



*The Abdus Salam
International Centre for Theoretical Physics*



2257-8

Joint ICTP-IAEA School of Nuclear Energy Management

8 - 26 August 2011

ICTP Overview

C. Tuniz

*ICTP, Trieste
Italy*



The Abdus Salam
International Centre for Theoretical Physics



ICTP OVERVIEW



ICTP | Strada Costiera 11 | 34151 Trieste - Italy | www.ictp.it



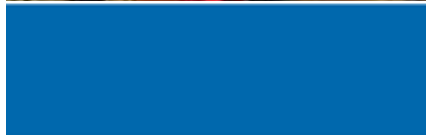
**"Scientific thought is the common
heritage of humankind."**

Abdus Salam

ICTP founder Abdus Salam



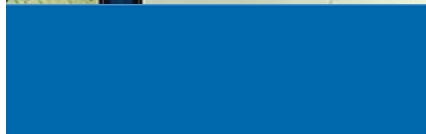
- > ICTP is an institution that is run by scientists for scientists to support the best science possible, with special attention paid to the needs of scientists from developing countries



ICTP mission

Conducting research at the highest international standards, ICTP's mission is:

- > To foster growth of advanced physics and mathematics studies, especially in developing countries
- > To develop high-level scientific programmes and encourage international scientific exchange
- > To provide excellent research and training facilities



Quick facts

- > Founded in 1964 by Nobel Laureate Abdus Salam
- > Sponsored by tripartite agreement between Italy, UNESCO and IAEA
- > Attracts visiting scientists mainly from developing and transition countries
- > Provides training to improve scientific capacity in developing countries



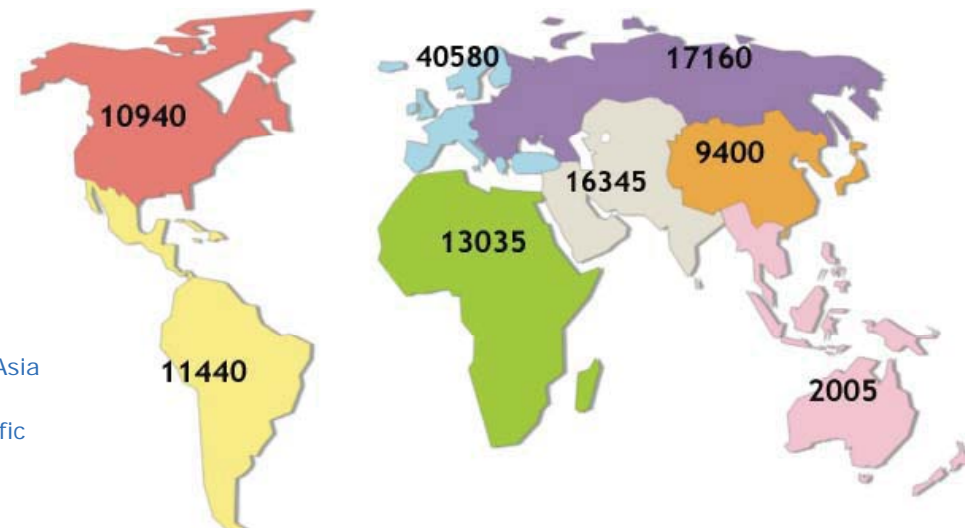
ICTP visiting scientists

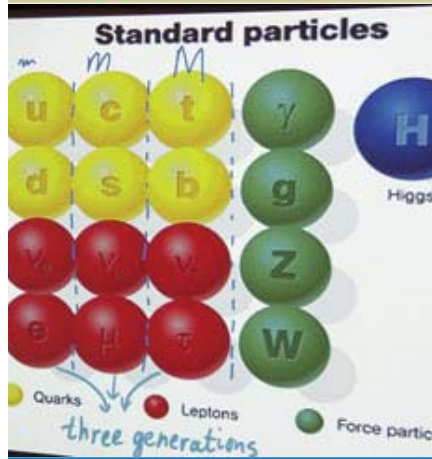
- > More than 120,000 visits since 1970
- > 184 countries represented
- > 20% of ICTP visiting scientists are women



Number of visits
by scientists from:

- North America
- Latin America
- Western Europe
- Eastern Europe
- Africa
- Middle East and South East Asia
- Far East
- South East Asia and the Pacific





Research at ICTP

- > High Energy, Cosmology and Astroparticle Physics
- > Condensed Matter and Statistical Physics
- > Mathematics
- > Earth System Physics
- > Applied Physics





Research at ICTP

- > 30 staff scientists, 8 staff associates, 52 post docs and long-term visitors, 15 consultants
- > Research support
 - > ICTP Library holdings include 68,000 books, 340 journal subscriptions and 4,000 e-journals
 - > State-of-the-art computer equipment and support
 - > Publications and printing unit
 - > Open access to e-journals, and digital lectures
 - > *African Physical Review*



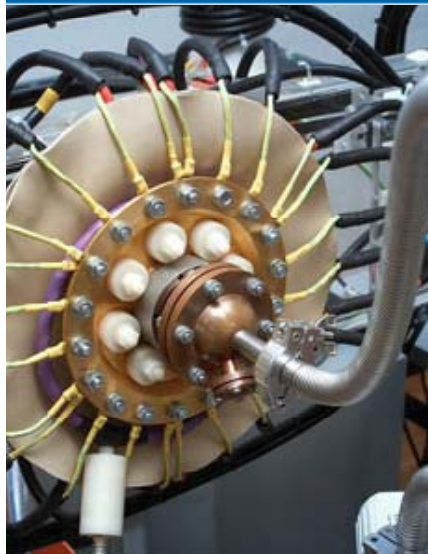
ICTP training and education

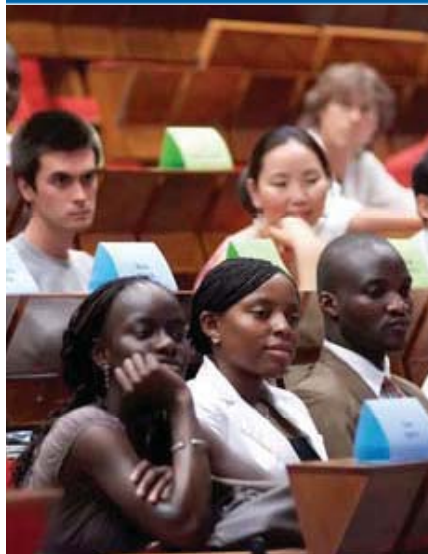
- > Provides training and skills to scientists from developing countries
- > Organises more than 60 conferences/workshops each year
- > Welcomes 4,000 to 5,000 scientists from about 130 nations each year
- > Attracts an additional 1,000-2,000 scientists/year through hosted activities



ICTP training and education

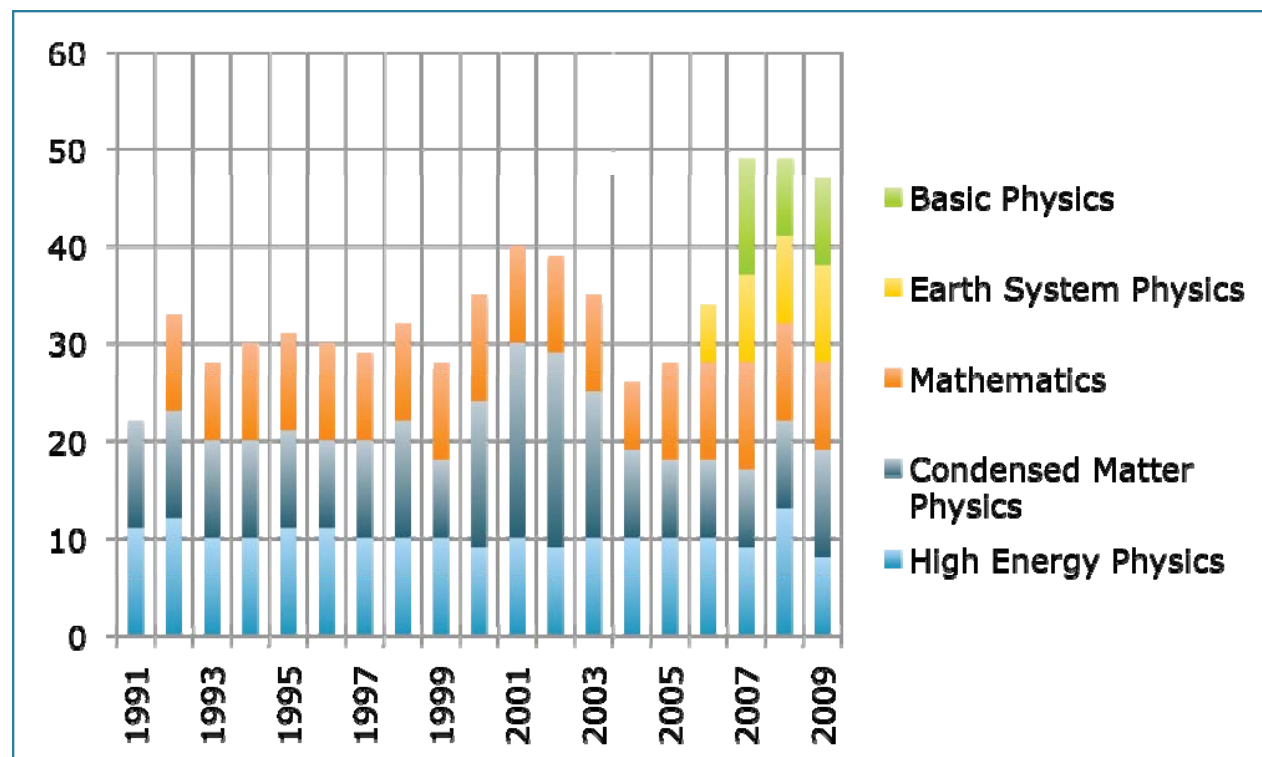
- > Pre-PhD programmes
 - > Diploma Programme
 - > ICTP/IAEA Sandwich Training Educational Programme
 - > Joint Ph.D. programme with University of Trieste
 - > ICTP/University of Trieste Laurea Magistralis





ICTP training and education

> Spotlight: Diploma Programme 1991-2009





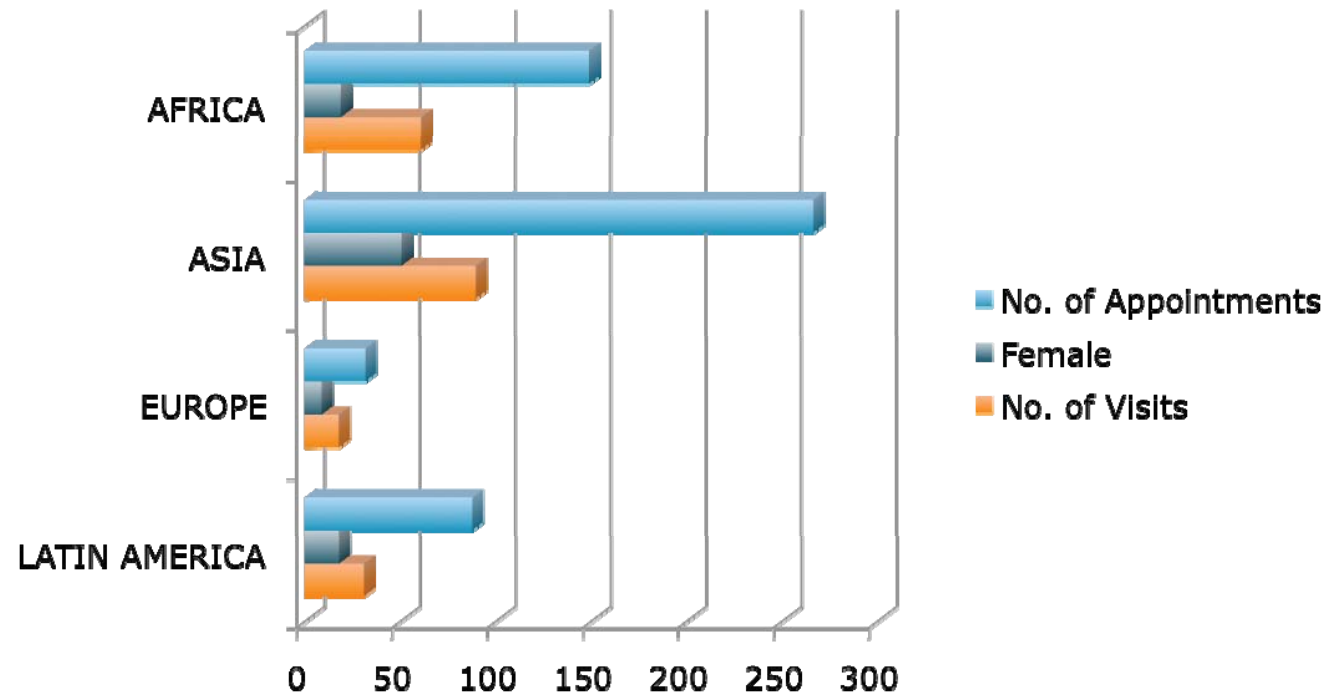
ICTP training and education

- > Scientific career support:
 - > ICTP visitors' programme
 - > Associate and Federation Schemes
 - > Training and Research in Italian Laboratories
 - > Training at Elettra Synchrotron Light Laboratory
 - > SESAME Programme



ICTP training and education

> Spotlight: Associateship Scheme 2010





ICTP training and education

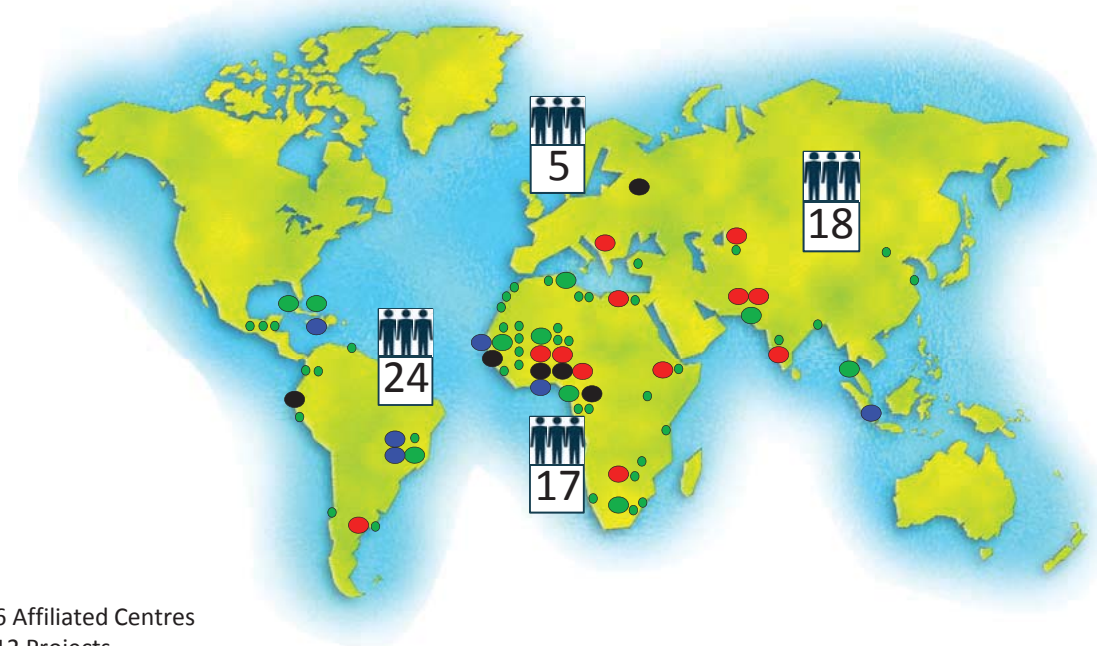
> Office of External Activities

- > Supports scientific activities in developing countries
 - > PhD courses
 - > Scientific meetings
 - > Regional networks
 - > Affiliated centres



ICTP Training and Education

> Office of External Activities in 2010



- 6 Affiliated Centres
- 12 Projects
- 10 Networks (● sub nodes throughout the continents)
- 5 Visiting Scholars
- Number of Scientific Meetings in Africa, Asia, Europe, Latin America



ICTP Prizes and Awards

- > Dirac Medal
- > ICTP Prize
- > ICO/ICTP Gallieno Denardo Award
- > Ramanujan Prize



Dirac Medal of the ICTP



P.A.M. Dirac
1902 - 1984





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ICTP – IAEA programme



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ICTP IAEA Collaboration

- > Workshops/Scientific events (organised-hosted)
- > PhD training for Agency Fellows (STEP)
- > Participation of IAEA staff in ICTP events
- > Placement of IAEA Fellows in Italy 2010



ICTP IAEA Activities

- > International School on Nuclear Security 2011-2012
- > School on Nuclear Energy Management 2010-2011-2012
- > ICTP-IAEA School of Nuclear Knowledge Management 2008-2009-2010-2011-2012
- > Workshop on Sustainable Energy Development: Pathways and Strategies after Rio20 2012
- > Course on Natural Circulation Phenomena and Passive Safety Systems in Advanced Water Cooled Reactors 2012
- > Two Courses on Nuclear Safety Assessment 2012
- > Training in Radiation Protection for Patients 2012



To develop

- > Joint studies and research with involvement of:
 - > ICTP Associates and Post-Doctoral Fellows
 - > ICTP Affiliated Centers and Networks
 - > ICTP Research Staff in IAEA CRPs
 - > Meetings of high-level experts for:
 - Science and technology watch
 - Assessment and review of scientific fields



Fields for collaboration

- > Knowledge management
- > Energy and climate change
- > Accelerator applications
- > Pulsed neutron, spallation and neutron sources
- > Science for cultural heritage
- > Plasma Focus
- > Nuclear security

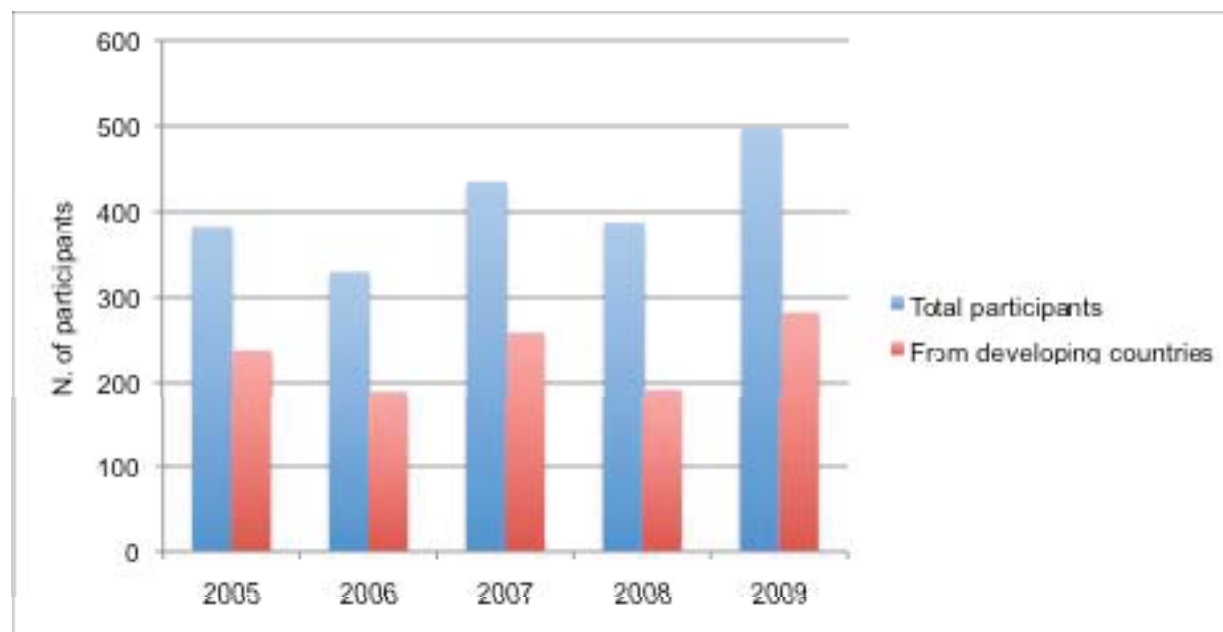


Fields for future collaboration (cont'd)

- > Ion beam, technology for material research
- > Radiation-resistant materials
- > Plasma physics and applications
- > Fusion
- > Medical physics
- > Synchrotron radiation research



Summary of ICTP-IAEA joint activities, 2005-2009



ICTP-IAEA joint activities by year:

9 in 2005 and 2006

8 in 2007

10 in 2008

13 in 2009



Thank you!

For more information visit:

www.ictp.it or

ctuniz@ictp.it

