

## **Session Program**

**21-23 May 2025**

# **AI in Astronomy Workshop**

## ***Team Activity Reports***

INAF-OACT, Aula Magna  
Via S. Sofia, 78, 95123 Catania CT

# Wednesday 21 May

09:30

## Team Activity Reports: Session I

**Session** | **Location:** INAF-OACT, Aula Magna, Via S. Sofia, 78, 95123 Catania CT

09:30–10:00

### Napoli Team Activities

**Speaker**

Stefano Cavuoti

10:00–10:20

### Automated identification of diffuse radio emission in all-sky surveys with Radio U-Net

**Speaker**

Chiara Stuardi

10:20–10:40

### Evaluating small vision-language models as AI assistants for radio astronomical source analysis tasks

**Speaker**

Dr Simone Riggi

10:40–11:00

### Machine learning for asterism selection in adaptive optics

**Speaker**

Fabio Rossi

11:00

11:15

## Team Activity Reports: Session II

**Session** | **Location:** INAF-OACT, Aula Magna, Via S. Sofia, 78, 95123 Catania CT

11:15–11:35

### OATo/UniGe Synergy - Integrating Observations and AI: Transformative Approaches for Unraveling Solar Activity

**Speaker**

Daniele Telloni

11:35–11:55

### The MIDA's activities in space sciences: Artificial intelligence for space weather

**Speaker**

Sabrina Guastavino

11:55–12:15

### Extending foreground emission with neural networks

**Speaker**

Giuseppe Puglisi

12:15–12:35

### Benchmarking Quantum Convolutional Neural Networks for Signal Classification in Simulated Gamma-Ray Burst Detection

**Speaker**

Farida Farsian

13:15

12:35-12:55

## Atmospheric Retrievals with Quantum Extreme Learning Machines

### Speaker

Prof. Tiziano Zingales

14:30

## Team Activity Reports: Session III

**Session** | **Location:** INAF-OACT, Aula Magna, Via S. Sofia, 78, 95123 Catania CT

14:30-14:50

## Deep Metal: Applying Transformer Models to Photometric Light Curves for Metallicity Estimation

### Speaker

Dr Lorenzo Monti

14:50-15:10

## Redefining X-ray Polarimetry: Insights from Imaging X- ray Polarimetry Explorer (IXPE) and Future Directions

### Speaker

Saba Imtiaz

15:10-15:30

## Survey of Surveys: Homogenizing Stellar Parameters Across Surveys with Symbolic Regression

### Speaker

Aleksandra Avdeeva

15:30