b.star is a function which computes the optimal block length for a continuous variable data using the method described in Patton, Politis, and White (2009).

Usage

b.star(data, 
  Kn = NULL, 
  mmax = NULL, 
  Bmax = NULL, 
  c = NULL, 
  round = FALSE)

Arguments

data  data, an n x k matrix, each column being a data series.
Kn    See footnote c, page 59, Politis and White (2004). Defaults to ceiling(log10(n)).
mmax  See Politis and White (2004). Defaults to ceiling(sqrt(n)) + Kn.
Bmax  See Politis and White (2004). Defaults to ceiling(min(3*sqrt(n),n/3)).
c     See Politis and White (2004). Defaults to qnorm(0.975).
round whether to round the result or not. Defaults to FALSE.

Details

b.star is a function which computes optimal block lengths for the stationary and circular bootstraps. This allows the use of tsboot from the boot package to be fully automatic by using the output from b.star as an input to the argument l = in tsboot. See below for an example.

Value

A k x 2 matrix of optimal bootstrap block lengths computed from data for the stationary bootstrap and circular bootstrap (column 1 is for the stationary bootstrap, column 2 the circular).
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References


Examples
set.seed(12345)

# Function to generate an AR(1) series

ar.series <- function(phi,epsilon) {
  n <- length(epsilon)
  series <- numeric(n)
  series[1] <- epsilon[1]/(1-phi)
  for(i in 2:n) {
    series[i] <- phi*series[i-1] + epsilon[i]
  }
  return(series)
}

yt <- ar.series(0.1,rnorm(10000))
b.star(yt,round=TRUE)

yt <- ar.series(0.9,rnorm(10000))
b.star(yt,round=TRUE)