

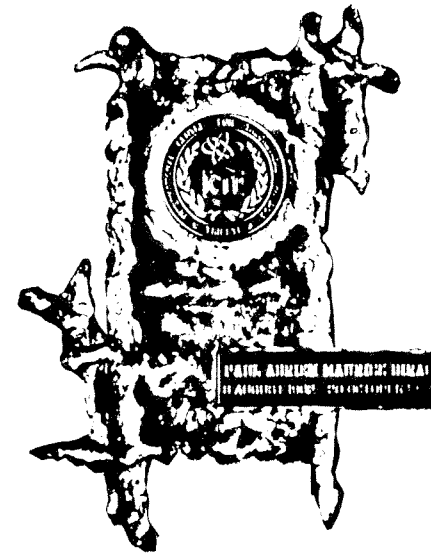
Doctorate in Physics from the University of California, Berkeley. He worked at Princeton University as Assistant Professor from 1969 to 1971, and as Associate Professor from 1971 to 1973. He is at present working at the same University where he was appointed Full Professor in 1974 and Eugene Higgins Professor of Physics in 1986. Professor Gross has been a Junior Fellow of the Harvard Society of Fellows (1966-9) and an Alfred Sloan Foundation Fellow (1970-72). He is currently a Fellow of the American Physical Society (elected 1974), of the American Association of Arts and Sciences (elected 1985), of the American Association for the Advancement of Science (elected 1987) and is a Member of the National Academy of Sciences (elected 1986). He has also been the recipient of two other awards: the J.J. Sakurai Prize of the American Physical Society in 1986 and the MacArthur Foundation Fellowship Prize in 1987.

The other Dirac Medal 1988 will be awarded to Professor Efim Samoilovich Fradkin (Lebedev Physical Institute, Moscow, USSR) in July 1989.

International Centre for Theoretical Physics

P.A.M. Dirac Medals

Presentation Ceremony



10 April 1989

*Strada Costiera, 11
34136 Trieste*

The Dirac Medals of the International Centre for Theoretical Physics were instituted in 1985. These are awarded yearly, on Dirac's birthday - 8th August - for contributions to theoretical physics.

The 1985 Dirac Medals were awarded to Professor Yakov Zeldovich (Institute for Space Research, Moscow, USSR) and Professor Edward Witten (Princeton University, USA) and in 1986 to Professor Yoichiro Nambu (Enrico Fermi Institute for Nuclear Studies, Chicago University, USA) and Professor Alexander Polyakov (Landau Institute for Theoretical Physics, Moscow, USSR). In 1987, they were awarded to Professor Bryce DeWitt (University of Texas at Austin, USA) and Professor Bruno Zumino (University of California at Berkeley, USA). The recipients of the 1988 Medals are Professor David J. Gross (Princeton University, New Jersey, USA) and Professor Efim Samoilovich Fradkin (Lebedev Physical Institute, Moscow, USSR).

The Selection Committee includes Professors S. Lundqvist, R. Marshak, J. Schwinger, L. Van Hove, S. Weinberg and Abdus Salam. The Dirac Medals are not awarded to Nobel Laureates or Wolf Foundation Prize winners.

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

Paul Adrien Maurice Dirac was born in Bristol in 1902. He studied engineering in his hometown, and obtained his degree in physics and mathematics at Cambridge University where he became professor in mathematics in 1932 in the Lucasian chair which was once of Sir Isaac Newton. After his retirement, Professor Dirac went to live in Tallahassee, Florida, where he taught at the University from 1971 until his death in 1984. A Member of the Royal Society since 1930, he won the Royal Medal in 1939 and the Copley Medal in 1952. He shared the Nobel Prize for Physics with E. Schrödinger in 1933.

Professor Dirac was an honoured guest at and a staunch friend of the International Centre for Theoretical Physics in Trieste.

Dirac Medal 1988

David J. Gross

Professor David J. Gross is honoured

for his fundamental contributions to the understanding of nuclear forces at short distances and to the theory of superstrings. Together with F. Wilczek and, independently, H.D. Politzer and G.H. 'T Hooft, he discovered the mechanism of asymptotic freedom in non Abelian gauge theories. This discovery, which accounts for the phenomenon of scaling in deep inelastic interactions, was central to the development of quantum chromodynamics as a viable model for the nuclear force. His invention, together with Harvey, Martinec and Rohm, of the heterotic superstring model enlarges the theoretical understanding of string theory and has provided a great stimulus to research in this subject. By its bold generalization from the picture of the relativistic string as a geometrical object embedded in spacetime, the heterotic model, seen as a two-dimensional conformal field theory whose left and right-moving modes are qualitatively different, is able to account for chirality in particle physics. This opened the way for a new understanding of the nature of spacetime and the unification of elementary forces.

Professor David J. Gross was born in Washington D.C., USA, on 19 February 1941. He studied at the Hebrew University of Jerusalem, Israel, where he received his BSc in 1962. From 1963-66 he held the NSF Graduate Fellowship and in 1966 he received his