

Spatial Homogenization of Stochastic Wave Equation with Large Interaction

Zhaosheng Feng, Yongxin Jiang, and Wei Wang

Abstract. A dynamical approximation of a stochastic wave equation with large interaction is derived. A random invariant manifold is discussed. By a key linear transformation, the random invariant manifold is shown to be close to the random invariant manifold of a second-order stochastic ordinary differential equation.