

Abstract

We discuss a simple two-dimensional slow-fast system, which is conjugate to the Chirikov standard map with a large parameter. Consider a random initial condition and view the n th iterate of the slow variable as a sequence of random variables, we prove a central limit theorem for this sequence, under suitable parameter values and time horizon. Our main motivation for studying this model is a phenomenon called "scattering by resonance" in physical systems.

This is a joint work with Alex Blumenthal and Jacopo De Simoi.