

time and place

Tue 14:15–16:00 MaD 380

Th 08:15–10:00 MaD 380

Th 14:15–16:00 MaD 381 demo

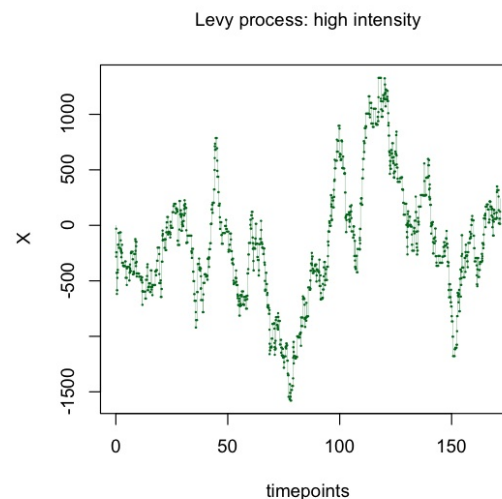
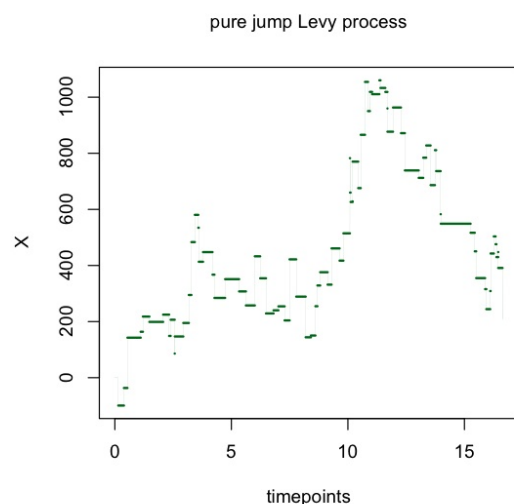
The course is about *continuous-time Markov processes*. For example, the Brownian motion, and the Poisson process are continuous-time Markov processes.

Prerequisites: Probability theory, knowledge about Brownian motion or the Poisson process. The knowledge of stochastic differential equations is not required but sometimes helpful.

Exam: there will be an oral open book exam where rather understanding is needed than learning by heart

We will discuss the following

- What are (strong) Markov processes?
- Markov processes, martingales and SDEs - how are they related?
- What are Lévy processes, and why can one always choose a Lévy process with càdlàg paths?
- The natural filtration of the Brownian motion is not right-continuous, but if we take the augmentation (adding the null sets) it is right-continuous - why?



Welcome 😊