Subject: Re: faster minimization needed - maybe mpfit?
Posted by Craig Markwardt on Tue, 27 Mar 2012 13:38:36 GMT
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On Tuesday, March 27, 2012 8:28:02 AM UTC-4, chris wrote:
> Hi Craig,
> sorry I made several typos. I would also be satisfied with a least
> squares solution as you can see if you compare function test2 with the
> previous posts. The function I want to minimize is test2. It doesnt
> matter for me at this stage whether total(abs(resid)) or
> total(resid^2) is minimized.
>
> function test2,p,xval=x,errval=err
> resid=convol(x-rebin(p[*],size(x,/dim)),[-1.,0.,1.])
> return,total(resid^2)
> end
>
> ENVI> help,im
> IM              INT       = Array[512, 7237]
> ENVI> sz=size(im,/dim)
> ENVI>  im2=im+fix(1000.*rebin((((add=randomn(seed,sz[0])))-mean(add ))/
> stddev(add),sz))
> ENVI> help,im2
> IM2             INT       = Array[512, 7237]
> ENVI>  p0=((p0=total(im2,2)/float(sz[1])))-smooth(p0,3,/edge_trunc)
> ENVI> help,p0
> P0              FLOAT     = Array[512]
> ENVI> st={x:im2,errval:sqrt(p0)}
>  &res=mpfit('test2',p0,functargs=st,maxiter=100,status=st atus,errmsg=errmsg)
> &print,status,string(10b),errmsg
>           0
> ERROR: number of parameters must not exceed data

Check out the documentation for MPFIT.  It expects your user function to return a 1D array of residuals, not the sum of squares.

Craig