



St. Xavier's College (Autonomous), Kolkata



NAAC ACCREDITED A++ Ranked 5th in NIRF 2023 under "College" Category
College of Excellence; ISO 9001:2015 Certified; College with Special Heritage Status

POSTGRADUATE AND RESEARCH DEPARTMENT OF PHYSICS

IN ASSOCIATION WITH XAVERIAN ASTRONOMICAL SOCIETY

PRESENTS

NATIONAL SCIENCE DAY 2024

INAUGURAL ADDRESS

Rev. Dr. Dominic Savio, SJ

Principal,

St. Xavier's College (Autonomous), Kolkata



TITLE: Tuning into 'Cosmic hum': The first hints of a stochastic Gravitational Wave Background



SPEAKER

Pratik Tarafdar

Postdoctoral Fellow

The Institute of Mathematical Sciences (IMSc), Chennai

Abstract:

The first direct detection of kilometre-length spacetime ripples was made by the LIGO-Virgo collaborations in 2015. However, continuous gravitational wave emissions have been predicted in colliding galaxies from supermassive black hole binaries. Superposition of emissions from multiple such binaries creates a persistent stochastic gravitational wave background in nanohertz frequencies. Nature has gifted us ultra-precise galactic clocks named 'millisecond pulsars' as potential tools to detect these light-years-long gravitational waves using pulsar timing techniques. Recent results announced by Indian, European, North American, Australian, and Chinese Pulsar Timing Arrays, unravel the first strong direct hints of such a cosmic gravitational wave background.

OBSERVATIONAL SESSION

Lunar Observation Session

On the occasion of National Science Day



28th February, 2024

Speaker Session - 3:30 to 5 pm,
Observation Session - 5:30 pm onwards

4th March, 2024

Observation Session - 5:30 pm onwards



Room No. 41 (Speaker Session)

Father Eugene Lafont Observatory (Observation session)

Register Here:

