



ICTS Astrophysics & Relativity Seminar

Title : X-ray flaring event in AGN: Multi-wavelength Investigation and Interpretation of Physical Processes

Speaker : Saikruba Krishnan (IUCAA, Pune)

Date : Tuesday, 06th February, 2024

Time : 02:00 PM (IST)

Abstract : AGN are powered by gas accretion onto the supermassive black holes. Persistently accreting AGNs, alongside inherent stochastic variability, display extreme flux and spectral changes (X-ray and/or optical fluxes), usually linked to significant variations in the global accretion rate. There are open questions regarding how the X-ray corona, disk, and broad-line region (BLR) evolve in response to such changes in accretion supply. This presentation delves into these aspects and discusses an intriguing flare observed in a Seyfert galaxy by eROSITA. Its X-ray flux increased by ~ 5 over six months; concurrent optical photometric monitoring data with ATLAS showed a simultaneous increase by 4. We triggered a multi-wavelength follow-up monitoring program (XMM-Newton, NICER; optical spectroscopy). The results highlight the intricate relationship between AGN variability and the accretion process, shedding light on dynamic mechanisms like disk instabilities and tidal disruption events. This exploration is pivotal for comprehending the events around SMBHs, and some of these could also be potential GW sources detectable by LISA.

Venue : Offline: Chern Lecture Hall

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

<https://icts-res-in.zoom.us/j/94231151374?pwd=TXN2WkNCYyt2cEhlQ0VHNmd0Zk00dz09>

Meeting ID: 942 3115 1374

Passcode: 060606