Geometry Note

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1 LQG propagator

Attempts to calculate particle scattering in nonperturbative quantum gravity has been conducted by Carlo Rovelli (**??**). All the scattering amplitudes can be derived from the n-point functions

$$G(x_1, \ldots, x_n) = Z^{-1} \int D\phi \; \phi(x_1) \cdots \phi(x_n) \; e^{-iS[\phi]} \tag{1.1}$$

$$G^{abcd}(x, y) = \langle 0 | h^{ab}(x) h^{cd}(y) | 0 \rangle \tag{1.2}$$

2 The problem with Barrett-Crane Model

References

[1] Leonardo Modesto and Carlo Rovelli, Particle scattering in loop quantum gravity, arXiv:gr-qc/0502036v1