Contribution ID: **469** Type: **Talk**

Creation of Emergent Universe with Wormholes

Saturday 5 December 2015 14:21 (21 minutes)

Emergent universe (EU) scenarios describe the evolution of a static Einstein universe in the infinite past whereby certain problems associated with the big-bang singularity can be circumvented. A flat universe composed of interacting fluids with a non-linear equation of state within the EU scenario leads to a viable cosmological model accommodating the presently observed accelerating era, as well. In the present work we focus on the origin of such a EU scenario. By investigating the very early universe in the presence of gravitational instanton solutions, we show how a static Einstein universe emerges, leading to a cosmologically viable EU scenario in the framework of massive gravity. Our analysis leads to certain constraints on the model parameters for the feasibility of such a scenario.

Author: PAUL, Dr. Bikash Chandra (University of North Bengal)

Presenter: PAUL, Dr. Bikash Chandra (University of North Bengal)

Session Classification: 06 - Early universe