

Meschach – SVD on a sparse matrix

Source: <http://sci.tech–archive.net/Archive/sci.math.num–analysis/2007–07/msg00093.html>

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 - *Date:* Thu, 12 Jul 2007 22:39:46 –0000
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Hi,

I'm trying use meschach, compiling some programs, etc. because I need compute svd on a sparse matrix.

<http://www.netlib.org/c/meschach/>

<http://www.math.uiowa.edu/~dstewart/meschach/>

Reading the FAQ:

"A1. What is Meschach?.....

.....o eigenvector/eigenvalue routines — symmetric, real Schur decomposition, SVD, extract eigenvector....."

"A2. Why not use C versions of LINPACK, EISPACK or LAPACK?.....

.....

As well, none of the above packages has anything to do with sparse matrices. There are, of course, sparse matrix packages that are freely

available, but even there, they do not seem to handle, in an integrated

way, both sparse and dense matrices. Meschach has not only sparse matrix

data structures and the routines to make use of them, but as the sparse

matrices are self–contained data structures, use of sparse and dense matrices can be intermixed...."

But, when I look for svd function, I only get in matrix2.h/svd.c,

```
svd.c:VEC *svd(MAT *A, MAT *U, MAT *V, VEC *d)
```

MAT (dense matrix) implementation but not the SPMAT (sparse matrix)

It seems that don't have svd functionality for SPMAT, I've seen samples in tutorial.c, torture.c and ztorture.c. Only has used SPMAT in tutorial.c /* discrete laplacian */ SPMAT *laplacian(A) SPMAT *A function.

Anyone has used meschach for svd on a sparse matrix? other package?

suggestions?

Thanks in advance!

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