60 ICTP 1964–2024

A Successful Model of International Cooperation for and through Advanced Science

IAEA
International Atomic Energy Agency

ICTP
The Abdus Salam
International Centre
for Theoretical Physics

unesco
United Nations
Educational, Scientific
and Cultural Organization

ICTP 1964–2024

- ICTP since 1964
- Relevance of ICTP
- ICTP in 2064

Celebrating the Past and Preparing for the Future

ICTP since 1964

ICTP has a unique mission to make advanced science globally available, overcoming the barriers of gender, ethnicity, geography, economics

Its successful delivery rests on three foundational principles

- **Excellence** at the frontiers of science
- **Global inclusion** for scientific resources
- **International cooperation** through science

Since 1970,

180,000+

scientific visits from

188

countries around the world

In 2023

32%

women scientists

59%

from developing countries

Every year

6,000+

visiting scientists

~60

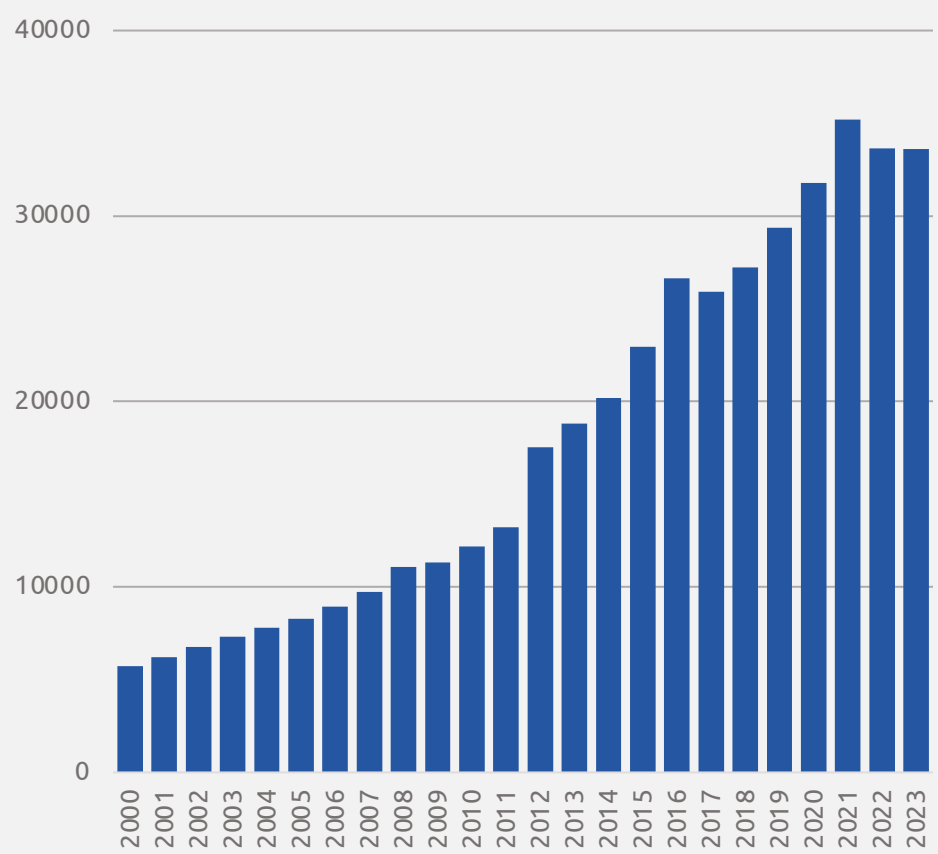
high level conferences

Contributions to many scientific breakthroughs including 5 Nobel Prizes.

Partner Institutes in Rwanda, Brazil, China, Mexico.

ICTP in Numbers 2023

187	Researchers from 44 countries
6,200+	Participants in scientific activities (including remote participation)
157	Nations represented
32%	of participants were female
59%	of participants from developing and least developing countries
61	Conferences, schools and workshops at ICTP +17 carried out abroad
25	Activities organized by Physics Without Frontiers with more than 1,100 participants



ICTP Research and Education 2023

42 Scientists (P-staff)
34 Scientific Consultants
80 Post-docs
31 Long-term visitors
28 PhD Students
99 TRIL and STEP fellows
97 Diploma and Master' students

411 Total (from 98 countries)

(100+ General Service Staff)

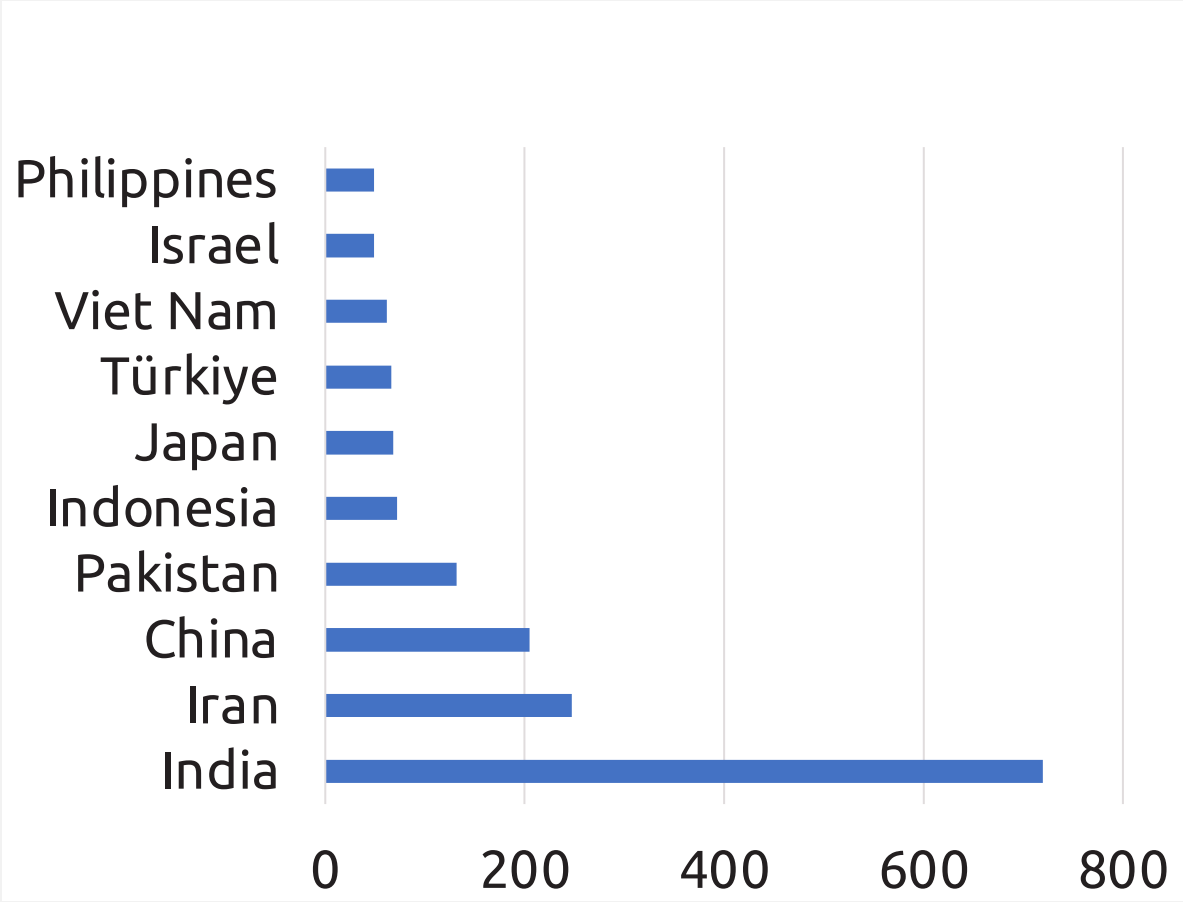
Participants from Asian countries in 2023

6,200+ Total participants

2013 participants from Asian countries

37% female

Asian countries with largest number of participants



Participants and Fellows from Viet Nam in 2023

- **75** Associate Members (10 female)
- **70** Postgraduate Diploma Students (22 female)
- **15** TRIL Fellows (6 female)
- **7** Female STEP Fellows
- **54** Participants in ICTP Activities in 2023 (15 female)

Notable Scientists from Viet Nam

- **Bảo Châu Ngô**
  Fields Medallist 2010, Member of ICTP Scientific Council

- **Hoang Hiep Pham**
  Ramanujan Prize 2019

- **Dam Thanh Son**
  ICTP Dirac Medal 2018

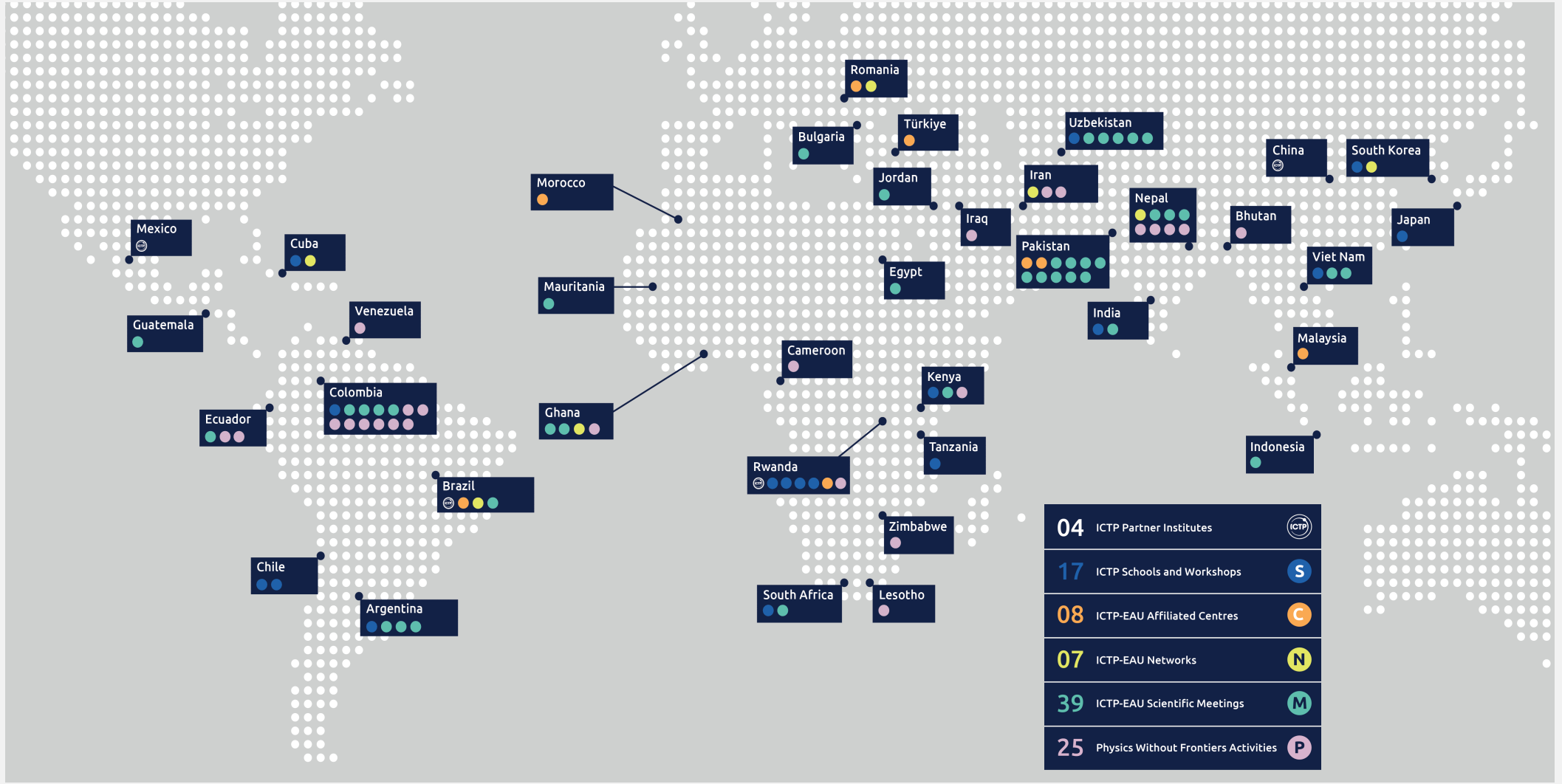
- **Hong Van Le**
  ICTP Prize 1991

Activities Supported by ICTP in Viet Nam

- **VIASM-ICTP Summer School on Differential Geometry**
  Hanoi, 2023
- **Summer School in Group Theory and Representation Theory**
  Hanoi, 2022
- **Topological Quantum Electrons Interacting In-person**
  Quy Nhon, 2022
- **Support by ICTP's External Activities Unit (EAU)**

NETWORK	SCHOLARS/ CONSULTANTS	SCIENTIFIC MEETINGS
Asian Network on Condensed Matter and Complex System Countries involved: Philippines, South Korea, Thailand, Vietnam	**7**	**66**

ICTP Impact 2023



Relevance of ICTP

- A science-based approach is critical for addressing many of the global challenges that we are facing today, climate change above all.
- ICTP’s role in building scientific communities, creating the culture of science, promoting international cooperation through science is even more relevant today.

ICTP Postgraduate Diploma

50 students from **40** countries each year with **1 M€**

1000+ graduates since 1991, from **100+** countries, **75%** did PhDs

Many other successful programs such as Visitors Program, Associates Program, TRIL and STEP Program for senior scientists

Physics Without Frontiers

- **10,000+** students from 35 countries
- 10th Anniversary
- Scientists from Conflict Zones
  (Afghanistan, Ukraine, Russia, Iran..)
- The PWF programme went to Viet Nam in 2014.
  (Interactive lectures on particle physics and hands-on exercises using data from CERN.)

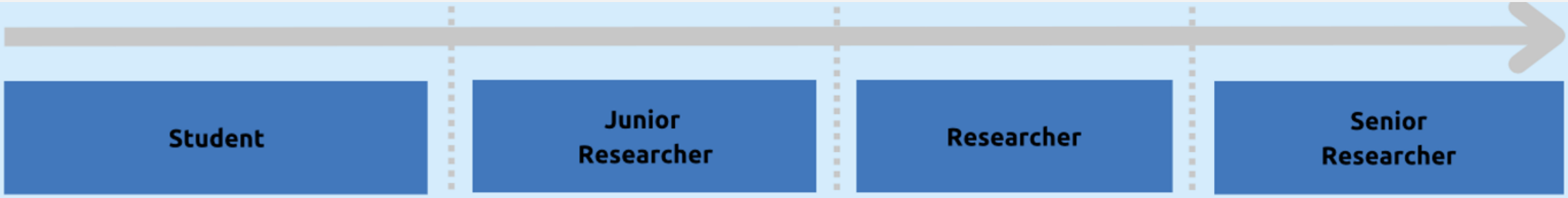
Worldwide physics outreach
inspiring, training, and connecting
young scientists

Supporting Scientists and Building Communities

- NARAYAN ADHIKARI from Tribhuvan University, Nepal
- Long association with ICTP for 25 years
- Successfully created a community of hundreds of students and researchers in Nepal.

Training the Trainers

Diploma ICTP	Associate	Senior Associate	Professor
1997-98	2008-15	2018-23	Tribhuvan, Nepal



IAEA
International Atomic Energy Agency

60 ICTP
1964–2024

unesco
United Nations
Educational, Scientific
and Cultural Organization

ICTP in 2064

A Lighthouse for Global Science

International Consortium for Scientific Computing

Open Science in the coming decade must include Open Access to Computational Resources

- A large divide between the US and Europe and even more the Developing world when it comes to Artificial Intelligence, Quantum Computing, use of modern algorithms and modern GPUs
- An obligation for ICTP to find the means to make these critical resources for science globally available.

Collaborations: Countries/Foundations/Corp.

- Collaborations established/under discussion with Indonesia, South Africa, Brazil;
- IBM: collaboration for prize and conferences on Artificial Intelligence and Quantum Computing;
- CECAM: collaboration to give access to supercomputers to scientists in Africa;
- CINECA and INFN and Trieste Science System, Swiss Supercomputing Facility as partners.

International Cooperation & Science Advocacy

- ICTP is a **"Door Opener"** for Science Infrastructures. Place where people with diverse backgrounds can come together and where science offers a common language.
- ICTP funded a seminal conference in Dahab in 1996, uniting various countries from the region to agree on funding a synchrotron light source research facility, **SESAME in Jordan**.
- Similar role in **South-Eastern Europe, Africa, Latin America, ...**

SESAME

SEE ST South East European International Institute for Sustainable Technologies

LAAAMP Lightsources for Africa, the Americas, Asia, Middle East and Pacific

A Year of Celebration at ICTP

- Important Information Sessions at UNESCO, IAEA, Rome
- Main celebratory event in November in Trieste
- Eight activities around the globe for ICTP@60, including a dedicated **event in Hanoi, Vietnam on 29-30 November**

ICTP and Vietnamese Science:

Celebrating 60 Years of Collaborations and Building the Future

- International Symposium on the Future of computing
- International Symposium on the Future of Climate and Energy