

Workshop in Stochastic Analysis and Applications

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Structure stability for nonautonomous random attractors.

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Abstract

we study continuity and topological structural stability of attractors for nonautonomous random differential equations obtained by small bounded random perturbations of autonomous semilinear problems. First, we study existence and permanence of unstable sets of hyperbolic solutions. Then, we use this to establish lower semicontinuity of nonautonomous random attractors and to show that the gradient structure persists under nonautonomous random perturbations.