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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS Astrophysical & Relativity Seminar (HYBRID)

Title : gw_eccentricity: a Python package to measure orbital eccentricity from gravitational waveforms

Speaker : Md Arif Shaikh (Seoul National University)

Date : Thursday, 15th June 2023

Time : 03:30 PM (IST)

Abstract : In this talk, I will introduce gw_eccentricity, a Python package for measuring orbital eccentricity from the gravitational waveform. This package, currently, includes six different methods for measuring eccentricity and mean anomaly. Our implementations are robust and can be used to measure very small (10^-5) to very high (0.999) eccentricity. gw_eccentricity can be used on waveforms originating from different formalisms including PN, EOB, NR, and self-force calculations. I will discuss how gw_eccentricity can be used in the postprocessing step of parameter estimation (PE) to obtain a model-independent posterior of eccentricity for eccentric PE.

Venue : **Offline:** Feynman Lecture Hall (ICTS)

Online: Please click the below link to join the seminar.

https://icts-res-in.zoom.us/j/88534543143?pwd=b1pISWRvMW54ajZISW1YRFQyS3VGUT09
Meeting ID: 885 3454 3143
Passcode: 151516