



Contribution ID: 130

Type: **Parallel**

Spectral Methods and Running Scales in Causal Dynamical Triangulations

Friday 21 June 2019 14:20 (20 minutes)

We will present recent results of the application of spectral analysis in the setting of the Monte Carlo approach to Quantum Gravity known as Causal Dynamical Triangulations (CDT), discussing the behaviour of the lowest lying eigenvalues of the Laplace-Beltrami operator computed on spatial slices. We will show that such a kind of analysis can provide information about running scales of the theory and about the critical behaviour around a possible second order transition in the CDT phase diagram, where a continuum limit could be defined.

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Session Classification: Theoretical Developments

Track Classification: Theoretical Developments