Identification of the parameters for the multiscale fractional Brownian motion

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In someapplications, for instance finance, biomechanics or internettraffic, it appears that it could be relevant to model data with ageneralization of a fractional Brownian motion for which the Hurstparameter H is depending on the frequency (see for instance[3,5]). In this contribution, we describe the multiscale fractionalBrownian motions which present a parameter H as a piece-wiseconstant function of the frequency. We provide the main propertiesof these processes and propose a statistical method based onwavelet analysis to detect the frequency changes, estimate thedifferent parameters and test the goodness of fit of our model tothe real data. In[5] biomechanical data are studied with these new tools,that leads to interesting conclusions.

- Bibliography

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