



The Abdus Salam
International Centre
for Theoretical Physics



Advanced School in Applied Machine Learning: Uncertainty and Robustness of DL Models for Science

DESCRIPTION:

We are excited to announce the Advanced School on Uncertainty and Robustness of Deep Learning (DL) Models for Science. This initiative, co-organized by ICTP alongside SISSA/TSDS, IBM and AREA, will take place at ICTP, in Trieste (Italy) from July 23rd to July 31st, 2026.

The school targets early-career researchers and PhD students, aiming to offer the participants practical tools to perform Uncertainty estimation (UQ) in DL models for scientific applications. There will be a special focus on scalability, sustainability, and advanced HPC methods for optimizing deep learning pipelines.

MORE INFORMATION:

Lecturers from top-ranked research centers/universities and big tech companies will cover the topics listed below:

- Scientific DL
- UQ in DL 4 Science
- Simulation based Inference
- Bayesian NN
- Explainable DL for Science

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 third activity in the field of advanced applied Machine Learning supported by the brand-new ICTP International Consortium for Scientific Computing (IComp).

The students are invited to follow the ceremony for the AI prize, that will be hosted at ICTP on July 23rd.

Co-Sponsors:



23 - 31 July 2026



Trieste, Italy



Applications and Deadlines:

For applicants requesting financial and/or visa support
18 April 2026

For all other applicants
9 May 2026

DIRECTORS:

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LOCAL ORGANIZER:

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FURTHER INFORMATION:

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Web: <https://indico.ictp.it/event/11154/>

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.

