



ID de Contribution: 4

Type: Non spécifié

Mini cours : Hawkes processes to model biological neuronal network

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I will give an introductory course on point processes that are used to model neuronal activity in the brain. I will especially focus on Hawkes processes even if I will recall some basic notions on Poisson processes as well. I will review the various methods to simulate such networks when the size is huge and comparable to animal brains or brain areas. A new algorithm especially involves Kalikow decomposition and can be seen as a branching process. Based on this view, we can also go a step further and try to understand how such neuronal network may learn to classify thanks to characteristics detection.

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