



IUCAA Workshop on

# AI/ ML APPLICATIONS IN ASTRONOMY & ASTROPHYSICS

**JANUARY 6 - 11, 2025**

**The workshop will be for young researchers and faculty with background in astronomy and astrophysics and interest in application of AI/ ML techniques to astronomy.**

## **The talks in the workshop will cover**

ML/ AI techniques ranging from machine learning and deep learning to Generative AI, Transformers, Diffusion and other emerging and impactful areas.

Application of the techniques to various domains in astronomy and astrophysics including cosmological simulations, gravitational waves, galaxy morphology, spectral classification, Solar astronomy, and all aspects of time domain astronomy. A few applications outside astronomy will be presented.

***The workshop will consist of keynote and invited talks, shorter talks, talks by young researchers along with demo sessions & panel discussions.***

## **SCIENTIFIC ORGANISING COMMITTEE**

**Ajit Kembhavi** (IUCAA), Co - Chair | **Arif Babul** (University of Victoria & IISc), Co - Chair | **Ashish Mahabal** (Caltech)  
**Ninan Sajeeth Philip** (Aries4D & IUCAA) | **Kanak Saha** (IUCAA), Coordinator | **Prateek Sharma** (IISc)  
**T. Sivarani** (IIA) | **M. Vivek** (Indian Institute of Astrophysics) | **Yogesh Wadadekar** (NCRA-TIFR)

## **INVITED SPEAKERS**

**Mark Allen** (CDS, Strasbourg) | **Arif Babul** (University of Victoria & IISc) | **Pawan Bharadwaj** (IISc) | **Federica Bianco** (University of Delaware) | **Brandon Panos** (University of Applied Sciences & Arts Northwestern Switzerland FHNW, Windisch) | **Michael Coughlin** (University of Minnesota) | **Rishita Das** (IISc) | **Shravan Hansoge** (TIFR)  
**Yashar Hezaveh** (University of Montreal) | **Ajit Kembhavi** (IUCAA) | **Ofer Lahav** (University College London)  
**Ashish Mahabal** (Caltech) | **Lucio Mayer** (University of Zurich) | **Anupreeta More** (IUCAA) | **Suvodip Mukherjee** (TIFR) | **Laurence Perreault - Levasseur** (University of Montreal) | **Joe Philip** (TIFR) | **Ninan Sajeeth Philip** (AIRIS4D & IUCAA) | **Alex Szalay** (Johns Hopkins University) | **Vishal Upendran**, (LMSAL & BAERI, Palo Alto) | **Francisco Villaescusa-Navarro** (Flatiron Institute, Princeton University) | **Yogesh Wadadekar** (NCRA - TIFR)

**For registrations scan QR code or visit**  
<https://web.iucaa.in/ws/~AMAA/>



**Participation by invitation only | No registration fees | Accommodation & meals will be provided**



The Inter-University centre for Astronomy and Astrophysics (IUCAA) is one of the premier research institutes in astronomy and astrophysics in India. The faculty at IUCAA have interests in theory, observations and instrumentation. It has a substantial number of visitors from various Indian universities and astronomy centres in the country and abroad. The workshop will be organised on the IUCAA campus, which is located in the verdant surroundings of the S. P. Pune University.