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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS Seminar

Title : Entropy of Entangled Gauge Fields in $D = 2+1$

Speaker : Abhishek Agarwal, American Physical Society, USA

Date : Tuesday, December 12, 2017

Time : 3:00 PM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : I will present an analysis of entanglement entropies of Maxwell, Maxwell-Chern-Simons and non-Abelian pure Yang-Mills theories in $D=2+1$. The analysis will be based on a gauge invariant Hamiltonian framework where special attention will be paid to role of the edge modes residing on the entangling surface. I will try to clarify how the edge modes generate the contact term and topological entropy without invoking the replica method. I will also comment on the effect of the non-perturbative mass-gap on the entanglement entropy of the non-Abelian theory.