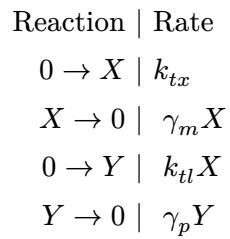


Guillespie SSA Code

We simulate a DNA transcription-translation system using Gillespie's stochastic simulation algorithm. We determine the population of mRNA and proteins in a system with the following reactions:



The parameters used in the simulation are

parameter	value
k_{tx}	1.0
γ_m	0.2
k_{tl}	5.0
γ_p	0.05

Realization from time $t = 0$ to $t = 1000$ were generated for each run.

Trajectories

Ensemble Averages and variances

Stationary distributions