Title

stata.com

LAPACK — The LAPACK linear-algebra routines

Description Remarks and examples Acknowledgments Reference Also see

Description

LAPACK stands for Linear Algebra PACKage and is a freely available set of FORTRAN 90 routines for solving systems of simultaneous equations, eigenvalue problems, and singular value problems. Many of the LAPACK routines are based on older EISPACK and LINPACK routines, and the more modern LAPACK does much of its computation by using BLAS (Basic Linear Algebra Subprogram).

Remarks and examples

stata.com

The LAPACK and BLAS routines form the basis for many of Mata's linear-algebra capabilities. Individual functions of Mata that use LAPACK routines always make note of that fact.

For up-to-date information on LAPACK, see http://www.netlib.org/lapack/.

Advanced programmers can directly access the LAPACK functions; see [M-5] **lapack( )**.

Acknowledgments

We thank the authors of LAPACK for their excellent work:

E. Anderson, Z. Bai, C. Bischof, S. Blackford, J. Demmel, J. Dongarra, J. Du Croz, A. Greenbaum, S. Hammarling, A. McKenney, and D. Sorensen.

Reference

Anderson, E., Z. Bai, C. Bischof, S. Blackford, J. Demmel, J. J. Dongarra, J. Du Croz, A. Greenbaum, S. Hammarling, A. McKenney, and D. Sorensen. 1999. *LAPACK Users' Guide*. 3rd ed. Philadelphia: Society for Industrial and Applied Mathematics.

Also see

[R] **copyright lapack** — LAPACK copyright notification

[M-5] **lapack( )** — LAPACK linear-algebra functions

[M-1] **intro** — Introduction and advice