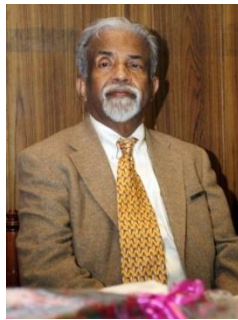


Prof. E. C. George Sudarshan



Prof. E. C. George Sudarshan was born (1931) in Pallam, Kottayam District, Kerala, India. He studied in CMS college Kottayam and graduated with honours from the Madras Christian college. After his master's degree from the University of Madras he moved to TATA Institute of Fundamental Research, Bombay and worked with Homi Bhabha for a brief period. Subsequently he moved to the University of Rochester, New York where he received his Ph.D. He worked for his Post-Doctoral research in Harvard. Prof. Sudarshan has made significant contributions to several areas of Physics. His areas of interest include elementary particles physics, quantum optics, quantum information, quantum field theory, gauge field theories, classical mechanics and foundations of Physics. He was the originator of the V-A theory of the weak force which eventually paved the way for the electroweak theory. He also developed a quantum representation of coherent light. Dr. Sudarshan's most significant work might be his contribution to the field of quantum optics. His theorem proves the equivalence of classical wave optics to quantum optics. The theorem makes use of the Sudarshan representation. This representation also predicts optical effects that are purely quantum and cannot be explained classically.

Sudarshan was also the first to propose the existence of tachyons, particles that travel faster than light. He developed formalism called dynamical maps that is one of the most fundamental formalism to study the theory of open quantum system. He, in collaboration with Baidyanath Misra, proposed the quantum Zeno effect. Sudarshan and collaborators initiated the "Quantum theory of charged-particle beam optics", by working out the focusing action of a magnetic quadrupole using the Dirac Equation. Prof. Sudarshan taught at TFR, University of Rochester, Syracuse University and Harvard. He was a senior Professor at IISc, Bangalore. He worked as Director of Institute of Mathematical Sciences, Chennai for five years. He has published 353 research papers and co-authored 7 books.

Prof. ECG Sudarshan has been honoured with several awards and distinctions which include Dirac Medal, TWAS prize, Bose Medal, CV Raman Award, Padma Bhushan in 1976 and Padma Vibhushan in 2007.

Prof. Sudarshan passed away on 13th May 2018.