravitational system with many degrees of freedom. In this talk, I will explain how quantum entanglement between these degrees of freedom is crucial for the emergence of a classical spacetime, and describe progress in understanding how spacetime dynamics (gravitation) arises from the physics of quantum entanglement.