
Subject: Re: Fourier analysis of the Data with some gaps
Posted by [R.G. Stockwell](#) on Tue, 14 Apr 2009 16:39:25 GMT
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<duxiyu@gmail.com> wrote in message
news:55d7a5d9-0fc3-462d-a680-3be22f337271@k19g2000prh.google groups.com...
Thank you for your explanation.
I am very interesting in the local spectral technique you mentioned.
Could you recommend some references about it?

Best regards,
jdu

There is a lot. A straight forward Short Time Fourier Transform is
simple and easy to understand. Simply parse the time series into small
overlapping regions and FFT it.

There are wigner type transforms, that in my opinion are very useful
for real data with noise.

There are wavelets (two distinct branches, you'd want the CWT with morlet
wavelets or perhaps mexican hat wavelets if you are interested in local
spectra.
Orthogonal wavelets are not directly related to the fourier spectrum)

And there is the S-transform, which is combination of STFT and Wavelets,
and has several advantageous characteristics.

<http://www.cora.nwra.com/stransform/>

cheers,
bob

PS disclaimer, the ST stuff is mine, so I may be a bit biased when I
say it is superior to all other methods for the analysis of transient
quasimonochromatic
signals in geophysical data. :)
Source code is available on that website.