Subject: Re: Curve Fitting to timeseries using a set of 8 sine and cosine functions
Posted by siumtesfai on Sat, 25 Oct 2014 23:00:07 GMT
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On Saturday, October 25, 2014 1:47:17 AM UTC-4, siumt...@gmail.com wrote:
> I think you should try to be for specific to ask question here.
>
> Suppose I have a timeseries with the S size.
>
> I want to do nonlinear fitting to the timeseries using the following fourier series (harmonic function)
>

>
> And I would find 8 coefficients such as An and Bn where n = 1,2,3,4
>
> That is.
>
> A1,A2,A3,A4
> B1,B2,B3,B4
>
> I have attempted to understand how it works mpfit by Craig and curvefit . Unfortunately, I did not because I am not IDL expert. So I posted this if anyone can help
>
>
> Best Wishes
>
>
> Thanks for you help

Hello,

I do not use FFT because I have missing data . I provided you with monthly timeseries which does not have missing data. But generally, I use monthly datasets that have missing values.

That is why I used multiple regression.

Assumption about regression is though that the dataset follow gaussian distribution. Maybe I am not getting the correct coefficients of the sine and cosine terms because my data is skewed (I can not think any thing else)

Second, I believe my model is correct because Suppose you have monthly temperature datasets. You can represent your seasonal cycle using the harmonics as I have .

Thanks