Heat transport in low-dimensional systems

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Abstract

Statistical fluctuations are strongly dependent on the space dimension and may yield ill-defined transport coefficients in stationary out–of–equilibrium conditions. Specifically, numerical simulations indicate that heat conductivity diverges as a power–law of the system size in several $1d$ models of coupled anharmonic oscillators and hard–sphere gases. In this talk we aim at summarizing the recent theoretical developments providing an explanation of these anomalous hydrodynamic properties.