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Subject: MPFit: changing the cost function

Posted by [thomas.launey](#) on Thu, 07 Feb 2008 05:22:31 GMT

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Hello,

I am using Craig Markwardt's MPFit with great enjoyment but I would like to change the way the model error is calculated. MPfit minimizes the  $\chi^2$  but for what I want to do, I would prefer minimizing "the largest relative error" rather than the "mean relative error".

I haven't found any hint in the documentation about "user-defined cost function". Shall I modify MPfit itself to add this option or did I miss something?

Thanks,  
Thomas

T. Launey  
RIKEN Brain Science Institute

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Subject: Re: MPFit: changing the cost function

Posted by [Craig Markwardt](#) on Mon, 11 Feb 2008 13:42:57 GMT

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thomas.launey@ncm.brain.riken.jp writes:

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> function". Shall I modify MPfit itself to add this option or did I  
> miss something?  
> Thanks,  
> Thomas  
>  
> T. Launey  
> RIKEN Brain Science Institute

Hello, I'm afraid it's going to be harder than you suspect. The cost function is built into the technique, namely it is *assumed* that the cost function is the sum of the squared residuals, and this feeds directly into the basic factorization approach taken by the code.

I suggest that you will probably want a generic optimizer. One option is my TNMIN() code, which will max/minimize any arbitrary cost function.

Good luck!  
Craig

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