

Title: Entanglement entropy in (1+1)-d with defects

Abstract: In this talk I will explore perspectives of quantum entanglement in (1+1)-d systems in presence of defects. The talk consists of two parts. In the first part, I will talk about the ground state entanglement entropy for 1d quantum spin chains with defects, using the transverse field Ising model and the three-state Potts model as examples. In the second part, I will describe the field theoretical replica trick approach to study entanglement entropy in such systems. This talk consists of some reviews about existing work, as well as work in progress with Linnea Grans-Samuelsson, Ananda Roy, Hubert Saleur, and Yifan Wang.