

INDAM MEETING:
**HYPERBOLIC DYNAMICAL SYSTEMS
IN THE SCIENCES**

CORINALDO (ITALY)
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CARLANGEOLO LIVERANI (Università di Roma Tor Vergata)

Some models related to the derivation of the Fourier Law

I will describe some models, consisting of interacting mechanical systems, that are a caricature of an insulator and are amenable to rigorous investigation. The goal is to show that in the limit in which the various systems have a very weak interaction, and the time is properly rescaled, the energy exchange satisfies a stochastic equation with a structure fairly independent on the model. This is a first step in the long road of deriving the heat equation from a mechanical model.