

Prequel to Hawkes Processes: An Overview of Temporal and Spatio-Temporal Point Processes and Some Simulations

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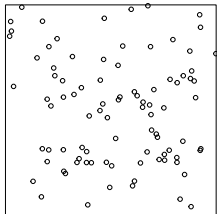
June 2021

Background and Objectives

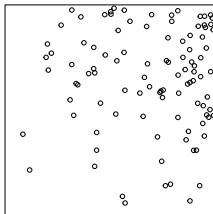
Definitions, Properties, and Graphs

HPP vs. NPP vs. Matern

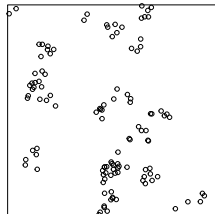
HPP (rate = 100)



NPP (intensity = $100 \times x$)

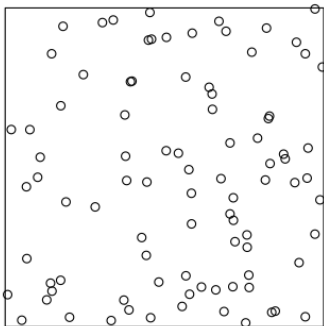


Matern (kappa = 20, $r = 0.05$, $\mu = 5$)



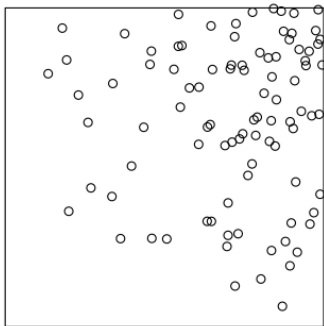
HPP

HPP (rate = 100)



NPP

NPP (intensity = $400 \times x \times y$)



Matern

Matern ($\kappa = 20$, $\nu = 0.05$, $\mu = 5$)

