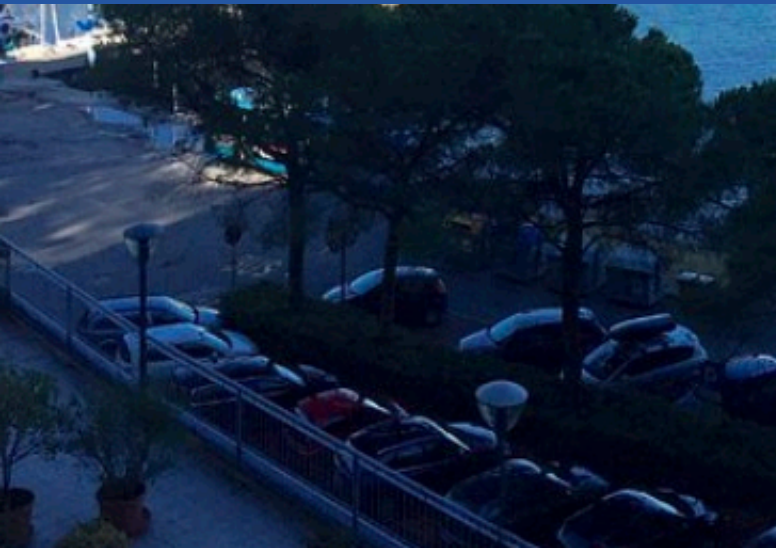


ICTP

A Short Introduction

R.Kaiser



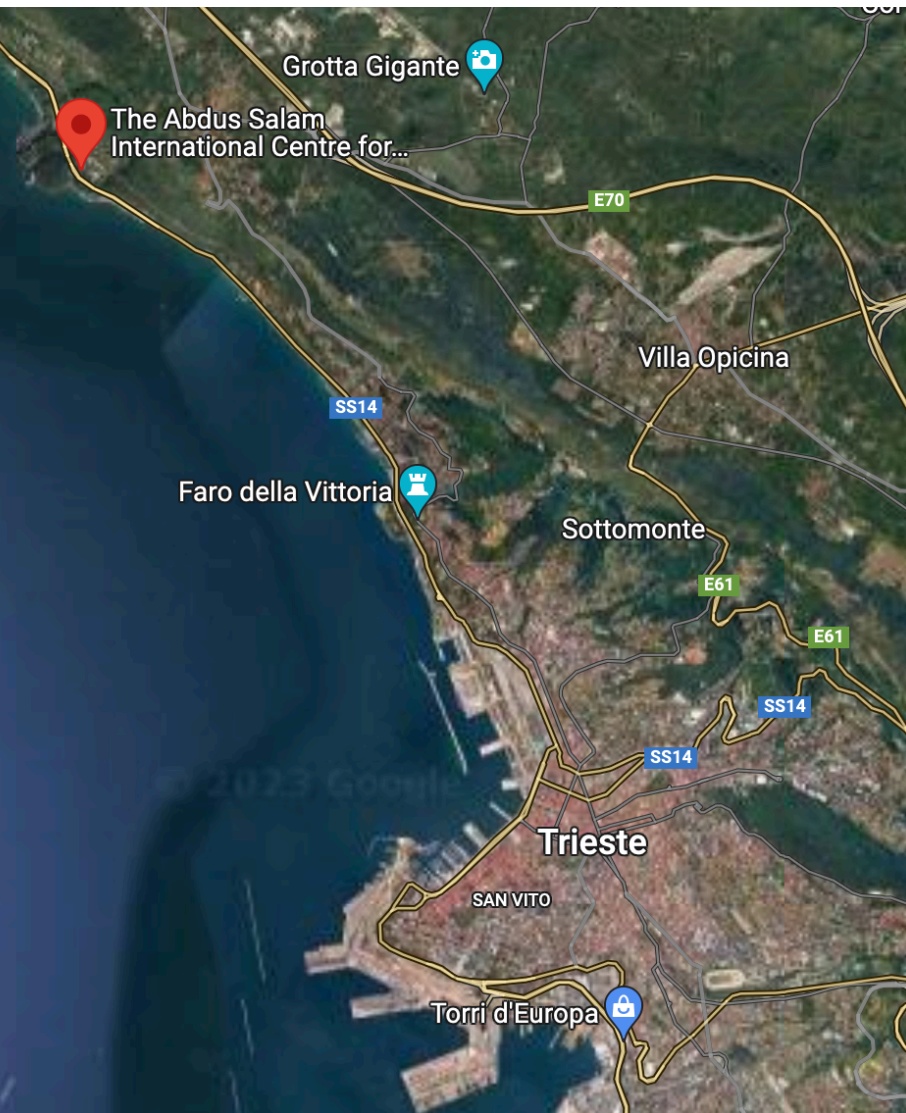
ICTP - Public
Information Unit
16 October 2023



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



Where is ICTP?



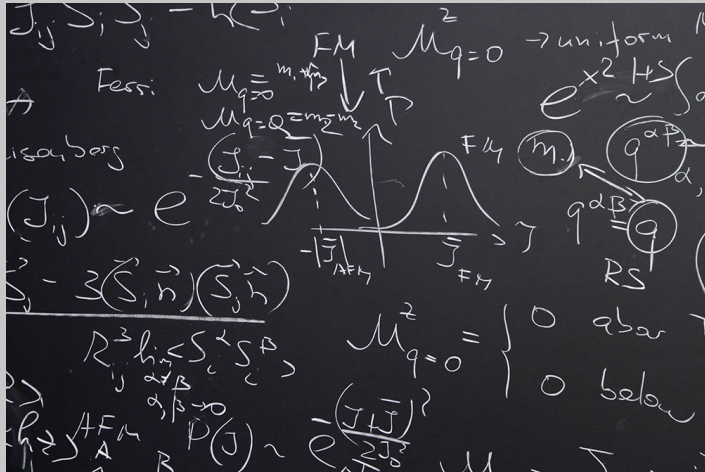
What is ICTP?

- 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.



What is ICTP?

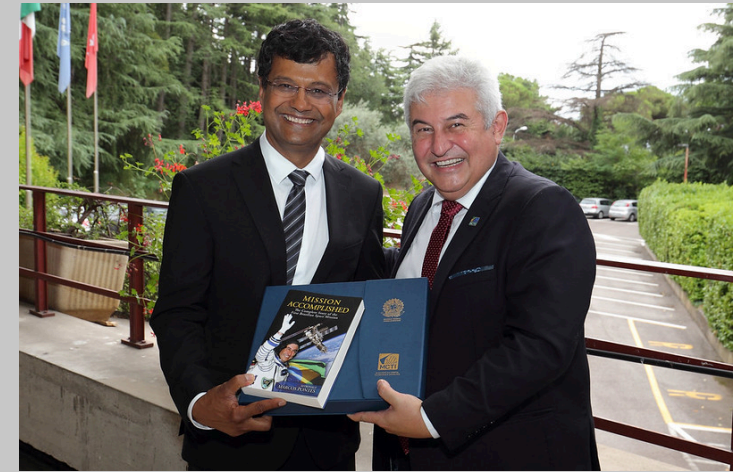
Research



Education



Cooperation



ICTP in Numbers 2023

187 Researchers from **44** countries



6,200+ Participants in scientific activities (including remote participation)

157 Nations represented



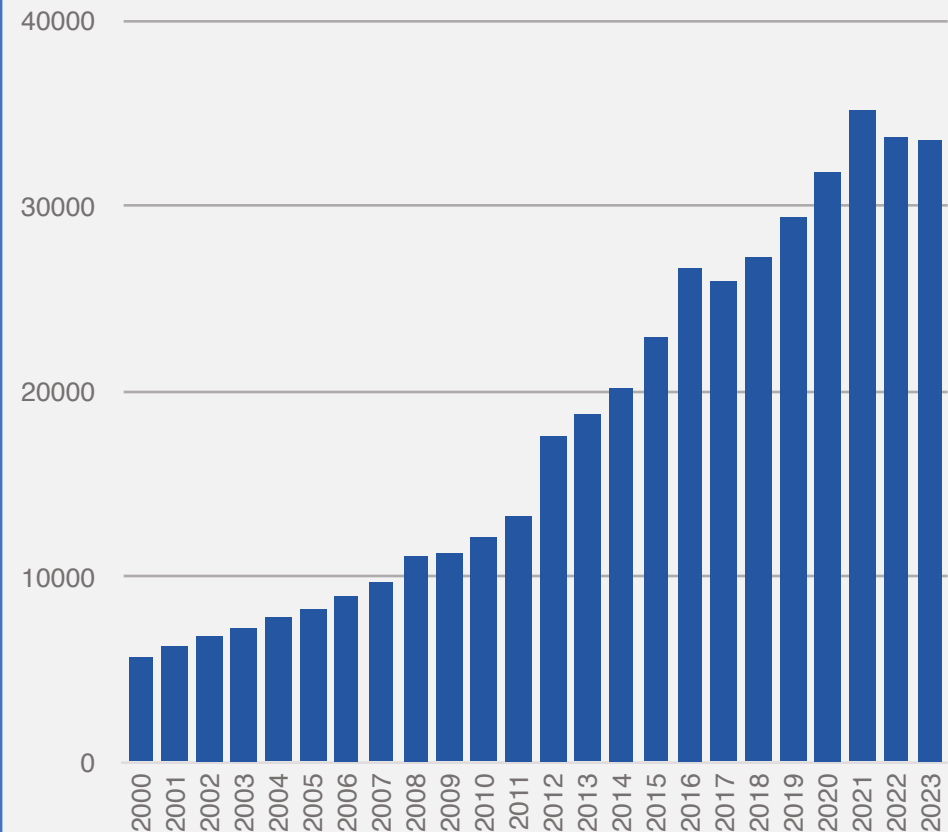
32% of participants were female

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

Total citations of ICTP papers



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)**

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 Medical Physics

Nobel-worthy Contributions

Research at ICTP and its Partner Institutes has contributed to 5 Nobels:

- **Physics Nobel 1979:** ICTP founder Abdus Salam
- **Nobel Peace Prize 2007:** ICTP's Earth System Physics scientist Filippo Giorgi's work with IPCC
- **Physics Nobel 2013:** ICTP's High Energy Physics section contributed to ATLAS discovery of Higgs Boson
- **Physics Nobel 2015:** Prize confirmed theory of solar neutrino oscillations co-developed by ICTP scientist Alexei Smirnov
- **Physics Nobel 2017:** Gravitational wave detection by LIGO (ICTP-SAIFR collaborated)

Research Grants



Marcello Dalmonte



Ali Hassanali



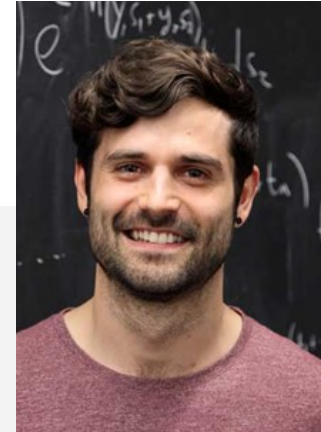
Joan Miró



Erika Coppola



Rosario Fazio



Jean Barbier

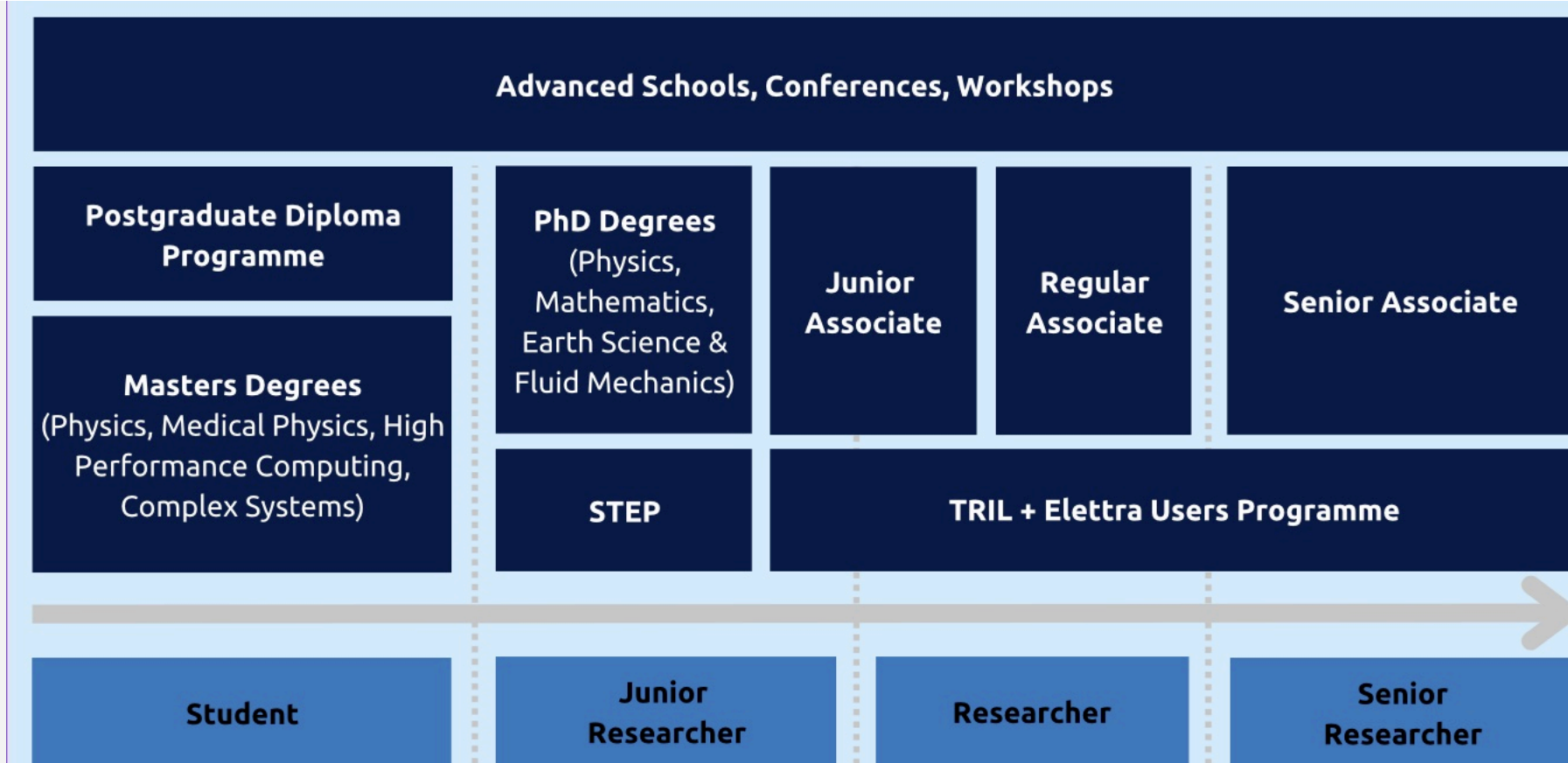
Five prestigious ERC grants about 1.5M€ each
and one Horizon Grant of 400K€

Biofluorescence, High Energy Physics, Climate Modeling,
Machine Learning, Quantum Information and Computing.

!

ICTP Programmes:

Supporting Scientists at all Stages of their Careers

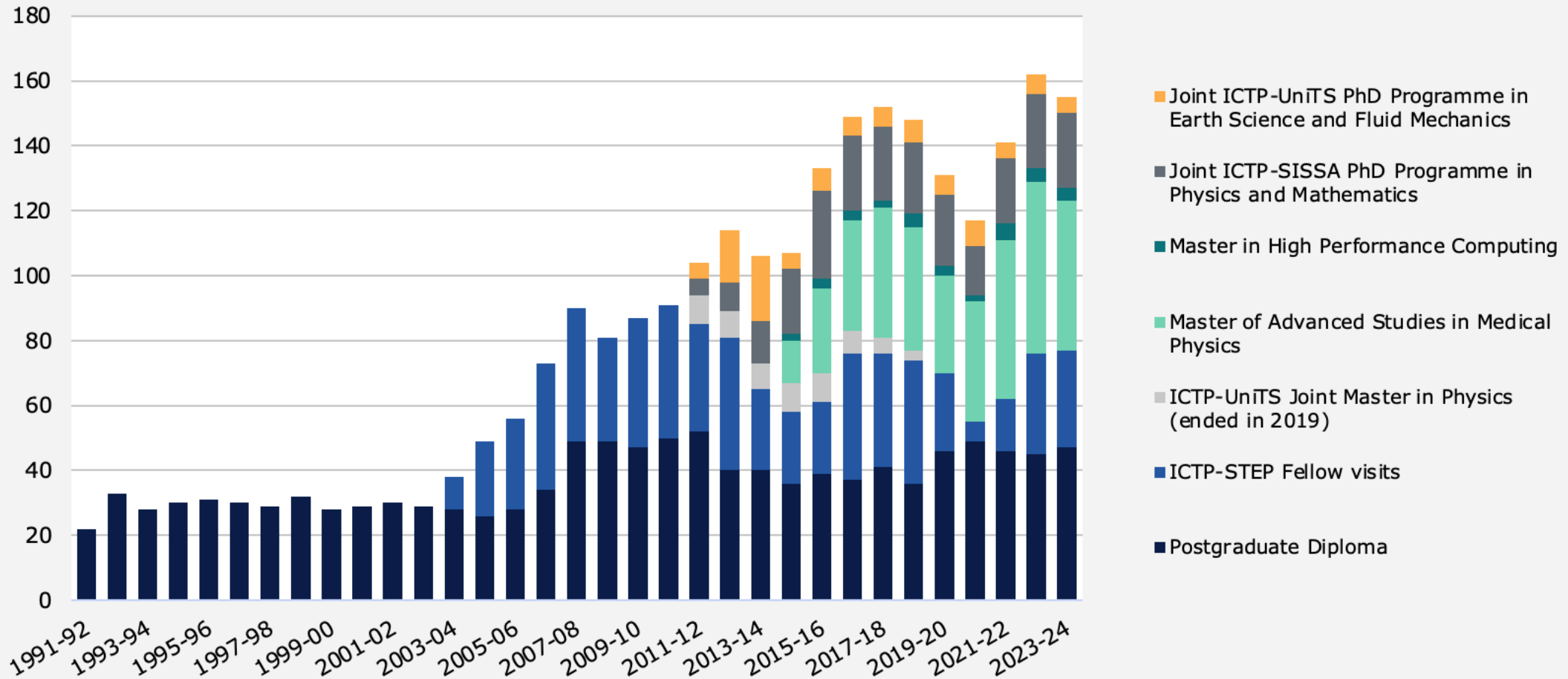


ICTP Degree Programmes

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

ICTP Degree Programmes as of 2023

Trend in ICTP Programmes and Enrollment, 1991-2023



ICTP's Postgraduate Diploma Programme: Preparing Young Scholars for PhD Studies

Since 1991:

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



Master of Advanced Studies in Medical Physics: Training Professionals for the Developing World

2023/2024:

46 students

from **33**
countries

33% female
students



25% of students funded by IAEA

ICTP/IAEA Sandwich Training and Educational Programme (STEP)

Capacity building by fostering the formation of PhD's in developing countries

Currently:

- **34** students enrolled from **19** countries
- **59%** are women

So far (2003-2023):

- **167** PhD's from **50** countries
- **37%** are women

In 2022:

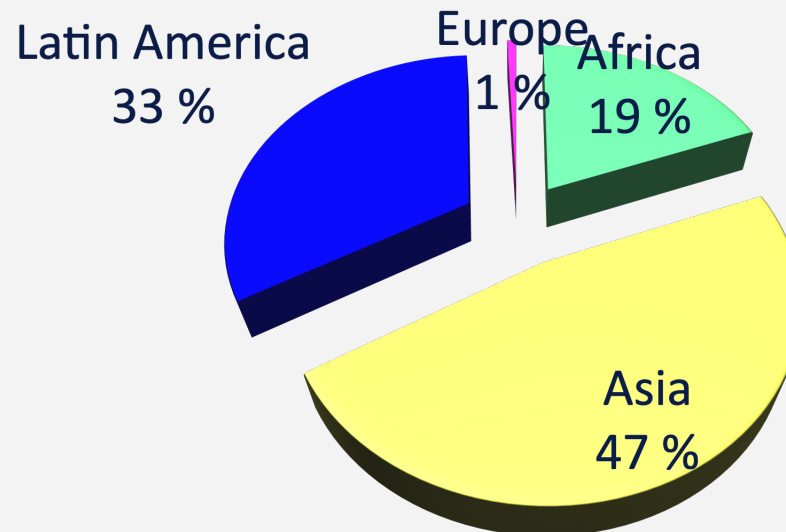
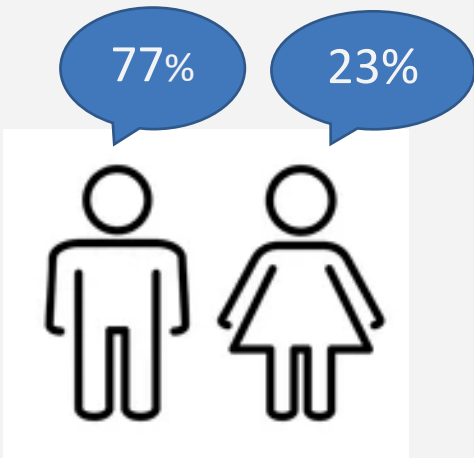
- **31** STEP visits
- 20 funded by ICTP, 10 by IAEA and 1 by Simons Foundation



Associates Programme

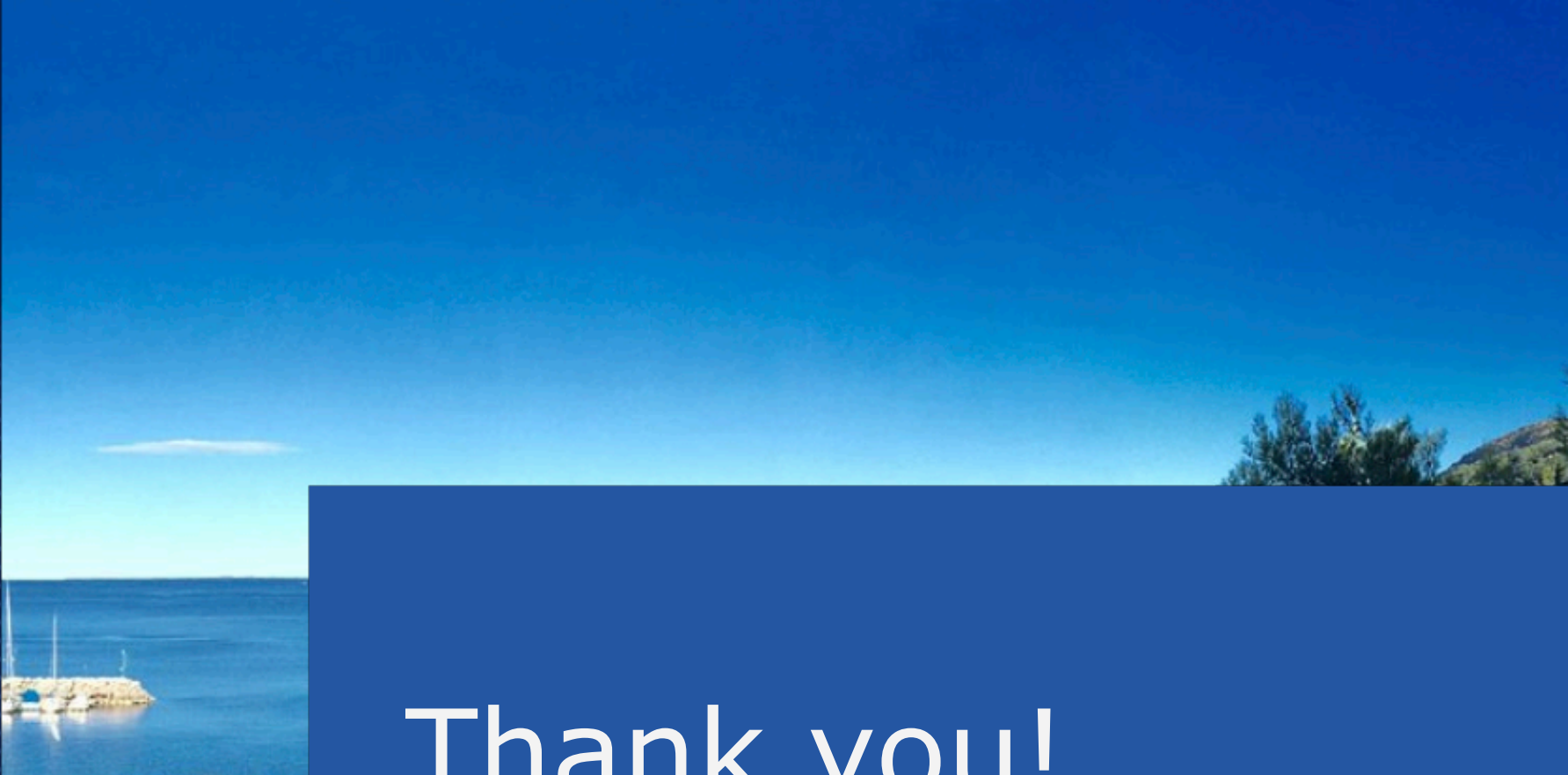
currently **244** ICTP Associates

- **Visits:** 144 in total (15 Junior, 63 Regular, 34 Senior, 32 Simons)
(Comparison: In 2022 we had 108 visits)
- **Accompanying students:** 15 visits of students with Simons assoc.



ICTP Impact 2022





Thank you!