

ÉCOLE D'ÉTÉ « MÉCANIQUE STATISTIQUE DE NON-ÉQUILIBRE »
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Linear response for smooth dynamical systems and applications to non-equilibrium statistical mechanics

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Non-equilibrium steady states (NESS) are natural objects of study in non-equilibrium statistical mechanics. For the classical case they are naturally described by certain ergodic measures for differentiable dynamical systems on a compact manifold (phase space). The uniformly hyperbolic systems, and the corresponding SRB measures are well understood. We shall also discuss other situations, in particular some that arise in the discussion of heat conduction (Fourier's law).

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