Subject: Re: SVDFIT Problems

Posted by Robert Stockwell on Fri, 30 Aug 2002 21:25:43 GMT

Paul van Delst wrote:
> Bill wrote:
>
>> In my occaisional attempts to use SVDFIT I have had problems in that it
>> reports singular solutions when other fitting routines, e.g., REGRESS,
>> have had not problems.
>
>
> Deja vu! I was using the SVDFIT routine just yesterday to fit a second order polynomial. I kept
> getting an error report for a singular value (even with /DOUBLE). Used POLY_FIT with no problems
> (SVDFIT _was_ overkill for what I wanted to do.)
>
> <snip>
>
>
>> Unfortunately it appeas that the code currently relies on a simplified
>> version of the Numerical Recipes routine SVDCMP, that does not return
>> the singular value vector that Numerical Recipes uses to compute wmax. A
>> rewrite to give SVDFIT the proper properties is more work than I am
>> willing to put in at this time.
>
>
> Thanks for taking the time to nut the problem out and report it here. It really pains me (just
> having finished the yearly license renewal tooth-pulling process) that these sorts of things are
> *still* found in incarnations of such well-worn linear algebra problems like SVD. I spent about half
> a day trying to figure out what I was doing wrong until I tossed the lot and surfed over to
> netlib.org for some fortran routines. I thought IDL was supposed to *save* time for this sort of
> thing?
>
> paulv
>

I've noticed that using a cholesky decomp to solve a fit was
twice as fast as an SVD, in case any cares.

Cheers,
bob