



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



IAEA
International Atomic Energy Agency



Science without Borders

Founded in 1964 by Nobel Laureate **Abdus Salam**.

Governed by tripartite agreement between **Government of Italy, UNESCO** and **IAEA**

Three elements are central to our unique mission:

- World class research in frontier areas of science
- Scientific capacity building in the developing world
- International cooperation through science



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**

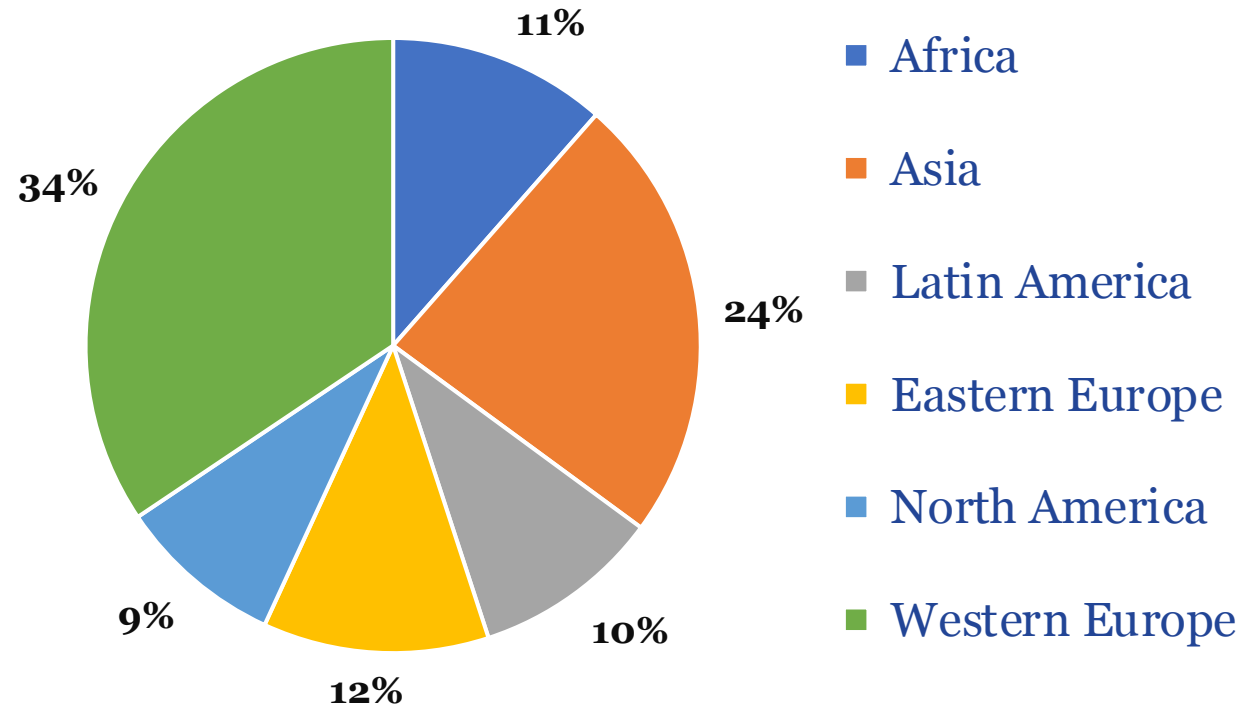
Prize confirmed theory of solar neutrino oscillations co-developed by ICTP scientist Alexei Smirnov

› **Physics Nobel 2017**

gravitational wave detection by LIGO (ICTP-SAIFR collaborated)

- › The ICTP campus in Trieste welcomes over **6000** scientists from **145+** nations each year
- › Each year over **60** conferences, workshops, and activities are organized by ICTP Scientists
- › Partner Institutes in Rwanda, Brazil, China, Mexico...
- › Making the latest developments at the frontiers in scientific research available to scientists from around the globe

- › Over **170,000** visits since 1970
- › **188** countries represented
- › In 2020, **27%** of ICTP visiting scientists were women

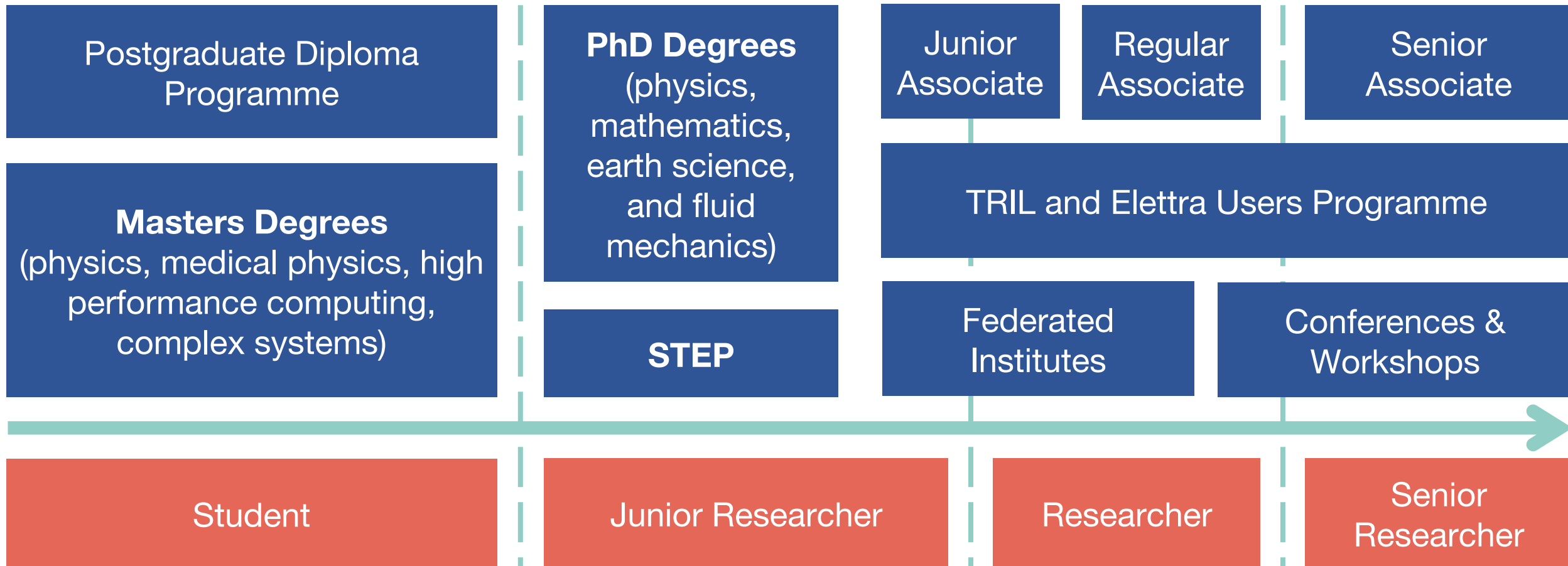


ICTP Engagement & Multiplier Effect



ICTP supports scientists from developing world throughout their career who in turn educate several younger scientists in their home country.

This multiplier effect is the strength of ICTP.



Trieste Science System

- ICTP has been the founding pillar of the **Trieste Science System** since 1964.
- A flourishing scientific ecosystem with SISSA, University of Trieste, Elettra, ICGEB, AREA, OGS...building synergies to internationalize Italian Science..
- Trieste recognized as the **Science City** with **European Science Forum 2020**

*The development of the Trieste Science System which gave birth to the ICTP, together with the other institutes represents a unique model of **international collaboration and scientific diplomacy** ... pursued through the powerful tools of scientific knowledge.*

Italian Prime Minister Giuseppe Conte

- › ICTP as a “**Door Opener**” for Science Infrastructures and a catalyst for international cooperation through science
- › **ICTP Café** offers an informal setting for people with diverse backgrounds to come together where science offers a common language.
- › For example, ICTP funded a seminal conference in Dahad in 1996, uniting Jordan, Israel, Palestine, Morocco, Egypt to agree on funding a synchrotron light source research facility that led to **SESAME in Jordan**.
- › Similar role now in **South-Eastern Europe, Africa....**



South East European
International Institute
for Sustainable Technologies



- › Office of External Activities
- › Physics Without Frontiers
- › Science Dissemination Unit
- › Partner Institutes:
 - › Rwanda (EAI FR)
 - › Brazil (SAIFR)
 - › China (ICTP-AP)
 - › Mexico (MCTP)



Stephen Hawking, University of Cambridge:

“Over the years, ICTP has left a deep legacy in performing and promoting outstanding fundamental scientific research. In particular, it has had a major impact supporting science in developing countries.”

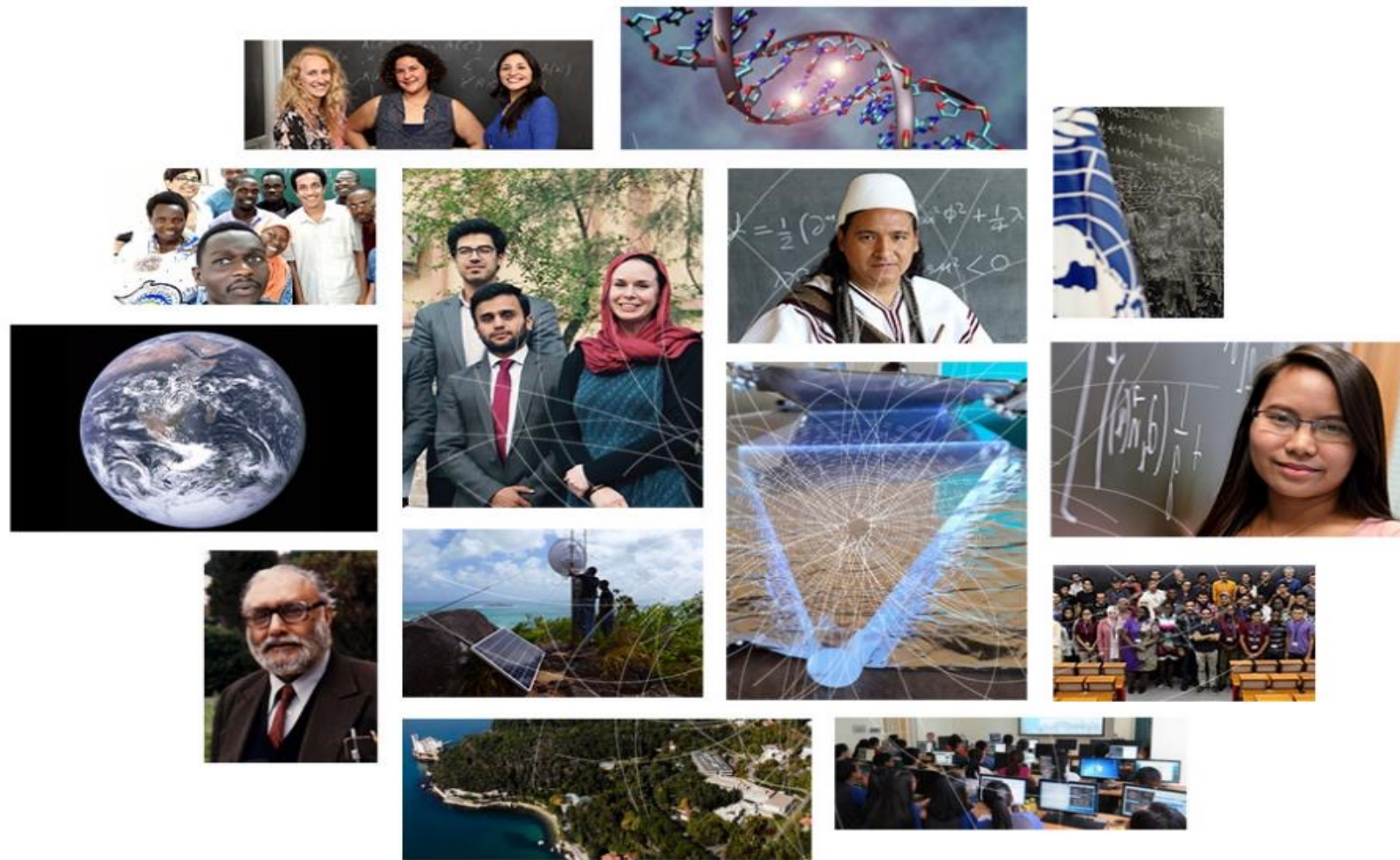




David Gross, Nobel Laureate in Physics 2004 and Director, Kavli Institute for Theoretical Physics:

“Much good emanates from ICTP. Salam's vision of a facility that couples the doing of first-rate research with advanced scientific training has been overwhelmingly vindicated and validated.”

- Scientific computing will be increasingly important in the coming decade with machine learning, HPC, data science as essential tool in addressing global challenges like climate action or processing data coming from major experimental facilities.
- Major need in Global South. A part of Open Science.
- Strong domain expertise at ICTP and network for advanced training.
- ICTP would like to a leading role in this new niche through an International Consortium in partnership with international partners like NITheCS in South Africa and CNR, INFN, Cineca in Italy.



A Sistine Chapel of Science

More Info: www.ictp.it.