



भारतीय खगोलभौतिकी संस्थान  
**INDIAN INSTITUTE OF ASTROPHYSICS**  
कोरमंगला Koramangala, बेंगलूरु Bengaluru – 560034.

स्नातक अध्ययन मंडल **Board of Graduate Studies.**

### **Visiting Student's Programme Seminar**

**Title:** Non-LTE Radiative Transfer of Spectral Lines in the Astrophysical Context

**Speaker:** Mr. Prajod C.P.  
(Integrated B.Tech, IIST Trivandrum)

#### **सार Abstract**

Radiative transfer is the backbone of accurately modeling the observed spectra from several astrophysical objects. In particular, modeling the stellar spectra requires the treatment of radiative transfer in spectral lines under non-local thermodynamic equilibrium (non-LTE) conditions. In this talk, I will present the theoretical background on non-LTE radiative transfer. I will discuss the relevant spectral line broadening mechanisms, and scattering of radiation by two-level atoms. The redistribution functions for four relevant astrophysical cases are presented. Finally, I will discuss the direct and iterative methods to solve the concerned transfer equation.

गुरुवार Thursday 31, जुलाई July 2025

Time: 11:00 AM

प्रेक्षागृह Auditorium

सभी का स्वागत है All are welcome.