

Asymptotically Safe Unimodular Quantum Gravity: a Status Report

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Unimodular Gravity is an alternative description of the gravitational dynamics that is equivalent to General Relativity within the classical realm. Since it is based on a different symmetry group, volume-preserving diffeomorphisms, it could be expected that Unimodular Gravity displays very different quantum properties with respect to the quantization of a full diffeomorphism-invariant theory. I will discuss how this comparison fits in the asymptotic safety program for quantum gravity as well as point out the recent progress in this direction. Moreover, I will raise some potential conceptual consequences of such a discussion in a broader quantum-gravity perspective.

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