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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS String Seminar

- Title** : Spatial decomposition of operators in 2d CFT
- Speaker** : Manish Ramchander (The Institute of Mathematical Sciences, Chennai)
- Date** : Thursday, 30 October 2025
- Time** : 2:00 PM (IST)
- Abstract** : I'll present a spatial operator decomposition formula based on Zassenhaus decomposition in 2d conformal field theory on Minkowski spacetime. Generalizing the usual case involving exponentials of bounded operators, the formula applies to exponentials of unbounded operators, and I will use half-sided translations as an example to build it. The formula will necessitate a regularization protocol to convert ill-defined operators like density matrices into well-defined ones, and a derivation of a 'centred' Zassenhaus formula. I'll show how this decomposition can be applied to an infinite set of operators, and obtain the governing differential equations.
- Venue** : Chern Lecture Hall
Zoom Link: <https://icts-res-in.zoom.us/j/88092766911?pwd=R3ZrVk9yeW96ZmQ4ZG9KRzVhenRKZz09>
Meeting ID: 880 9276 6911
Passcode: 232322