



The Institute Of Mathematical Sciences

Golden Jubilee Year : 2012

K S Krishnan Discussion Meeting on Frontiers in Quantum Science (FQS2012) Tensor Network States for Quantum Matter

19-21 March 2012

Ramanujan Auditorium

The Institute of Mathematical Sciences, Chennai 600 113

Understanding quantum and classical correlations in many particle wave functions demands a deeper understanding of the structure of the wave function at different length scales. Recent developments, starting from density matrix renormalization group have evolved into matrix product and tensor product representation for many body states. Ideas from quantum information theory have been used. A popular tensor network state called MERA (multiscale entanglement renormalization ansatz) brings out an AdS/CFT type of correspondence in a manifest fashion. It is also believed that the tensor product representation will enable us to address hard problems in strongly correlated electrons in condensed matter and strong coupling problems in QCD.

Speakers

Miles Stoudenmire (UC Irvine), Sukhwinder Singh (Maquarie Univ), H S Sharatchandra* (IMSc), Diptiman Sen (IISc), S Ramasesha* (IISc), H R Krishnamurthy* (IISc), G. Baskaran(IMSc)

[* to be confirmed]

**To participate: Please send an email to: kskfqs@imsc.res.in
on or before **1st March 2012**
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Organizers:

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