Subject: Re: Lanczos diagonalisation with IDL
Posted by Kenneth P. Bowman on Fri, 08 Dec 2006 03:07:19 GMT
View Forum Message <> Reply to Message

In article <1165497198.963840.266160@l12g2000cwl.googlegroups.com>,
philip.tregenna@psi.ch wrote:

> I would like to diagonalise a large, sparse, symmetric matrix, and find
> a limited set of eigenvalues. The best way to do this is to use an
> algorithm based upon the Lanczos method. Has a Lanczos diagonalisation
> routine been written in the IDL language? The procedure with a
> functionality close to that which I need is "LA_EIGENQL". However,
> this routine is not ideal for large sparse matrices as it requires as
> input all the elements of the matrix, including those with a value of
> zero.

Haven't used it, but this looks like a job for IDL Analyst (aka IMSL)

http://www.ittvis.com/idl/pdfs/IDL63_Analyst_RoutinesFunc.pd f

It includes sparse matrix routines. It costs extra, but consider the
cost of your time.

Ken Bowman