Subject: Re: alternative to CURVEFIT function
Posted by Russell Ryan on Wed, 29 May 2013 20:15:13 GMT
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Well, according to the IDL documentation, curvefit uses the gradient-expansion algorithm --- whereas lmfit uses Levenburg-marquardt. I suppose these could be the same algorithm, but it seems odd. The Markwardt stuff that David pointed you to is two different algorithms: Levenburg-marquardt and truncated newton (i'm fairly sure these are actually different).

Now, the Nelder-Mead is just the amoeba algorithm --- as coded in IDL by ... amoeba.pro.

Now, there are others in IDL as well: dfpmin, powell, and a few others (which assume linearity).

Can you compute the derivative of the function to minimize analytically? The answer to that will dictate what options you have.

Finally, I agree with David. the MPFIT from Markwardt is probably the best all-purpose thing in IDL.

Russell

On Wednesday, May 29, 2013 11:19:27 AM UTC-4, fd_...@mail.com wrote:
> Hi all
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> I was wondering if anyone knows an alternative function of CURVEFIT. If I am not mistaken the CURVEFIT uses the Levenberg-Marquart algorithm. I need to use a different algorithm which provides a numerical solution to the problem of minimising a function, generally non-linear.
>
> Nelder–Mead method and Newton-Raphson are some choices but I was wondering if there is a function in IDL like the CURVEFIT.
>
>
>
> With Thanks
>
> M