

An Application of Stochastic Hybrid Systems

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Abstract

Hybrid systems exhibits both continuous(differential equations) and discrete(Booleen variables) dynamic behavior. Hybrid systems are useful because of flexibility properties in modelling dynamic phenomena. Including stochastic calculus into the model, more accurate results can be obtained. Most complex systems in real life are inherently stochastic in nature. Tumor growth involve some complex dynamics like immune system responses.

In this study, an application of stochastic hybrid systems into the tumor-immune system will be introduced and analyzed.

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