

ICTS String Seminar

- Title : Entanglement entropy, Spin Structures and Modular Invariance
- Speaker : Sunil Mukhi, Indian Institute of Science Education and Research, Pune
- Date : Thursday, February 16, 2017
- Time : 11:30 am
- Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore
- Abstract : In 2d CFT, the computation of entanglement entropy at finite temperature in a finite system involves the torus path integral, which is expected to be modular invariant/covariant. Previous attempts to compute entanglement measures for free-field theories using the standard replica method and twist-field correlators have failed to produce a modular-invariant result. I will argue that the sum over fermion spin structures conflicts with the use of twist fields (at least in the standard way) but that a direct higher-genus computation on the replica surface gives a consistent, invariant result satisfying all the desired properties.