



The Abdus Salam  
International Centre  
for Theoretical Physics



# Advanced School on Applied Machine Learning

## Description:

We are excited to announce the first Advanced School in Applied ML at ICTP, which will take place in Trieste (Italy) from May 27th to June 1st, 2024, dedicated to PhD students and junior researchers. The school aims to bridge the gap between theoretical notions in data science/ML and application of ML to cutting edge scientific problems, with a focus on scalability and advanced HPC methods for ML, and in particular for deep learning (DL).

## MORE DETAILS:

Lecturers from top-ranked research centers/universities and big tech companies (e.g. Intel, Nvidia, IBM) will cover the following topics: symbolic regression, Gaussian processes for time-series data analysis, transfer learning and domain adaptation, Graph Neural Networks and Transformers for multi-modal analysis, AI explainability, Neuromorphic computing, energy-efficient DL training. Each topic will be complemented by the necessary tools to create efficient, scalable, and portable ML pipelines that exploit the capabilities of modern HPC infrastructures.

30 participants will be selected with attention to creating a cohort with balanced representation of countries (particularly, least developed countries), gender and under-represented groups.

This school will be the first activity in the field of advanced applied Machine Learning organised by the brand-new ICTP International Consortium for Scientific Computing (IComp).

The students are invited to follow the Symposium on “The Future of Scientific Computing: A Global Perspective” as collateral activity of the school, that will be hosted at ICTP on the 27<sup>th</sup> of May 2024



**27 May - 1 June 2024**



**Trieste, Italy**



## Applications and Deadlines:

Requesting financial and/or visa support:

**12 March 2024**

For all other applicants:

**31 March 2024**

## DIRECTORS:

Jean BARBIER, ICTP  
Serafina DI GIOIA, ICTP  
Ivan GIROTTI, ICTP  
Roberto TROTTA, Imperial College London & SISSA

## LOCAL ORGANISER:

Serafina DI GIOIA, ICTP

## FURTHER INFORMATION:

E-mail: [smr3941@ictp.it](mailto:smr3941@ictp.it)

Web: <http://indico.ictp.it/event/10479/>

Female scientists are encouraged to apply.

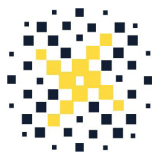


## GRANTS:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.



Supported by the Theoretical and  
Scientific Data Science group, SISSA



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