



The Abdus Salam
**International Centre
for Theoretical Physics**



The CODATA-RDA Advanced Workshops for Research Data Science

Description:

The advanced workshops are a week-long hands-on activity that exposes participants to advanced techniques/approaches in specialized areas. Participants are expected to have a suitable background or have participated in a prior Summer School part of of this activity.

MORE INFORMATION:

Four applied/thematic workshops on Research Data Science will run in parallel:

Workshop 1: Big-Data Analytics

- Analysis of Large Scale Real-Time and Streaming Data
- Real time event processing, low latency query and visualization
- Hands-on sessions on Data ingesting and tools for capturing real time events/ streams, processing, low latency query and visualization

Workshop 2: Compute Infrastructure

- Data analysis tasks (from laptops to HPC platforms)
- Deploying and using applications (jupyter notebooks) on laptops and HPC clusters
- A look at large scale data analysis on Cloud Computing Platforms

Workshop 3: Urban Data Science

- Foundations of Urban Data Science and Geospatial Analytics (data integration, ethics and FAIR data principles).
- Urban Data Creation, Integration, and Analysis Techniques (using tools like QGIS, Google Earth Engine, on spatial data modelling, urban land use change detection, and visual analytics).
- Health, Mobility, and Sustainability (mapping and tracing disease, mobility patterns).
- Predictive Modeling and Decision Support for Smart Cities (machine learning models to forecast urban dynamics e.g population growth, infrastructure, climate change and health risk).

Workshop 4: Ocean Science Data

- FAIR ocean data stewardship through enhanced discoverability of metadata, sharing of best practices, co-developing standards, and dataset documentation.
- Ocean observation to data services using real workflows from acquisition to dissemination via platforms like ODIS and GLOSS.
- Applied ocean data analytics with open-source platforms to facilitate modelling of coastal dynamics & processes for data-driven decision making
- Marine biodiversity data practices using OBIS for species distribution mapping, data submission, and regional ecosystem assessments.

Call for Contributed Abstracts:

All applicants are requested to submit an abstract for a poster presentation. Abstract templates are available below for download.

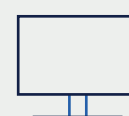
Individuals seeking an introduction to Research Data Science can apply to The CODATA-RDA School that runs immediately before the workshops.



11 - 15 August 2025



Trieste, Italy



**Deadline:
25 May 2025**

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LOCAL ORGANISER:

C. Onime, ICTP, Italy

FURTHER INFORMATION:

E-mail: smr4092@ictp.it

Web: <https://indico.ictp.it/event/10990/>

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.

