Contribution ID: **32** Type: **talk**

The role of causality in quantum gravity

Tuesday, 24 September 2019 09:00 (45 minutes)

The notion of causality, both local or global, is tied inextricably to the Lorentzian character of spacetime. This is embodied by the causal structure poset which, given weak causality constriants, determines the conformal
spacetime geometry. This is the starting point for the causal set approach to quantum gravity, where the underlying continuum is replaced by a locally finite partially ordered set. In this talk I will discuss the role played by
causality both kinematically and dynamically in quantum gravity, with a focus on the causal set approach.

Presenter: Prof. SURYA, Sumati (Raman Research Institute)

Session Classification: The Mathematical side of Causality