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Título: *Asymptotic behaviour of a nonlinear PDE for neural networks*

Abstract:

Nonlinear Noisy Leaky Integrate and Fire neuronal (NNLIF) models are one of the simplest models used to describe the behaviour of neuronal networks.

In recent years, NNLIF models have been studied from a mathematical point of view; at the microscopic level, using Stochastic Differential Equations (SDE) and at mesoscopic/macrosopic level, through the mean field limits using nonlinear Fokker-Planck type equations (FPE). The considerable amount of publications and unanswered questions on these models reveal their high mathematical complexity, despite their simplicity. In this talk we will focus on analyzing the asymptotic behaviour of this kind of models.