

Seminário de Probabilidade e Processos Estocásticos

Asymptotically Deterministic Time of Extinction for a Stochastic System of Spiking Neurons

Morgan André
(IME - USP)

Abstract: We consider a countably infinite system of spiking neurons introduced by Ferrari et al. in an article entitled "Phase transition for infinite systems of spiking neurons" (2018). This model was previously proven to present a phase transition with respect to its parameter γ , which corresponds to the rate of the leaking of the neurons. It was also proven that when γ is in the sub-critical region the renormalized time of extinction of a finite version of the system converges in law toward an exponential random variable when the number of neurons goes to infinity, so that it is highly unpredictable. In this talk we present a result which is in some sense the symmetrical of this last result: we prove that in the super-critical regime the renormalized time of extinction converges in probability to 1, so that it is asymptotically deterministic

Terça-feira, 8 de outubro

⇒ ***Horário: 14:00***

**Local: 132A
(IME-USP)**