Subject: Re: MPfit question
Posted by Craig Markwardt on Wed, 01 Oct 2008 17:16:10 GMT
View Forum Message <> Reply to Message

Wox <nomail@hotmail.com> writes:

> On 30 Sep 2008 11:49:46 -0400, Craig Markwardt
> <craigmnet@REMOVEcow.physics.wisc.edu> wrote:
>
>> If you look at the code, the value of ALPHA is adjusted so that, at
>> the next iteration, a parameter will exactly touch its boundary,
>> within a small tolerance. At that point, the parameter will be
>> considered fixed, and will no longer enter into the calculation of the
>> value of ALPHA. [*] Thus, the step *is* adaptive, it just doesn't
>> happen in a single iteration.
>
> I'm sorry, but I don't see how it does this. ALPHA is adjusted and
> immediatly used (see below). In the next iteration, the increments are
> calculated again by mpfit_lmpar and used again to calculate ALPHA,
> whether the param was at the limit in the previous iteration or not.

That is not correct. Please search for 'zeroing the derivatives of pegged parameters'. Once a parameter is pegged at a boundary in the previous iteration, it no longer contributes to the congugate gradiate solution because its derivatives have been zeroed.

> The thing is, my problem is solved when I adjust the increments
> themselves and leave ALPHA=1. I was just wondering whether I introduce
> some errors by doing this.

Probably your best bet is to see which convergence criterium is satisfied when ALPHA < 1, and go from there.

Craig

--

Craig B. Markwardt, Ph.D. EMAIL: cbmarkwardt+usenet@gmail.com
---