Subject: Re: Regression fit and random noise
Posted by on Thu, 28 Mar 2013 23:26:30 GMT
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Den torsdagen den 28:e mars 2013 kl. 22:26:01 UTC skrev kisCA:
> Thank you Phillip for your answer and the book reference !
>
> What I am trying to know is if by increasing the noise ratio in my data, the model will still find a good fit.
>
> I increase the noise with:
>
> new_sig = original_sig + noise_ratio*randomu(seed,n_elements(original_sig))
>
> I increase slowly the value of noise_ratio. So first I obtain almost the same value of R2 as if no noise was there. R2 is getting lower as the value of noise_ratio increase. After a certain value of noise_ratio is reached, R2 values don't get lower than 0.3.

Maybe I misunderstand what you are trying to do but... Are you aware that randomu has a uniform distribution between 0 and 1? So you are adding on the average something like 0.5*noise_ratio to your original signal. So maybe you want to add noise_ratio*(randomu(...)-0.5) instead. Or, since randomn is normal distributed with zero mean, simply noise_ratio*randomn(...).