



**Srinivasa Ramanujan
Institute for Basic Sciences (SRIBS)**

(A Capacity Building Initiative of Kerala State Council for Science, Technology and Environment, Govt of Kerala, Pattom, Thiruvananthapuram 695 004, Kerala)

National Colloquium on Theoretical Physics (9–11 August 2013)

Venue: Mascot Hotel, Thiruvananthapuram, Kerala

Direct experimental access to quantum states of light, atoms and molecules becoming a reality, renaissance has happened in the physics of these systems. The established quantum theories of light and matter that were conceived several decades ago are being directly tested now and their boundaries are being pushed towards a new synthesis and understanding warranted by the observations. The national colloquium on theoretical physics is designed to communicate the excitement in the field to young students and researchers from all over India. It is also to point out the gaps in our understanding of the quantum states of light and atoms that needs to be filled and the theoretical frontiers that need to be pushed forward. Quantum information theory, with its subfields like quantum computation and quantum control is an area where these theories find fruitful application. The colloquium aims to introduce these topics as well where over a century of research on the theory of computation and information meets up with the quantum mechanics of molecular, atomic and optical systems. As an added bonus, evening talks as part of the colloquium will cover the broader scope of theoretical physics ranging from fundamental particle physics to cosmology, and the history of Kerala mathematics.

Topics: Quantum theory of light, Quantum control, Quantum information theory and Quantum computation.

Speakers: **Prof. E. C. G. Sudarshan**, University of Texas at Austin, USA (Academic Chair of the programme); **Prof. N. Mukunda**, Indian Institute of Science, Bengaluru; **Prof. G. S. Agarwal**, Oklahoma, State University, USA; **Prof. V. Srinivasan**, University of Hyderabad; **Prof. Apoorva Patel**, Indian Institute of Science, Bengaluru; **Prof. P. P. Divakaran**, NCBS, TIFR, Bengaluru; **Prof. C. S. Unnikrishnan**, TIFR, Mumbai; **Prof. Ujjwal Sen**, HRI, Allahabad; **Prof. T. S. Mahesh**, IISER, Pune; **Dr Anil Shaji**, IISER, Thiruvananthapuram; **Prof. Cesar Rodriguez-Rosario**, University of Bremen, Germany; **Prof. Mark Selover**, University of Texas at Austin, USA.

All India Selection: 100 seats. No registration fee.

Eligibility: Final year M.Sc. Physics students, Physics research scholars, and young faculty members (physics).

For more details: <http://kscste.kerala.gov.in/collog7.htm>

or e-mail to sribs.kscste@gmail.com, shaji@iisertvm.ac.in, carunan@gmail.com.