

# ICTP

## Research & Training Programmes

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



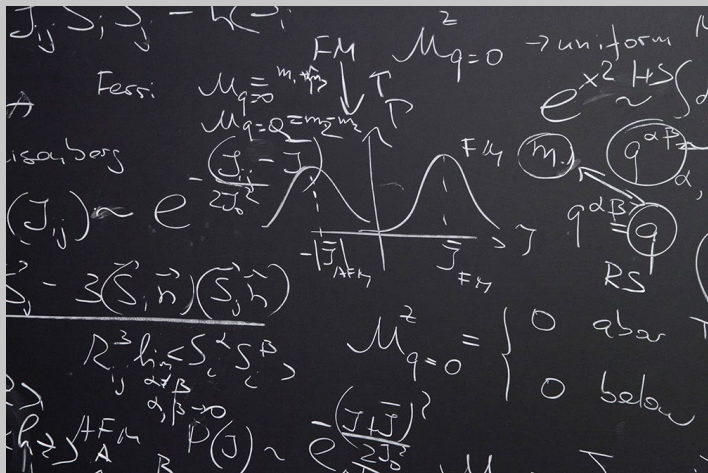
# What is ICTP?

- Founded in 1964 by Nobel Laureate Abdus Salam to enhance international cooperation through science.
- Combines world class research with a unique global mission of building science capacity in the developing world.
- Governed by tripartite agreement between Italy UNESCO and IAEA.
- Run by scientists for scientists



# What is ICTP?

## Research



## Education



## Cooperation





# Research Sections



High Energy, Cosmology  
& Astroparticle Physics



Condensed Matter and  
Statistical Physics



Mathematics



Science, Technology and  
Innovation



Earth System  
Physics



Quantitative Life  
Sciences

Also: Sustainable Energy, High Performance Computing, and Machine Learning

# Multidisciplinary Laboratory (MLab)

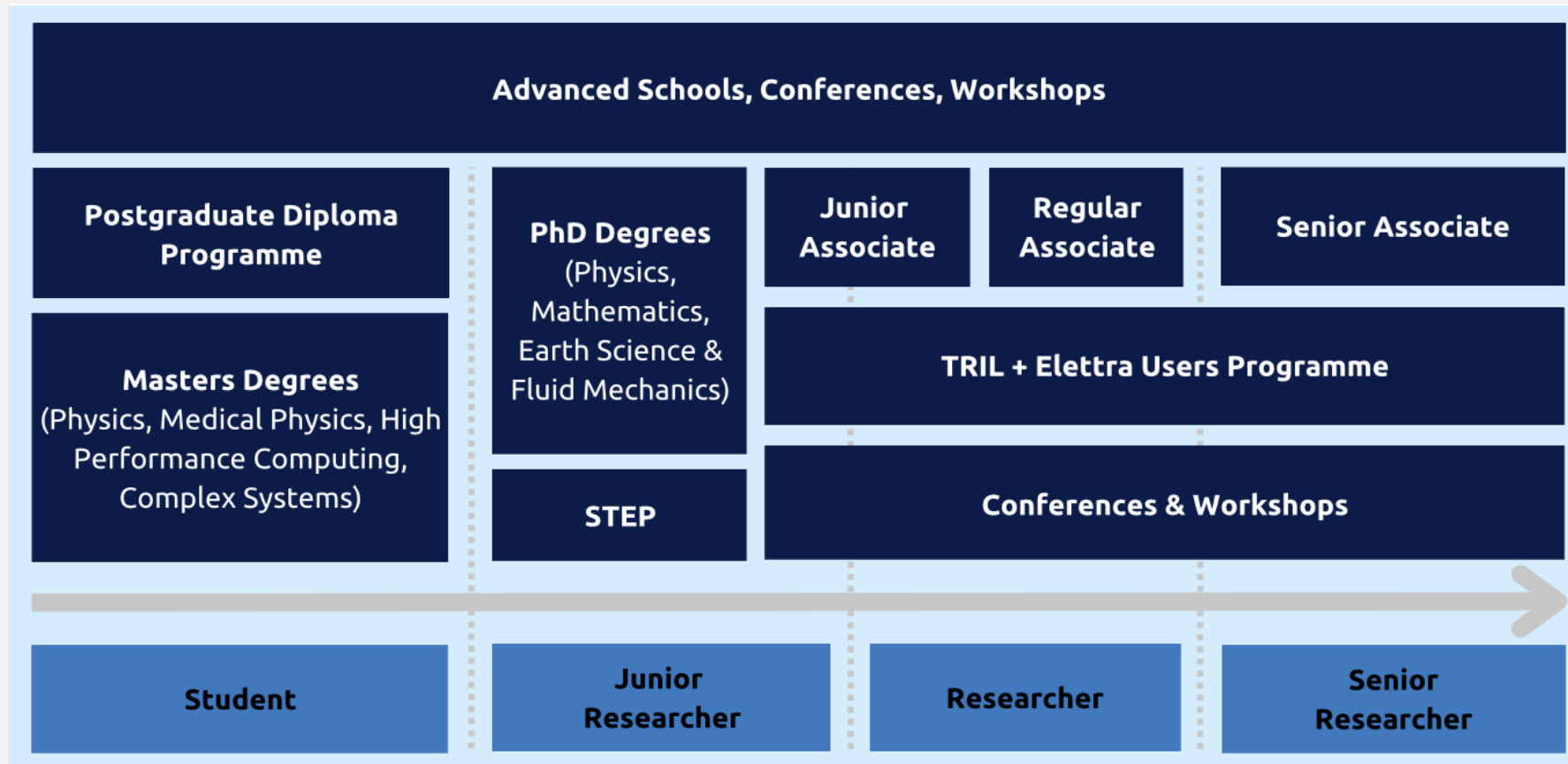
## Research and Development of Advanced Scientific Instrumentation and Methods

- Particle Physics Experiments (INFN, CERN)
- Nuclear Applications (IAEA)
- Heterogeneous Computing (UniTS)
- X-Ray for Cultural Heritage (IAEA, Elettra)
- Applied Optics and Lasers (SPIE)



# ICTP Programmes:

Supporting Scientists in all Stages of their Careers





# ICTP's Postgraduate Diploma Programme

## Preparing Young Scholars for PhD Studies

Since 1991:

- **1000+** Diploma graduates
- More than **75%** earned or working toward PhDs



# ICTP Degree Programmes

- Master in Medical Physics (with University of Trieste - UniTS)
- Master in High Performance Computing (with SISSA)
- Master of Complex Systems (consortium of European universities)
- *PhD in Physics (with UniTS)*
- PhD in Physics and Mathematics (with SISSA)
- PhD in Earth Science and Fluid Mechanics (with UniTS)
- *PhD in Engineering and Information Systems (with UniTS)*



# ICTP/IAEA Sandwich Training Education Programme (STEP)

## PhD Students

- Fellowships for students enrolled in a PhD in their home countries. PhD awarded at their home institutes
- Support to visit ICTP for a three- to six-month stay each year for up to three successive years
- Fellows work on their PhD theses with their advisors at their home institutes and co-advisors at the hosting institute

# Training and Research in Italian Laboratories (TRIL)

- Hands-on experience in world-class laboratories (including the ICTP Labs).
- Scientists having at least a university Master's Degree
- Fellowships range in length from a few months to one year (Maximum period: two years)

# Associate Programme

## Working Together at ICTP

### ICTP Associates

- Junior: Scientists up to age 35
- Regular: Scientists from age 36 to 45
- Senior: Scientists from age 45 to 65
- 3-year appointment, during which associate visits ICTP for stays of between 30 and 60 days each



# Postdoc and Short-term Visitors

## Working Together at ICTP

### Postdoc fellowships

- Check ICTP website for Postdoctoral opportunities (2-year appointment)

### Short-term visits

- Up to 3 months
- Agreement with ICTP faculty member

# ICTP: An International Hub for Scientific Networking

- Organises more than **60** conferences, schools & workshops each year (at ICTP and abroad)
- Welcomes up to more than **7,000** scientists from **145** nations each year
- Call for proposals: February/March each year
- **Scientific Calendar**

Please visit: <https://www.ictp.it/home/scientific-calendar>

# International Schools and Workshops

Search

Search in Conferences:

Overview

Programme

Speakers

Apply here

Practical info

Support

✉ smr4110@ictp.it

## Joint ICTP-IAEA School on Detector Signal Processing and Machine Learning for Scientific Instrumentation and Reconfigurable Computing | (smr 4110)

🕒

Starts 27 Oct 2025  
Ends 7 Nov 2025  
Central European Time

📍

ICTP  
Kastler Lecture Hall (AGH)  
Adriatico Guest House  
Riva Massimiliano e Carlotta, Grignano  
I - 34151 Trieste (Italy)


*An ICTP-IAEA meeting*

*The call for applications is open. Please click on 'Apply here' to submit your application.*

Organizers

Mladen Bogovac (IAEA, Austria),  
Maria Liz Crespo (ICTP, Italy),  
Kalliopi Kanaki (IAEA, Austria),  
Local Organiser: Maria Liz Crespo (ICTP)

Co-sponsors

 **IAEA**  
International Atomic Energy Agency  
Atoms for Peace and Development



# Scientific Capacity Building in Developing Countries

## External Activities Unit

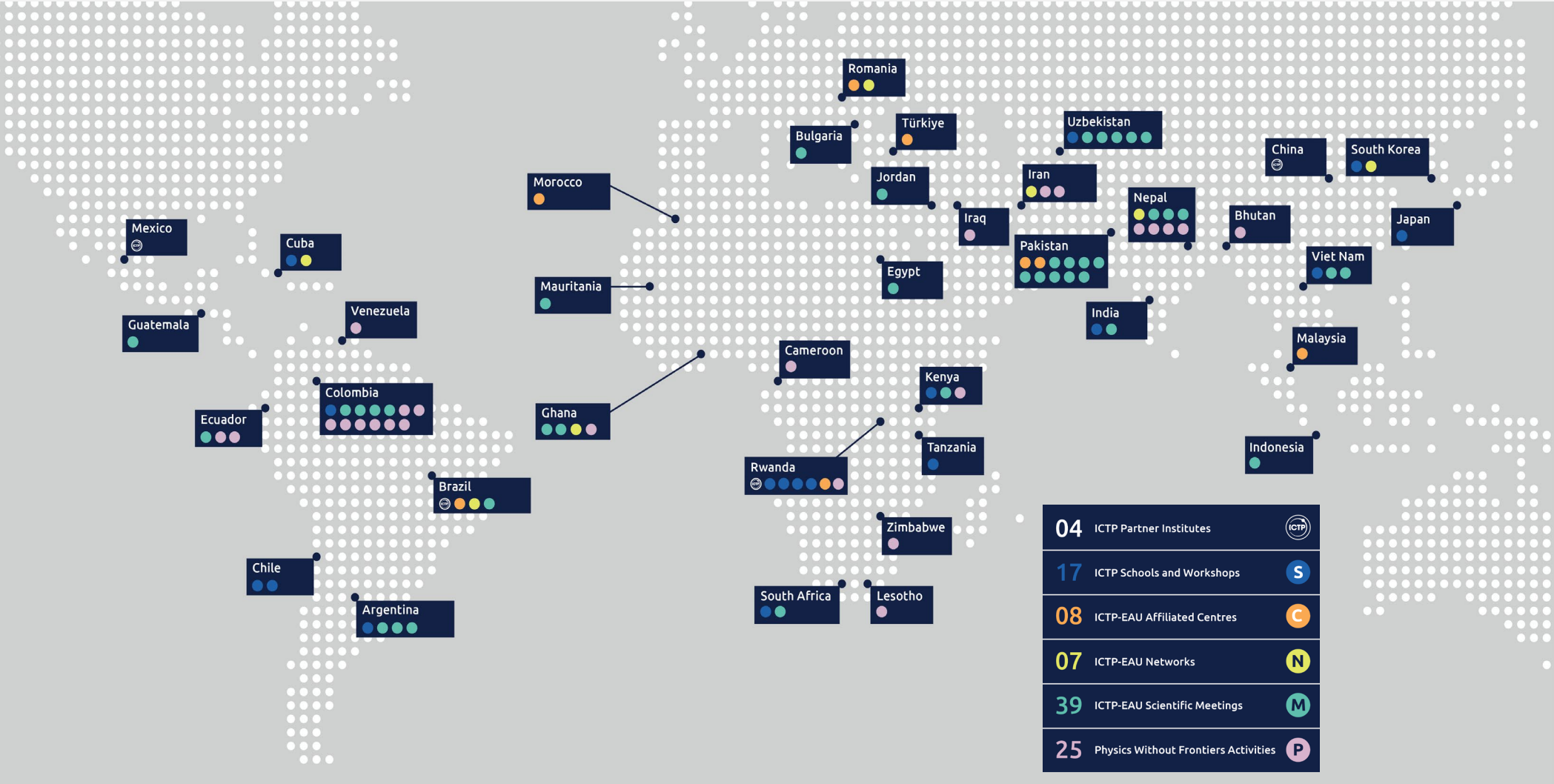
### ICTP Affiliated Centres

- Institutes or university departments in developing countries with which ICTP has established a formal collaboration.
- Collaboration may focus on research, training, or a combination of both.
- Make use of ICTP programmes in order to have maximum impact in research or training in the region.

### Scientific Meetings and Research Networks

- *Regional scientific meetings* in developing countries by offering financial assistance to the organisers of conferences, workshops, and schools.
- *Scientific network projects* proposed by institutes or individuals with common scientific interests who agree upon a well defined joint project that emphasises collaboration and the sharing of expertise and facilities.

# ICTP Impact 2023





Thank you!

