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随机Logistic模型的稳态关联函数

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On stationary correlation function of a noisy Logistic model

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- 摘要
- 参考文献
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摘要 针对2个Gauss白噪声驱动的Logistic模型,研究了噪声间的关联效应对稳态关联函数的影响.利用Stratonovich近似解耦,得到了随机Logistic模型的稳态关联函数和相应的衰减速率.经过数值计算,结果表明:噪声的负关联效应不会破坏原有的稳态关联函数的变化趋势,但使得稳态关联函数的衰减加速,而噪声的正关联效应会导致稳态关联函数衰减出现慢化.

关键词： 关联噪声 Logistic模型 稳态关联函数

Abstract： The stationary correlation function and the associated decay rate for a Logistic model with correlated Gaussian white noises have been derived by virtue of a Stratonovich-like ansatz.The effects of correlated noises on the stationary correlation function have been studied.Negative correlations between the noises always speed up the decay of the stationary correlation function.Positive correlations between the noises can cause a minimum of the decay rate of the stationary correlation function.

Key words： correlated noise Logistic model stationary correlation function

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