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Continuum properties using Causal Sets

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We present the utility of chains defined on causal sets in estimating continuum properties like the curvature, the proper time and the space-time dimension through a numerical analysis. In particular, we show how right continuum properties emerge in deSitter and FLRW spacetimes.
We also discuss a possible test of manifoldlikeness by considering two models of non-manifoldlike causal sets. This is a part of a broader idea of the geometrical reconstruction of continuum properties given a discrete sub structure, in this case the causal set.

Keyword-1

quantum gravity

Keyword-2

discrete spacetime

Keyword-3

causal sets

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