S. N. Bose National Centre for Basic Sciences
Block JD, Sector III, Salt Lake, Kolkata 700098

TPSC Seminar Announcement

Topic:

From Strings to Strings - the amazing story of strings in Quantum Chromodymamics.

Speaker:

Dr. N. D. Hari Dass

Centre for Quantum Information and Quantum Computing (CQIQC)
Indian Institute of Science, Bangalore, India.

Chennai Mathematical Institute, Siruseri, India.

Abstract:

The Dual Superconductor picture, proposed as a resolution for the problem of Quark Con_nement, predicts Flux Tubes connecting quarks. Evidence for such ux tubes in QCD has been unambiguously provided by Lattice Gauge Simulations. An algorithmic breakthrough by Luscher and Weisz permitted very accurate studies of the ux tube which showed that the sub-dominant term in ground state energy was characterstic of Bosonic Strings, the original candidates for explaining strong interactions.

Pushan Majumdar and myself carried out massive simulations using the Luscher-Weisz algorithm. We showed that even the next two higher order terms are exactly what is expected of a free bosonic string. Peter Matlock and myself subsequently proved this result analytically using the idea of effective string theories. I shall conclude by briey reviewing the status of even higher order corrections as well as some implications of all these results.

Venue, Date & Time:

Fermion on 27 November 2013 (Wednesday) at 4:00 PM

All are Welcome! Tea / Coffee at 5:00 PM !!

S. Mukherjee
TPSC Convener