

**ICTP after 45: Science and Development for a Changing World**  
**8-10 November 2010**  
*Under the high patronage of the President of the Italian Republic*

The International Centre for Theoretical Physics (ICTP) has recently passed an important milestone: its 45th anniversary. With its new leadership and in light of rapid economic and technological developments taking place worldwide, ICTP is hosting a high-level gathering of top scientists and policy makers to discuss the implications of global change on science and education in the developing world. Nobel Prize winners, government ministers, and leaders of development agencies from developed and developing countries, will join in an international dialogue that could determine new, effective strategies for scientific research and education.

*Draft programme (subject to updates)*

**DAY 1**

**Monday 8 November**

**09:00 Welcome remarks and keynote addresses by:**

Fernando Quevedo (Director, ICTP)  
Representative of the Italian Government  
Irina Bokova (Director General, UNESCO) or representative  
Yukiya Amano (Director General, IAEA) or representative

**10:00 Remarks by local authorities:**

Renzo Tondo (President, Giunta Regionale, Regione Autonoma Friuli Venezia-Giulia)  
Roberto Dipiazza (Mayor of Trieste)  
Maria Teresa Bassa Poropat (President, Provincia di Trieste)

**10:20 ICTP Strategic Plan**, Fernando Quevedo (Director, ICTP)

*10:45 Coffee break*

**11:15 2010 Dirac Medal Award Ceremony**

Italian physicist Nicola Cabibbo† (University La Sapienza, Rome, Italy) and Indian-American physicist Ennackal Chandy George Sudarshan (University of Texas, Austin, Texas, USA) have been awarded ICTP's Dirac Medal for 2010.

**Dirac Medal lecture:**

*Universality of the Weak Interactions: Recalling Nicola Cabibbo*  
Luciano Maiani (President CNR)  
Brief remarks by Ennackal Chandy George Sudarshan

*12:30 Lunch*

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† posthumously

14:00 **Keynote speeches**

Chair: Roberto Petronzio (INFN)

**The Future of Science**

David Gross (Director, The Kavli Institute for Theoretical Physics, USA, and Physics Nobel Laureate 2004)

**Energy**

Carlo Rubbia (CERN and Physics Nobel Laureate 1984)\*

**The Importance of Science for Developing Countries**

C.N.R. Rao (Honorary President, Jawaharlal Nehru Centre for Advanced Scientific Research, India)

15:45 *Coffee break*

16:15 **Session on supporting science in the developing world**

Co-chairs: Werner Burkart (Deputy Director General, IAEA), Gretchen Kalonji (Assistant Director-General, UNESCO)

An overview of international support efforts, with contributions by high-level representatives of governments, agencies and institutions from developing, emerging, and developed countries.

17:30 **Session on the importance of education and training in the developing world**

Chair: Walter Kohn (Chemistry Nobel Laureate, 1998)

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\* to be confirmed

## **DAY 2**

### **Tuesday 9 November**

#### **09:00 Sessions on Science within a Changing Geopolitical Framework**

A series of presentations focusing on regional success stories and challenges regarding science and mathematics education in developing countries. Contributors will include ministers, policy makers, and high-level scientists.

##### **Science in Africa**

Chair: Jean-Pierre Ezin (Commissioner for Human Resources, Science and Technology, African Union)

*10:30 Coffee break*

#### **11:00 Science in Asia**

Chair: Katepalli R. Sreenivasan (former Director, ICTP)

#### **12:00 Science in Eastern Europe and the Balkans**

Chair: Rexhep Meidani (former President of Albania and Member, Club of Madrid)

*12:50 Lunch*

#### **14:30 Science in Latin America and Caribbean**

Chair: Miguel A. Virasoro (former Director, ICTP)

*15:45 Coffee break*

#### **16:15 Panel discussion**

A summary of key points made during the morning sessions

Chair: Peter Goddard (Director, IAS, Princeton)

#### **17:15 2010 ICTP Prize and lecture: “Fluid Dynamics from Gravity”**

Shiraz Minwalla, a string theorist at the Tata Institute of Fundamental Research (TIFR) in Mumbai, India, has been named the recipient of the 2010 ICTP Prize.

## **DAY 3**

**Wednesday 10 November**  
**World Science Day**

### **25th anniversary, ICTP's Dirac Medal**

ICTP's Dirac Medal, first awarded in 1985, is given in honour of P.A.M. Dirac, one of the greatest physicists of the 20th century and a staunch friend of the Centre. It is awarded annually to scientists who have made significant contributions to theoretical physics. Many Dirac medallists have gone on to win even more prestigious prizes, including the Nobel Prize, the Wolf Prize, and the Fields Medal.

09:00 **2010 Dirac Medal lecture:** E.C.G. Sudarshan  
*Half a Century of Physics: Problems and Solutions*

09:45 *Coffee break*

10:15 **Lectures by past Dirac medalists:** Stephen L. Adler, Roman Jackiw, Jogesh Pati, John Iliopoulos, Sergio Ferrara, Giorgio Parisi.

12:45 *Lunch*

14:30: **Lectures by past Dirac medalists:** John H. Schwarz, Michael B. Green, Joseph Polchinski, Cumrum Vafa.

16:30 *Coffee break*

17:00 **Lectures by past Dirac medalists:** Vladimir E. Zakharov, Roberto Car, Michele Parrinello.

18:30 **Closing session:** summary by F. Quevedo