Package 'TSeriesMMA'

October 12, 2022

Title Multiscale Multifractal Analysis of Time Series Data

Version 0.1.1

Description Multiscale multifractal analysis (MMA) (Gierałtowski et al., 2012)<DOI:10.1103/PhysRevE.85.021915> is a time series analysis method, designed to describe scaling properties of fluctuations within the signal analyzed. The main result of this procedure is the so called Hurst surface h(q,s) , which is a dependence of the local Hurst exponent h (fluctuation scaling exponent) on the multifractal parameter q and the scale of observation s (data window width).

Depends R (>= 3.0.2)

License GPL (>= 2)

Encoding UTF-8

LazyData true

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Repository CRAN

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mma *Multiscale Multifractal Analysis of Time Series Data*

Description

Multiscale Multifractal Analysis of Time Series Data

Usage

```
mma(smin = 10, smax = 600, qmin = -5, qmax = 5, data, col = "V1",
  theta = -45, phi = 25)
```

Arguments

smin	Minimal s scale used, when calculating Fq(s) functions family (default 10)
smax	Maximal s scale used, when calculating Fq(s) functions family, has to be multiple of 5 (default 600; in general should be near to N/50, where N is a time series length)
qmin	Minimal multifractal parameter q used (default -5)
qmax	Maximal cmultifractal parameter q used (deafault 5)
data	Time series data
col	The color variation of the plot
theta	Angle of view
phi	Second angle of view

Examples

```
## Not run:
mma(smax=30, data=timeSeriesData)

## End(Not run)
```

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