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Arpit Das: Anomalies and Entanglement: Twist Field Approach to Non-Invertible Symmetries in RCFTs

Monday, July 14, 2025 4:00 PM (30 minutes)

In this talk, I will present an approach to Symmetry Resolved Entanglement Entropy based on the twist field formalism. I will construct twist fields corresponding to non-invertible symmetries in two-dimensional Rational Conformal Field Theories (RCFTs) and demonstrate their connection to 't Hooft anomalies. These anomalies, manifesting as the absence of scalar primaries in twisted symmetry sectors, pose a fundamental obstruction to the construction of the twist fields – and hence to the resolution of entanglement entropy by symmetry sectors. I will then compare the symmetry resolved entanglement entropy computed via the twist field approach with results obtained through the boundary CFT framework, for both conventional and non-invertible symmetries.