

P.A.M. DIRAC (1902-1984)

Paul Adrien Maurice Dirac was born in Bristol, England, on 8 August 1902. He studied engineering in his hometown, and obtained his degree in physics and mathematics at Cambridge University where in 1932 he became Professor of Mathematics in the Lucasian Chair, which had been held by Sir Isaac Newton two centuries earlier. After his retirement, Professor Dirac went to live in Tallahassee, Florida, where he taught at Florida State University from 1971 until his death on 20 October 1984.

A Member of the Royal Society since 1930, he won the Royal Medal in 1939 and the Copley Medal in 1952. Professor Dirac shared the Nobel Prize for Physics with E. Schrödinger in 1933. He invented the well-known relativistic wave equation predicting the existence of spin and of the positron when he was only 23 years old. His further work includes his formulations of quantum field theory, statistics of fields and particles, gravitational waves and the prediction of magnetic monopoles.

Dirac first came to Trieste in June 1968 on the occasion of the International Symposium on Contemporary Physics at which he delivered a lecture on the methods of theoretical physics. After this symposium, Dirac was a guest of honour at the Centre for a month or so nearly every year. In 1972, at a symposium on The Physicists' Conception of Nature organised in honour of Dirac on the occasion of his 70th birthday, he gave a lecture on Fundamental Constants and their Development in Time. Dirac also attended the Marcel Grossman Meeting held at the Centre on the centennial of the birth of Albert Einstein in 1979.

Abdus Salam, who proposed the institution of the Dirac Medal, was Dirac's student at Cambridge and it was after having listened to Dirac's lectures that he decided to devote his life to research rather than becoming a civil servant in his country. He remained in touch with his master and became his friend.



The Abdus Salam
International Centre for Theoretical Physics



2008 Dirac Medal Ceremony
June 19, 2009

THE DIRAC MEDAL

The International Centre for Theoretical Physics awarded its first Dirac Medal in 1985. The 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 an individual or individuals who have made significant contributions to physics.

An international committee of distinguished scientists selects the winners from a list of nominated candidates. Nominations are invited from scientists working in all areas of physics. The deadline for receipt of nominations is 15 April of the relevant year.

THE 2008 DIRAC MEDAL AND PRIZE

The 2008 Dirac Medal and Prize is awarded to

Juan Martin Maldacena, Joseph Polchinski and Cumrun Vafa for their fundamental contributions to superstring theory. Their studies range from early work on orbifold compactifications, physics and mathematics of mirror symmetry, D-branes and black hole physics, as well as gauge theory-gravity correspondence. Their contributions in uncovering the strong-weak dualities between seemingly different string theories have enabled us to learn about regimes of quantum field theory which are not accessible to perturbative analysis. These profound achievements have helped us to address outstanding questions like confinement of quarks and QCD mass spectrum from a new perspective and have found applications in practical calculations in the fluid dynamics of quark gluon plasma.

The dualities have also led string theorists to conjecture that the five different superstring theories in ten space-time dimensions are manifestations of one underlying theory, yet undiscovered, which has been named the M-theory.

2008 DIRAC MEDAL AWARD CEREMONY

Professor S. Randjbar-Daemi
Assistant Director of the
Abdus Salam International Centre for Theoretical Physics
has the pleasure of inviting you to the
2008 Dirac Medal Award Ceremony on

Friday, June 19, 2009

at 11.00 hrs.

in the Main Lecture Hall of the Leonardo Building

Programme

Welcome address by Professor S. Randjbar-Daemi

Presentation of the award

Dirac Lecture by Professor Cumrun Vafa
Stringy Predictions for Particle Physics