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Witnessing many-particle features in quantum transport

Transport of non-interacting quantum particles through a one-dimensional lattice is mainly governed by the bias between reservoirs and no clear cut distinction between fermionic and bosonic carriers can be observed by studying single particle observables. Differences, however, emerge in two particle observables, due to the underlying contrast between fermionic and bosonic many-particle interference phenomena [1]. We explore such differences, providing methods to witness and discriminate the nature of the particles involved in a quantum transport experiment.

[1] F. Schlawin, N. Cherroret and A. Buchleitner, EPL 99, 14001 (2012)

The Zoom Meeting ID and Passcode for the seminar are

Join Zoom Meeting

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