

Hawkes AutoRegressive processes, a new model for functional connectivity estimation: theoretical analysis

Leblanc Théo | CEREMADE

In this poster we present a new model for estimating functional connectivity while including all possible interactions between spikes and LFPs. This model mixes Hawkes processes and Autoregressive processes. We study the theoretical properties of this stochastic model and also propose a robust method for estimating functional connectivity using a LASSO procedure.

Authors: Théo Leblanc (PhD student, CEREMADE) and my PhD supervisors; Vincent Rivoirard (CEREMADE) and Patricia Reynaud-Bouret (Université Côte d'Azur).

INTERNATIONAL CONFERENCE OF MATHEMATICAL NEUROSCIENCE

- June 17 20, 2025
- PRBB, Barcelona