



INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

2A & 2B, Raja S. C. Mullick Road, Jadavpur, Kolkata-700 032

School of Physical Sciences

SEMINAR NOTICE

- Title :** Gravitational wave memory effects in exact radiative spacetime
- Speaker :** Indranil Chakraborty, Indian Institute of Technology, Kharagpur
- Date :** September 16, 2022 (Friday)
- Time :** 15:30 hours (IST)
- Venue :** Physics Seminar Room (C-406), 3rd Floor, Centenary Building, IACS

Abstract:

Following recent work [Zhang, Duval, Gibbons and Horvathy (PRD, 2017)], there has been growing interest in understanding memory effects through the study of geodesic motion. One can, in principle, arrive at a class of memory effects (displacement and velocity memory) by solving the geodesic equation or the equation of geodesic deviation. Another route to memory (also termed as B-memory) involves the study of geodesic congruences by utilising the Raychaudhuri equation. In this talk, we will provide an overview of our recent work on such diverse aspects of memory in the context of exact, radiative solutions in General Relativity and modified theories of gravity.

Reference: The talk will be based on the following papers,
arXiv:1901.11236, 2005.00245, 2011.12368, 2202.10661

All are cordially invited to attend the seminar.