
Subject: Re: scalogram

Posted by [Michael Werger](#) on Tue, 27 May 1997 07:00:00 GMT

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Harald Dankworth wrote:

>
> Hi,
>
> I use IDL to compute the wavelet coefficients of a signal and
> present them as a scalogram. The wavelet coefficients are non-uniformly
> distributed over the time-scale plane. My problem is: how do I
> interpolate the intermediate values?
>
> Is anybody familiar with this problem?
>
> Thanks,
>
> Harald Dankworth

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As long I understand the scalogram representation of wavelet coefficients, I think you shouldn't interpolate between intermediate values.

Sloppy spoken:

The scalogram shows the strength of each wavelet coefficient sorted by the corresponding resolution scale, i.e. sorted from a coarse to fine (or vice versa) representation of your data. So, why do you want to interpolate between some values?

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Subject: Re: scalogram

Posted by [Achim Hein](#) on Tue, 27 May 1997 07:00:00 GMT

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> interpolate the intermediate values?

As I understand you right, you have got the problem that you have evaluated coefficients and these values do not correspondent to an equidistant axis - where you came from.

So, you have to do an interpolation to 'fit' the nonequidistant 'distributed' values in equidistant samples.

If these remarks are correct, there are some methods to 'fit' your values or let us say there are methods to resample your values.

You can look for any kind of linear or bilinear interpolation.

Furthermore there are the spline interpolations and that's what I recommend.

Additionally in IDL you have a wonderful simply routine to interpolate with cubic splines. For some more information look the online help for SPLINE.

Cheers

Achim

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