Spatial Point Pattern Analysis with `spatstat::cheatsheet`

Maximilian H.K. Hesselbarth
Department of Ecosystem Modelling, University of Goettingen
maximilian.hesselbarth@uni-goettingen.de
https://mhesselbarth.rbind.io

Importing data

spatstat::ppp(x, y, window, ...)
Creates a point pattern object

spatstat::as.ppp(X, W, ...)
Converts data to point pattern object

spatstat::ripras(x, y, shape, ...)
Estimates observation window from points

spatstat::marks(x)
Extract/change the marks attached to point pattern object

Summary functions

spatstat::Kest(X, ...)
Estimates Ripley's K function

spatstat::Lest(X, ...)
Estimates the *L*-function

spatstat::pcf(X, ...)
Estimates the pair correlation function

spatstat::eval.fv(expr, ...)
Evaluates expression involving function value objects

Point processes

spatstat::rpoispp(lambda, owin, ...)
Simulates homogeneous/inhomogeneous Poisson process

spatstat::rThomas(kappa, scale, mu, ...)
Simulates Thomas cluster process

spatstat::kppm(X, ...)
Fits cluster process to ppp object

spatstat::simulate.kppm(object, nsim, ...)
Generates simulated realisations from a fitted cluster point process model

Basics

summary(X, ...)
Prints basic summary of ppp object

plot(X, ...)
Plots ppp object

spatstat::density.ppp(x, ...)
Estimates intensity function from a ppp object

Simulate null models

spatstat::envelope(Y, fun, nsim, ...)
Computes simulation envelopes of a summary function

spatstat::rlabel(X, ...)
Estimate the pair correlation function

spatstat::rshift(X, ...)
Randomly shifts the points of a point pattern

https://spatstat.org

Adrian Baddeley, Ege Rubak, Rolf Turner (2015).
Spatial Point Patterns: Methodology and Applications with R.
London: Chapman and Hall/CRC Press, 2015. URL