Non-equilibrium steady-states for interacting open systems : exact results

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We give sufficient conditions for the existence of a steady-state transport regime for interacting mesoscopic systems coupled to reservoirs (semi-infinite leads). The partitioning and partition-free scenarios are treated on an equal footing. Moreover, our time-dependent scattering approach proves the independence of the steady-state quantities from the initial state of the sample, and that the stationary current vanishes when the bias is zero.

This is joint work with V. Moldoveanu (Bucharest) and C.-A. Pillet (Toulon).

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