

Physics Beyond General Relativity: Theoretical and Observational Constraints.

The study of the effects of higher curvature terms is a major research theme of contemporary gravitational physics. In this talk, I will present a comprehensive study of the higher curvature gravity and various observational & theoretical constraints. The inclusion of these terms leads to exciting new possibilities, e.g., gravitational and electromagnetic perturbations following different geodesics; leading to a time delay. Such a time delay was observed between the gravitational wave event GW170817 and its electromagnetic counterpart GRB 170817A. I describe how this effect can be used to constrain the coupling of the higher curvature term.

Primary authors: Dr JANA, Soumya (Physical Research Laboratory); Mr MISHRA, Akash K. (IIT Gandhinagar); Dr GHOSH, Avirup (IIT Gandhinagar); Prof. SARKAR, Sudipta (IIT Gandhinagar)

Presenter: Prof. SARKAR, Sudipta (IIT Gandhinagar)

Session Classification: Coffee+Posters session