



SELECTED TOPICS OF JOINT INTEREST

- Environment and climate change (modelling, pollution, agriculture)
- Marine ecology (modelling, advanced tracers)
- Energy for sustainable development
- Medical physics and human health
- Forensics and cultural heritage
- Radiation and materials
- Plasma physics and nuclear fusion
- Dense plasma-focus sources for neutron and x-ray production
- Earthquake prediction
- Synchrotron radiation imaging and analysis
- Accelerators for materials research

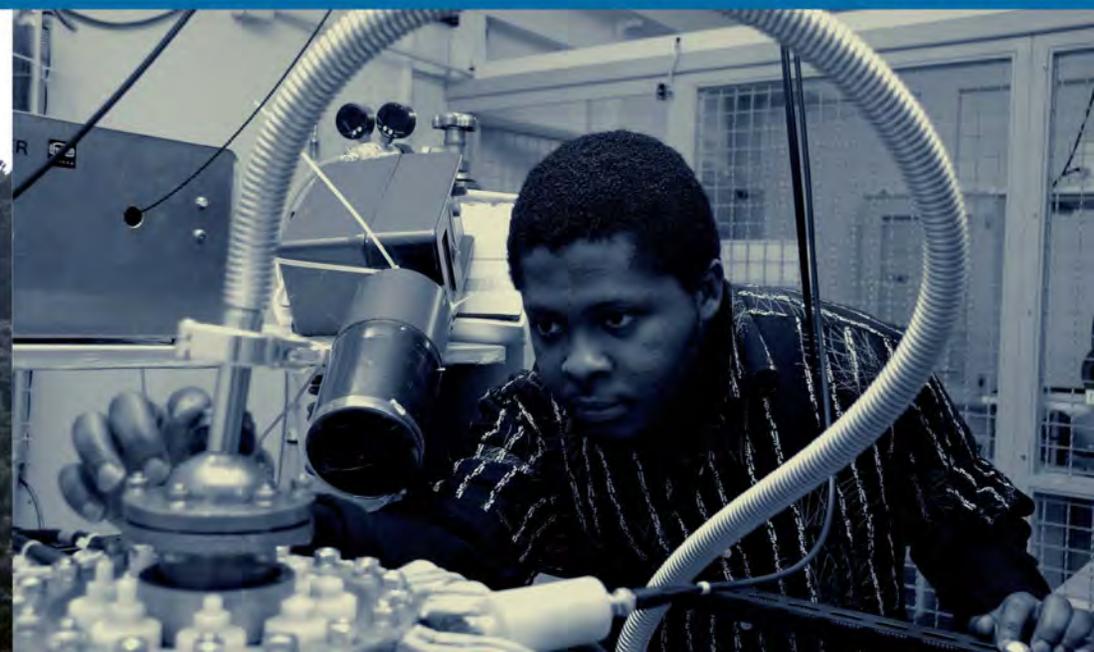
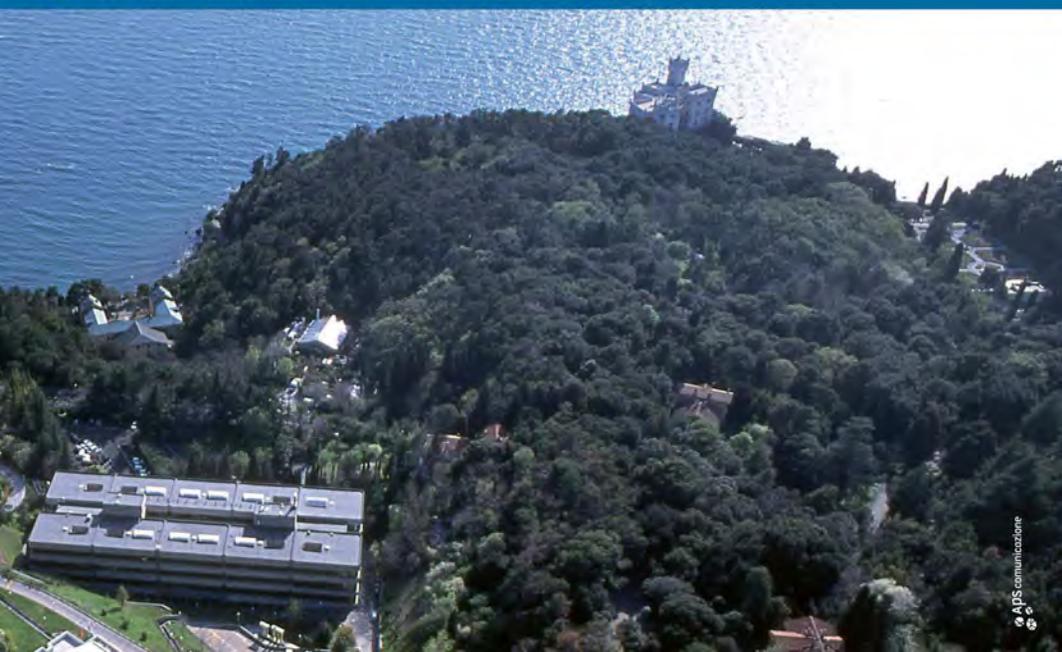
ICTP and the IAEA

Promoting “Atoms for Peace”
in the Developing World

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International Centre
for Theoretical Physics

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The Abdus Salam International Centre for Theoretical Physics (ICTP), based in Trieste, Italy, has enjoyed the **support and partnership of the IAEA** from the Centre's very beginning in the early 1960s.

Because it enjoys close ties and enormous credibility throughout the developing world, ICTP, in a strategic partnership with the IAEA, serves as a unique intellectual conduit on subjects related to **nuclear science and its applications**. Working jointly, ICTP and the IAEA offer a variety of activities in support of research, education, training, and capacity building in developing countries, including training courses and workshops as well as fellowship programmes for young scientists. These activities focus on interdisciplinary applications of nuclear science and technology in areas crucial to socio-economical development such as energy, health, agriculture, industry, and environment protection. ICTP and the IAEA are also involved in joint activities to strengthen nuclear safety and security in developing countries.



Participants with gamma detector at ICTP-IAEA Workshop on Understanding and Evaluating Radioanalytical Measurement Uncertainty, November 2007.

Practical session at Trieste Hospital using a linear accelerator during Joint ICTP-IAEA School on Quality Assurance in Radiotherapy, December 2008.



Cooperation is carried out through the following activities:

- **Organization of joint workshops and scientific events (10-12 per year):** topics include nuclear knowledge management, physics and technology of innovative reactor systems, earthquake engineering for nuclear facilities, nuclear medicine, medical physics, extreme environmental events and risks to nuclear infrastructure, and materials science.
- **ICTP-IAEA Sandwich Training Educational Programme (STEP):** creates a pool of well-trained scientists and technologists who can address a wide range of challenges and ultimately help to educate and train subsequent generations of researchers at home. Agency fellows train at laboratories in Trieste, Vienna, or Monaco, as well as in other laboratories throughout Italy.
- **Synchrotron light for Experimental Science and Applications in the Middle East (SESAME) programme:** in the context of this regional synchrotron research centre, ICTP and the IAEA provide support for scientists from the Middle East to train at established synchrotron facilities in Europe.
- **ICTP-IAEA International School on Nuclear Security:** trains professionals from developing countries, providing them with the fundamental nuclear security knowledge necessary to understand international requirements and measures to be taken in order to meet any obligations under the international nuclear security legal framework.
- **Network of accelerators for sustainable development in Africa:** the IAEA and ICTP jointly support activities related to the application of small ion accelerators for materials characterization, particularly in sub-Saharan Africa.

Based in Trieste, Italy, the **Abdus Salam International Centre for Theoretical Physics (ICTP)** fosters advanced studies and research in physics and mathematics, especially in developing countries. The Centre operates under a **tripartite agreement between the Italian Government, UNESCO and IAEA**. Each year about 6,000 scientists from around the world visit ICTP for workshops, training and research. Website: www.ictp.it

The **International Atomic Energy Agency (IAEA)** serves as the world's foremost intergovernmental forum for scientific and technical cooperation in the peaceful use of nuclear technology. Established as an autonomous organization under the United Nations (UN) in 1957, the IAEA carries out programmes to maximize the useful contribution of nuclear technology to society while verifying its peaceful use. Website: www.iaea.org

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