

Curvature for quantum gravity

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In non-smooth and discrete metric spaces of some models of quantum gravity, e.g., those based on Ricci calculus, it is a nontrivial task to introduce a notion of curvature that works at any length scale down to the cutoff scale and in the continuum limit converges to a curvature defined in terms of the Riemann tensor. The recently introduced *quantum Ricci curvature* has those properties. In the talk I will present this quantity and the results of calculating it in discrete spaces of several kinds, including the newest results in the most physically relevant four-dimensional model of Causal Dynamical Triangulations with the toroidal spatial topology.

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