Subject: non linear systems, mpfitexpr and functargs
Posted by Elix on Tue, 30 Jan 2007 18:15:09 GMT
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Hi,

in this newsgroup I found the interesting option of solving non-linear systems using mpfitexpr. I need to use mpfitexpr with the functargs keyword, but apparently I'm doing something wrong here.

```
stru={iref:iref,i2:i2}
p1=[0.3,0.5]
 expr='[stru.iref-(1.-p[0])-p[0]*exp(-p[1]),'+$
 'stru.i2-(1.-p[0])-p[0]*exp(-p[1]*0.3)]'
p=mpfitexpr(expr,0,0,1,p1,functargs=stru)
```

% MPFITEXPR: ERROR: execution of "[stru.iref-(1.-p[0])-p[0]*exp(-p[1]),stru.i2-(1.-p[0])-p[0]*exp(-p[1]*0.3)]" failed.

Any suggestion?
thanks!
Elix

Subject: Re: non linear systems, mpfitexpr and functargs
Posted by Craig Markwardt on Sat, 03 Feb 2007 19:36:09 GMT
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"Elix" <elisa.costantini@gmail.com> writes:

```
> in this newsgroup I found the interesting option of solving non-linear
> systems using mpfitexpr. I need to use mpfitexpr with the functargs
> keyword, but apparently I'm doing something wrong here.
>
> stru={iref:iref,i2:i2}
> p1=[0.3,0.5]
>  expr='[stru.iref-(1.-p[0])-p[0]*exp(-p[1]),'+$
>  'stru.i2-(1.-p[0])-p[0]*exp(-p[1]*0.3)]'
> p=mpfitexpr(expr,0,0,1,p1,functargs=stru)
>
> % MPFITEXPR: ERROR: execution of "[stru.iref-(1.-p[0])-p[0]*exp(-
> p[1]),stru.i2-(1.-p[0])-p[0]*exp(-p[1]*0.3)]" failed.
```

Just a follow-up to this. You *can* use functargs to mpfitexpr, as documented here:

```
;  The most complicated optimization problems typically involve other
;  external parameters, in addition to the fitted parameters.  While
;  it is extremely easy to rewrite an expression dynamically, in case
```

; one of the external parameters changes, the other possibility is to
; use the PRIVATE data structure.

Thus, you need to refer to your structure as PRIVATE, not stru.

Craig

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Craig B. Markwardt, Ph.D. EMAIL: craigmnet@REMOVEcow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
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