عنوان فارسی مقاله:
پایداری-ن سیگمای سیستم های تصادفی با کنترل مدل لغزشی

عنوان انگلیسی مقاله:
N-sigma stability of stochastic systems with sliding mode control

توجه!
این فایل تنها قسمتی از ترجمه میباشد. برای تهیه مقاله ترجمه شده کامل با فرمت ورد (قابل ویرایش) همراه با نسخه انگلیسی مقاله، اینجا کلیک کنید.
5. Conclusions

In this work, a new and simpler approach towards dealing with systems subjected to stochastic noise in input channel is proposed, wherein the stochastic signal is approximated as a bounded uncertainty of appropriate bounds as per stability requirement. Practical notion of stability in probability is proposed and something called N-sigma stability is arrived by the approximation approach. It is shown through simulations that the sliding motion becomes N-sigma bounded stable for discrete systems as desired and predicted by the approximation theory. An optimum probability level for the stability is also suggested, referring the widely accepted and celebrated methodology of six sigma used in process quality control. The work as in this paper can be readily applied by design engineers to discrete stochastic systems taking the bounds of uncertainty as required for their desired degree of stability in terms of probability.