

Entanglement Hamiltonian for inhomogeneous free fermions.

The last two decades have witnessed an increasingly growing interest in the study and characterization of the entanglement structure of many-body quantum systems, also due to the development of related experiments. In this framework, a central object is the so-called entanglement Hamiltonian (EH), defined as the logarithm of the reduced density matrix, that provides a full description of the entanglement of a quantum state. In this seminar, I will present results on the EH of inhomogeneous free fermionic systems, in the presence of a linear or quadratic potential. For both cases we find that the EH is given by a deformed version of the physical Hamiltonian, with local inverse temperatures increasing linearly from the entanglement cut. The results are in perfect agreement with CFT predictions.

Orateur: BONSIGNORI, Riccarda