



PRESS RELEASE
8 August 2010

ICTP announces Dirac Medallists for 2010 ***Award cites work on fundamental force of nature***

(Trieste, Italy) Italian physicist Nicola Cabibbo (University La Sapienza, Rome, Italy) and Indian-American physicist Ennackal Chandy George Sudarshan (University of Texas, Austin, Texas, USA) share the 2010 Dirac Medal and Prize given by the Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.

The award recognizes their fundamental contributions to the understanding of weak interactions and other aspects of theoretical physics. The weak interaction is one of the four fundamental forces of nature, along with strong interaction, electromagnetism, and gravity. It is crucial to the structure of our universe, as it, among other things, causes fusion in the sun.

Cabibbo was cited for his important contributions to theoretical physics include the recognition of the significance of mixing in weak interactions, which has established the existence of a new class of physical constants, whose first example is the Cabibbo angle. This angle determines the mixing of strange quarks with non-strange quarks and has been measured experimentally. With the discovery of a third family of quarks and leptons, quark mixing led to the understanding of the phenomenon of CP violation. Cabibbo is currently chair of ICTP's Scientific Council.

Sudarshan's important contributions to theoretical physics include the discovery (with Robert Marshak) of the V-A theory of weak interactions, which opened the way to the full description of the unified electroweak theory. He has also made innovative discoveries in the field of Quantum Optics, including the Optical Equivalence Theorem, which provides the foundation upon which the investigations of the manifestly quantum or non-classical character of the electromagnetic field are based.

In announcing the winners, ICTP Director Fernando Quevedo said, "I am very pleased by the decision of the Dirac Medal selection panel for this year's medallists. Cabibbo and Sudarshan have played major roles in advancing our understanding of what is now called the standard model of particle physics, in addition to making many other important contributions to theoretical physics. It is a recognition that is long overdue. Furthermore, both have had strong links to the developing world, reflecting the spirit of ICTP's mission."

ICTP's Dirac Medal 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 on Dirac's birthday, 8 August, to scientists who have made significant contributions to physics. The Medallists also receive a prize of US \$5,000.

For additional information about the Dirac Medal and a complete list of previous winners, see <http://prizes.ictp.it/Dirac>.

Based in Trieste, Italy, the Abdus Salam International Centre for Theoretical Physics 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 7000 scientists from around the world visit ICTP for workshops, training and research. For more information, visit the website at <http://www.ictp.it>.

---end---

Public Information Office
ICTP
Strada Costiera, 11
I-34151 Trieste
phone: (+39) 040 2240 603 or 564
pressoffice@ictp.it