



Contribution ID: 262

Type: not specified

Deterministic Approach to Nonequilibrium Physics: news from RareNoise

Tuesday, March 12, 2013 10:00 AM (1 hour)

Twenty years ago, the molecular dynamics approach to nonequilibrium phenomena gave birth to a vast still growing wave of investigations, which has resulted in a number of works conceptually important in general, and of practical relevance especially in the mesoscopic realm. That wave has largely turned towards stochastic systems, considered easier to handle. We will outline recent results on non-equilibrium response, obtained from the deterministic (molecular dynamics/dynamical systems) perspective, which complements the stochastic perspective. Relaxation, response relations and optimal control will be considered, together with a new interpretation of non-equilibrium effective temperatures. These results raise some new questions on the use of ergodic theory in statistical mechanics.

Presenters: Prof. RONDONI, Lamberto (Politecnico di Torino); Dr DE GREGORIO, Paolo (INFN Padova)