



ICTS Astrophysical Relativity Seminar

Title : Ringdown properties of compact objects

Speaker : Mostafizur Rahman (Indian Institute of Technology, Gandhinagar)

Date : 14th May 2021

Time : 11:30 am

Abstract : In recent years, several horizonless compact object models were proposed to address the problems associated with the existence of black holes. As the gravitational wave detectors started to observe more and more merger events with a large signal-to-noise ratio, gravitational wave spectroscopy could hold the key to uncover the existence of these objects. This is because the late time ringdown signals of horizonless compact objects differ from that of the black holes. In this talk, I will discuss the ringdown properties of compact objects and compare them with those obtained in the black hole scenario. Since the internal structure and the equation of state of these compact objects are largely unknown, we employ the membrane paradigm to obtain appropriate boundary conditions for the perturbations of these objects. This model can describe the ringdown properties of a large variety of compact objects.

Venue : Please click on the link to join the seminar

<https://zoom.us/j/99555355478?pwd=SUpFOHd6MlovRitrMHlleUhhNzc2dz09>

Meeting ID: 995 5535 5478

Passcode: 426811