C R RAO
ADVANCED INSTITUTE OF
MATHEMATICS, STATISTICS AND COMPUTER SCIENCE
Prof. C R Rao Road, University of Hyderabad Campus, Gachibowli, Hyderabad

Seminar on

A theory of quantum error correcting codes, a brief introduction

by

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Professor Emeritus , ISI Delhi Centre

Abstract

The state of a d-level quantum system is a positive semidefinite operator of unit trace in a d-dimensional Hilbert space. In quantum communication theory, such states pass through devices like channels, computers etc., In the process they can get corrupted by noise. The means for error-free communication of states depend on the usage of error correcting codes which are a generalization of the classical error correcting codes in information theory. We shall present the mathematical foundations of such a theory

Reference: KRP: Coding theorems of classical and quantum information theory, 2nd edition 2013, Hindustan Book Agency, New Delhi

Brief Biodata

Kalyanapuram Rangachari Parthasarathy, fondly known to many as "KRP" and to some as "Partha" was born in Chennai in 1936. He was one of the "famous four" (the others were R. Ranga Rao, V. S. Varadarajan, and S. R. S. Varadhan, a later entry) in I.S.I. during 1956-1963, who taught each other modern mathematics. KRP was awarded in 1961 the first Ph.D. degree of I.S.I. and after a visit of A. N. Kolmogorov to India, spent a year with him in Moscow and participated in the famed seminars of Gel'fand and Dynkin.

KRP taught in the Universities of Sheffield and Manchester, U.K. during 1965-70. Then he returned to India, and after a few years in Bombay University and the Indian Institute of Technology in Delhi, he came back in 1976 to the fledgling new Centre of I.S.I. in Delhi to build up its Mathematics-Statistics unit. Currently he is working as Professor Emeritus in ISI delhi centre

Dates: 23-24, December 2013, 3:30 PM– 4:30 PM
Venue: Classroom-1, First Floor, Ramanujan Building,
C R Rao AIMSCS