Subject: Re: power law fit with a constant
Posted by wlandsman on Wed, 09 Mar 2016 16:39:27 GMT
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On Tuesday, March 18, 2014 at 10:13:47 PM UTC-4, suruchi wrote:
> Could anyone suggest me how to do the fitting of the following functions:
>
> 1) A + B (x^gamma) which is a power law with a constant.
>
> without the constant, for the power law of the form " Bx^gamma " it is easy to convert to log space and linearize the problem, that is
> log(y)=log(B)+gamma*(log(x)).

I am trying to fit a power law without the constant term to data. As noted above, and also at
http://www.exelisvis.com/Support/HelpArticlesDetail/TabId/219/ArtMID/900/ArticleID/2813/2813.aspx
one can convert to log space and linearize the problem. This is very nice because linear fits can be vectorized and I can do a million linear fits in one vector call.

But what if my data has -- due to noise -- some negative values? I can always use nonlinear fitting routines like mpfitfun, but performing thousands of fits this way will be much slower. I haven't been able to think of any tricks to keep the problem linear, but perhaps others have a suggestion. Thanks, --Wayne