Title & Abstract – Leila Setayeshgar

Title: Large deviations for a class of semilinear stochastic partial differential equations in any space dimension

Abstract: We prove the large deviation principle for the law of the solutions to a class of parabolic semilinear stochastic partial differential equations driven by multiplicative noise, in $C\big([0,T] : L^{\rho}(D)\big)$, where $D \subset \mathbb{R}^d$ with $d \geqslant 1$ is a bounded convex domain with smooth boundary and ρ is any real, positive and large enough number. The equation has nonlinearities of polynomial growth of any order, the space variable is of any dimension, and the proof is based on the weak convergence method.