CHOLMOD: Core

Required module for CHOLMOD v. 4 and earlier that provides core functionality for all of CHOLMOD.

CHOLMOD: Core: A required software Module for CHOLMOD v.4 and earlier, a sparse Cholesky factorization update/downdate package. The Module provides core functionality for all of CHOLMOD.

CHOLMOD is a set of routines for factorizing sparse symmetric positive definite matrices of the form A or AA^T, updating/downdating a sparse Cholesky factorization, solving linear systems, updating/downdating the solution to the triangular system Lx = b, and many other sparse matrix functions for both symmetric and unsymmetric matrices. Its supernodal Cholesky factorization relies on LAPACK and the Level-3 BLAS, and obtains a substantial fraction of the peak performance of the BLAS. Both real and complex matrices are supported. CHOLMOD is written in ANSI/ISO C, with both C and MATLABTM interfaces. It appears in MATLAB 7.2 as x=A\b when A is sparse symmetric positive definite, as well as in several other sparse matrix functions.

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