Geffert

Stochastic Non-Excitable Systems with Time Delay

Modulation of Noise Effects by Time-Delayed Feedback

Paul M. Geffert analyses the interplay of noise and time delay in non-excitable nonlinear systems and the modulation of stochastic effects. In particular, the author studies coherence resonance, which is a constructive effect of noise that occurs in nonlinear systems, and demonstrates that it can be modulated by time-delayed feedback. Analytical methods for the investigation of stochastic delay differential equations are developed. Noise or random perturbations and time delay are two phenomena which arise in many fields of physics, chemistry, or biology, just to mention a few examples. The investigated model is a generic Hopf normal form so that these methods and results can be transferred to many different areas of science.

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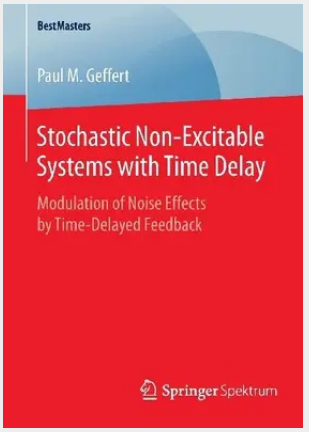

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