Subject: Funding the Global Minimum Using IDL
Posted by Maryam on Wed, 23 Nov 2016 20:28:35 GMT

Hello everyone,

Does anyone know any routine that finds the global minimum? The mpfit routine I normally use only finds the local minimum which is not what I want here.

Any help is greatly appreciated.

Maryam

Subject: Re: Funding the Global Minimum Using IDL
Posted by Sergey Anfinogentov on Thu, 24 Nov 2016 10:17:28 GMT

Dear Maryam

As far as I know, there are no global optimisation routines in standard IDL Library.
If you you have a low-dimensinal parameter space (~ 3-4 parameters), you can find the global minimum by starting MPFIT or CURVEFIT from many (thousands) different random locations and selecting the best solution.

or alternatively, you can use global optimisation routines from Python SciPy package (https://docs.scipy.org/doc/scipy/reference/optimize.html).
The latest version of IDL can transparently call Python routines (See http://www.harrisgeospatial.com/docs/python.html).

Best Regards,
Segey

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>
> Any help is greatly appreciated.
>
> Maryam

Subject: Re: Funding the Global Minimum Using IDL
Posted by Maryam on Thu, 24 Nov 2016 21:26:34 GMT

Dear Sergey,

Thanks a lot for your suggestions. I will try them out.

Regards,
Maryam