

A Numerical Scheme for Solutions of Hybrid Systems

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Abstract: In this work, we are interested in numerical schemes for hybrid stochastic differential equations. Inspired by the well-known Euler algorithms for solutions of stochastic differential equations, our effort is devoted to designing approximation algorithms. Apparently, the presence of both continuous and discrete processes makes the design of the algorithms and the analysis much more complicated. Our results verifies the convergence of the algorithm under some appropriate conditions. Furthermore, a numerical example is also provided to demonstrate the proposed algorithm.

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