Subject: Re: How can one improve the derivative?
Posted by wlandsman on Wed, 27 Nov 2013 14:46:28 GMT
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You might look at the SAVGOL function which gets rid of the high-frequency signal (noise) while preserving the lower-frequency signals. (Smooth() suppresses both high and low frequencies.) The documentation for SAVGOL() says

"Tip: You can use this function in conjunction with the CONVOL function for smoothing and optionally for numeric differentiation."

On Wednesday, November 27, 2013 8:26:08 AM UTC-5, David Fanning wrote:
> g.nacarts@gmail.com writes:
>
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>
>> I had to differentiate noisy data - which is a problem. I was wondering, how can one improve the derivative?
>
>> I read on a blog that one way is to make a Fourier filtering afterwards and another way is to apply a "smoothed" or "filtered" gradient. But I had no idea how to do this in IDL. Can anyone help?
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>
> I think I would just apply the SMOOTH function to your data before you
>
> differentiate it.
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>
> Cheers,
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>
>
> David
>
> --
>
> David Fanning, Ph.D.
>
> Fanning Software Consulting, Inc.
>
> Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
>
> Sepore ma de ni thue. ("Perhaps thou speakest truth.")