

Quasi-Stationary Distributions for a Random Neuron Model

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In this work, we aim to analyze the existence and exponential convergence towards quasi-stationary distributions (QSD's) for a Random Neuron Model [1] in the case of almost sure extinction. To this end, we first take a discretization of such model and explore the QSD's in this case. Some techniques regarding Lyapunov functions and R-positiveness of a Markov Chain in continuous time are proposed in order to find such distributions.

References

- [1] ROBERT, PHILIPPE AND TOUBOUL, JONATHAN , *On the Dynamics of Random Neuronal Networks* , Journal of Statistical Physics