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Subject: mpfit and linear equality constraints

Posted by on Mon, 30 Jan 2012 16:32:12 GMT

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I want to do non-linear model fitting with linear equality constraints and I just want to check that I've understood the mpfit "tied" keyword functionality correctly. Am I correct in believing it does not use the theory for linear equality constraints at all, it just removes the tied parameters from the problem and calculates them afterwards from the non-tied parameters?

By "theory for linear equality constraints" I'm referring the procedure where you calculate an orthogonal decomposition of the constraints matrix, extract the basis vectors for the null space, etc. And then use this to reduce the dimension of the problem by the same number of parameters but instead of removing parameters from the problem, you'd be solving for combinations of the parameters that are tied to one another. (Not meant as a full description, just a reminder for those who have encountered it before.)

I can't find any of that going on in mpfit.pro but I thought I'd ask just to make sure.

If I'm right, I'd be interested in pointers to IDL code implementing this kind of processing. Particularly if it does it and still uses mpfit for the actual fitting once the constraints part is out of the way.

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