

# Anomalous Transport in Disordered Dynamical Systems

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We consider simple extended dynamical systems with quenched disorder. It is shown that these systems exhibit anomalous transport properties such as the total suppression of chaotic diffusion and anomalous drift. The relation to random walks in random environments, in particular to the Sinai model, explains in addition the occurrence of ageing in such dynamical systems. Anomalous transport is explained by spectral properties of corresponding propagators and by escape rates in these systems. For special cases we provide a connection to quantum mechanical tight-binding models and Anderson localization. New classes of anomalous transport behaviour with clear deviations from the behaviour of Sinai type are found for generalizations of these models.