ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

Invitation to the Doctoral Seminar

Anna Melnykova, PhD
University of Avignon

"Hawkes processes in Neuronal Modelling"

N.1.43 | Wednesday, 10 January 2024 | 10:00 a.m.

Abstract
Hawkes processes is a versatile probabilistic tool which permits to model a variety of real-world phenomena: earthquakes, stock markets, population dynamics. In this talk we will focus on its use in neuroscience, where they permit to model interactions between different group of neurons (or individual neurons). Furthermore, due to memory property, models based on Hawkes processes naturally embed the refractory (inter-spiking) period for each individual neuron. The focus of this talk is on numerical and statistical challenges associated with Hawkes processes (simulation, parametric and non-parametric inference, causality).

Irene Tubikanec and the Department of Statistics look forward to seeing you at the talk!