

Abstract Submitted
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Stability of Gapless Quantum Spin-Liquids¹ TARUN GROVER,
Kavli Institute for Theoretical Physics, UC Santa Barbara — Strong correlations can lead to novel quantum phases with striking features, such as, emergent fermions and photons in a bosonic system, or even phases which lack any sharply defined quasiparticle. Given their scarcity, a fundamental question is: when are such ‘fractionalized’ phases stable? In this talk, I will employ the recently discovered results which relate quantum entanglement and the renormalization group, to determine the stability of several gapless quantum spin-liquids. I will also provide a general argument which shows that the phase transitions out of a topological phase necessarily lie beyond Landau-Ginzburg paradigm.

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