

MACROSCOPIC BEHAVIOR OF CHAINS OF OSCILLATORS WITH CONSERVATIVE NOISE

Stefano OLLA (CEREMADE, Universite Paris-Dauphine)

I will review some recent work on the macroscopic non-equilibrium behavior of the Hamiltonian dynamics of chains of oscillators perturbed by a conservative noise. The stochastic perturbation is given by hypoelliptic diffusions on the momentum of particles, such that total energy, and eventually total momentum, is conserved. I will discuss hydrodynamic and kinetic limits for these models. These are joint works with Giada Basile, Cedric Bernardin, Milton Jara, Carlangelo Liverani and Herbert Spohn.