
Subject: Re: Question about CURVEFIT function
Posted by [Paul Van Delst\[1\]](#) on Thu, 29 Aug 2013 14:48:43 GMT
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BTW, I would use MPFIT rather than CURVEFIT:

<http://www.physics.wisc.edu/~craigm/idl/fitting.html>

On 08/29/13 10:45, Paul van Delst wrote:

> Here's a place to start:
> http://en.wikipedia.org/wiki/Non-linear_least_squares
>
> IDL docs tell me CURVEFIT uses a gradient expansion method. Directly
> from the docs:
>
> PROCEDURE:
> Copied from "CURFIT", least squares fit to a non-linear
> function, pages 237-239, Bevington, Data Reduction and Error
> Analysis for the Physical Sciences. This is adapted from:
> Marquardt, "An Algorithm for Least-Squares Estimation of
> Nonlinear Parameters", J. Soc. Ind. Appl. Math., Vol 11,
> no. 2, pp. 431-441, June, 1963.
>
> "This method is the Gradient-expansion algorithm which
> combines the best features of the gradient search with
> the method of linearizing the fitting function."
>
> Iterations are performed until the chi square changes by
> only TOL or until ITMAX iterations have been performed.
>
> The initial guess of the parameter values should be
> as close to the actual values as possible or the solution
> may not converge.
>
> On 08/29/13 09:14, fd_luni@mail.com wrote:
>> Hi all
>>
>> I have some questions about the CURVEFIT function. I didn't use any
>> programming language before and there are some things in this
>> function that I don't understand.
>>
>> The keyword TOL which corresponds to tolerance what actually do in
>> the algorithm?
>>
>> When you specifies the number of iterations what does this means?
>> What is the role of this keyword?
>>

>> Finally, the CURVEFIT function how does it works? For instance, It
>> uses the derivatives of the points?
>>
>> Many Thanks Mar
>>
