Subject: Re: Fitting an implicit function with IDL
Posted by Craig Markwardt on Tue, 08 Jun 2010 23:47:28 GMT
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On Jun 8, 6:54 am, Gianluca Li Causi <lica...@mporzio.astro.it> wrote:
> Hi all,
> I have to find the A, B and C parameters which best satisfy (in the
> chi-square sense) the following equation:
>
> A * g(x) + (W(x) + B) / (X(x) + C) = 0
>
> where g(x) is a known function of x and (W +/- sigmaW) and (Z +/-
> sigmaZ) are two sets of measured data together with their measurement
> errors.
>
> This is different from the usual form F(x, A,B,C) = Y where a function
> of x and parameters is to be fitted to a dataset (Y +/- sigma_Y).
> So, how to use the various IDL fitting routines to solve this
> problem??

I think what you really want to use is the FORTRAN library ODRPACK.

As Heinz Stege said, you can use curve fitting programs as equation solvers. I actually did an IDL workshop presentation on this very type of application. [*]

What I am not quite sure is how you include the data uncertainties in the model.

Craig

[*] http://cow.physics.wisc.edu/~craigm/idl/fitting.html