

## CURRICULUM VITAE : S. M. ROY

1. Date of Birth : Sept. 2, 1941
2. Citizenship : INDIA
3. Family : Wife: Nandita, Son: Arunabha, Daughter: Aditi
4. Academic Record : B.Sc. 1st Class (Physics), Delhi University, Delhi (1962)  
M.Sc. 1st Class (Physics), Delhi University, Delhi (1962)  
Ph.D., Princeton University, Princeton (1966)
5. Permanent Position : Joined TIFR, Mumbai, 1967.  
1992-97: Chairman, Theoretical  
Physics Group Committee  
Current designation: Senior Professor
5. Specialization : Quantum Physics and Information Processing, Elementary Particles
7. Visiting Positions :  
Sept. 1966 - Aug. 1967 : University of Calif., San Diego, U.S.A., Post Doctoral Fellow  
Oct. 1970 - Sept. 1971 : CERN, Geneva (Visiting Scientist).  
Oct. 1971 - Sept. 1972 : C.E.N. Saclay (Collaborateur Etrangère).  
Jan. 1976 - Dec. 1976 : CERN, Geneva (Visiting Scientist).  
1982 - 83 : Univ. of Lausanne and Syracuse University  
Mar. - Sept. 1989 : CERN, Geneva.  
Jan. - June 1991 : University of Alberta, Canada  
(Visiting Scientist)  
Nov. - Dec. 1994 : CERN, Geneva.  
Sept. - Dec. 1997 : Visiting Syracuse University  
Feb. - March 1998 : Visiting Waseda University  
April - May 2000 : CERN, Geneva; Univ. of Montpellier;  
Erwin Schrödinger Institute, Vienna.  
April- May 2002 : Visiting Univ. of Montpellier, France.  
July-Aug 2002 : Attending 6th Intl Conf on  
Quantum Communication, Measurement and Computation,  
MIT, USA; Workshop on Decoherence Control and  
Quantum Computing, Ann Arbor, Michigan; Workshop  
on Quantum Computation, MSRI, Berkeley, USA  
Aug-Sept 2004 : Visiting Univ. of Geneva  
and Isaac Newton Institute, Cambridge, U.K.

## 8. Teaching Experience

Graduate Courses in Physics (Mathematical Physics & Quantum Mechanics) at TIFR and Graduate Course on Quantum Mechanics at Syracuse University. Lecture Courses at SERC Schools organized by the Dept. of Science & Technology, India.

## 9. Awards & Honours

Union Territories Overseas Scholarships (Awarded at Princeton University 1963-66).

S.S. Bhatnagar Prize for 1981 in Physical Sciences (Awarded by the Council of Scientific and Industrial Research, India).

Elected 'Fellow of Indian Academy of Sciences' (1982).

Elected 'Fellow of Indian National Science Academy' (1989).

Elected 'Fellow of National Academy of Sciences', India, 1993.

Nominated "Expert Member of SENATE IIT Bombay" by Chairman, Board of Governors of IIT, Bombay, 1997.

Principal Investigator from the Indian side of the project "Rigorous Results on Schroedinger Equations and Foundations of Quantum Theory and Applications to Particle physics and Astrophysics" 1999-2002 funded by the Governments of India and France through the Indo-French centre for the Promotion of advanced Research.

Elected 'FELLOW' of 'THE THIRD WORLD ACADEMY OF SCIENCES' (TWAS), TRIESTE, ITALY (2002).

Awarded "THE SN BOSE BIRTH CENTENARY AWARD (GOLD MEDAL)", by THE INDIAN SCIENCE CONGRESS, JAN. 2003.

## 10. Selected Papers.

Upper bounds on particle-antiparticle total cross-section differences at high energies, S.M. Roy and V. Singh, Phys. Lett. 32B(1970) 50.

Exact integral equation for pion-pion scattering involving only physical region partial waves, S.M. Roy, Phys. Lett. 36B(1971) 353.

High energy theorems for strong interactions and their comparison with experimental data, S.M. Roy, Physics Reports, 5C, 125- 196 (1972).

Semi-relativistic stability and critical mass of a system of bosons in gravitational interaction, A. Martin and S.M. Roy, Phys. Lett. 233B (1989) 407.

Tests of signal locality and Einstein-bell locality for multiparticle systems, S.M. Roy and V. Singh, Phys. Rev. Letters 67(1991) 2761.

Non-existence of positive phase-space distribution functions in quantum mechanics, A. Martin and S.M. Roy, Phys. Lett. B 350 (1995) 66.

Causal quantum mechanics treating position and momentum symmetrically, S.M. Roy and V. Singh, Mod. Phys. Lett. A10 (1995) 709.

Maximally Realistic Causal Quantum Mechanics, S.M. Roy and V. Singh, Phys. Lett. A 255 (1999) 201.

A Quantum Anti-Zeno Paradox, A.P.Balachandran and S.M.Roy, Phys. Rev. Letters 84(2000) 4019.

Bell Inequalities in Phase Space and their Violation in Quantum Mechanics', G. Auberson, G. Mahoux, S. M. Roy and Virendra Singh. quant-ph/0205157, Physics Letters A 300 (2002) 327.

Bell Inequalities in Four dimensional Phase Space and the Three Marginal Theorem, G. Auberson, G. Mahoux, S. M. Roy and Virendra Singh. Journal of Mathematical Physics 44 (2003) 2729-2747.

Multipartite Separability Inequalities Exponentially Stronger Than Local Reality Inequalities , S. M. Roy, Phys. Rev. Letters 94 (2005) 010402.