SEMINARIO

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Entanglement Content of Localized Excitations: Symmetry Resolution

Abstract: In this talk I will introduce some basic ideas about entanglement measures in many-body quantum systems and I will present one of the leading approaches to computing such measures in 1D quantum field theory. This approach is based on relating entanglement measures to correlations functions of a special class of fields called branch point twist fields. Once this connection has been made, the problem of computing entanglement measures is reduced to computing correlation functions, which is generally technically difficult. I will explain how these correlation functions become especially simple for certain types of excited states of quantum field theory and how this simplicity allows us to compute many different measures very explicitly, including a measure that has attracted a lot of interest recently: the symmetry resolved entanglement entropy.

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