

General Relativity and Quantum Cosmology

Emergent matter from 3d generalised group field theories

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We identify classical solutions of a generalised group field theory model in 3 dimensions, and study the corresponding perturbations, deriving their effective dynamics. We discuss their interpretation as emergent matter fields. This allows us, on the one hand to test the proposed mechanism for emergence of matter as a phase of group field theory, and on the other hand to expose some limitations of the generalised group field theory formalism.

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