

Bifurcations of random dynamical systems

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We discuss bifurcations of random dynamical systems for both the bounded and unbounded noise case. For bounded noise, minimal forward invariant sets play an important role, since they support stationary measures. We will consider bifurcations in form of discontinuous changes of such sets and characterise them by means of Morse-like decompositions. The situation is fundamentally different for unbounded noise, where minimal invariant sets do not bifurcate. We will propose an alternative way to study bifurcations in this context by means of uniformly continuous topological conjugacies.

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