

STRUCTURAL PROPERTIES AND EXPONENTIAL ERGODICITY FOR EQUATIONS WITH LÉVY NOISE

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We prove exponential convergence to the invariant measure, in the total variation norm, for solutions of SDEs driven by α -stable noises in finite and in infinite dimensions. Two approaches are used. The first one is based on Liapunov's function approach by Harris, and the second on Doeblin's coupling argument [1]. Irreducibility and uniform strong Feller property play an essential role in both approaches. We concentrate on two classes of Markov processes: solutions of finite dimensional equations with Hölder continuous drift and a general, non-degenerate, symmetric α -stable noise (see [3]), and infinite dimensional parabolic systems, introduced in [2], with Lipschitz drift and cylindrical α -stable noise. We show that if the nonlinearity is bounded, then the processes are exponential mixing under the total variation norm.

REFERENCES

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