

On Stochastic Liénard Equations

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ABSTRACT: Versions of stochastic Liénard equations perturbed by state-dependent white noise are considered. We discuss existence, uniqueness, continuity, boundedness, almost sure and moment stability of solutions by the help of several Lyapunov-type functions.

Key words. Random ODEs, stochastic Liénard equation, stochastic differential equations, multiplicative white noise, additive noise, existence and uniqueness, boundedness, Lyapunov-type functions, moment stability, asymptotic stability