Stochastic enzyme kinetics and quasi steady state approximations.

Rempala, Grzegorz A.[1]

1) *Department of Math and Stat, Ohio State University*

Corresponding Author: Rempala, Grzegorz A. , rempala.3@osu.edu

ABSTRACT

The enzyme kinetic equations are fundamental to many problems in modern biology and medicine. The stochastic version of these equations is of interest when fitting model parameters to data both at molecular and other scales (tissue, host etc). In this talk I will present the stochastic derivation of the two types of MM approximations based on quasi-steady states (QSSA), the so called standard QSSA and total QSSA.
Some application to simple gene transcription model will be presented.