

NAG C Library Chapter Contents

f07 – Linear Equations (LAPACK)

f07 Chapter Introduction

Routine Name	Mark of Introduction	Purpose
f07adc	7	nag_dgetrf <i>LU</i> factorization of real m by n matrix
f07aec	7	nag_dgetrs Solution of real system of linear equations, multiple right-hand sides, matrix already factorized by nag_dgetrf (f07adc)
f07agc	7	nag_dgecon Estimate condition number of real matrix, matrix already factorized by nag_dgetrf (f07adc)
f07ahc	7	nag_dgerfs Refined solution with error bounds of real system of linear equations, multiple right-hand sides
f07ajc	7	nag_dgetri Inverse of real matrix, matrix already factorized by nag_dgetrf (f07adc)
f07arc	7	nag_zgetrf <i>LU</i> factorization of complex m by n matrix
f07asc	7	nag_zgetrs Solution of complex system of linear equations, multiple right-hand sides, matrix already factorized by nag_zgetrf (f07arc)
f07auc	7	nag_zgecon Estimate condition number of complex matrix, matrix already factorized by nag_zgetrf (f07arc)
f07avc	7	nag_zgerfs Refined solution with error bounds of complex system of linear equations, multiple right-hand sides
f07awc	7	nag_zgetri Inverse of complex matrix, matrix already factorized by nag_zgetrf (f07arc)
f07bdc	7	nag_dgbtrf <i>LU</i> factorization of real m by n band matrix
f07bec	7	nag_dgbtrs Solution of real band system of linear equations, multiple right-hand sides, matrix already factorized by nag_dgbtrf (f07bdc)
f07bgc	7	nag_dgbcon Estimate condition number of real band matrix, matrix already factorized by nag_dgbtrf (f07bdc)
f07bhc	7	nag_dgbrfs Refined solution with error bounds of real band system of linear equations, multiple right-hand sides
f07brc	7	nag_zgbtrf <i>LU</i> factorization of complex m by n band matrix
f07bsc	7	nag_zgbtrs Solution of complex band system of linear equations, multiple right-hand sides, matrix already factorized by nag_zgbtrf (f07brc)
f07buc	7	nag_zgbcon Estimate condition number of complex band matrix, matrix already factorized by nag_zgbtrf (f07brc)
f07bvc	7	nag_zgbrfs Refined solution with error bounds of complex band system of linear equations, multiple right-hand sides

f07fdc	7	nag_dpotrf Cholesky factorization of real symmetric positive-definite matrix
f07fec	7	nag_dpotrs Solution of real symmetric positive-definite system of linear equations, multiple right-hand sides, matrix already factorized by nag_dpotrf (f07fdc)
f07fgc	7	nag_dpocon Estimate condition number of real symmetric positive-definite matrix, matrix already factorized by nag_dpotrf (f07fdc)
f07fhc	7	nag_dporfs Refined solution with error bounds of real symmetric positive-definite system of linear equations, multiple right-hand sides
f07fjc	7	nag_dpstri Inverse of real symmetric positive-definite matrix, matrix already factorized by nag_dpotrf (f07fdc)
f07frc	7	nag_zpotrf Cholesky factorization of complex Hermitian positive-definite matrix
f07fsc	7	nag_zpotrs Solution of complex Hermitian positive-definite system of linear equations, multiple right-hand sides, matrix already factorized by nag_zpotrf (f07frc)
f07fuc	7	nag_zpocon Estimate condition number of complex Hermitian positive-definite matrix, matrix already factorized by nag_zpotrf (f07frc)
f07fvc	7	nag_zporfs Refined solution with error bounds of complex Hermitian positive-definite system of linear equations, multiple right-hand sides
f07fwc	7	nag_zpstri Inverse of complex Hermitian positive-definite matrix, matrix already factorized by nag_zpotrf (f07frc)
f07gdc	7	nag_dpptrf Cholesky factorization of real symmetric positive-definite matrix, packed storage
f07gec	7	nag_dpptrs Solution of real symmetric positive-definite system of linear equations, multiple right-hand sides, matrix already factorized by nag_dpptrf (f07gdc), packed storage
f07ggc	7	nag_dppcon Estimate condition number of real symmetric positive-definite matrix, matrix already factorized by nag_dpptrf (f07gdc), packed storage
f07ghc	7	nag_dpprfs Refined solution with error bounds of real symmetric positive-definite system of linear equations, multiple right-hand sides, packed storage
f07gjc	7	nag_dpstri Inverse of real symmetric positive-definite matrix, matrix already factorized by nag_dpptrf (f07gdc), packed storage
f07grc	7	nag_zpptrf Cholesky factorization of complex Hermitian positive-definite matrix, packed storage
f07gsc	7	nag_zpptrs Solution of complex Hermitian positive-definite system of linear equations, multiple right-hand sides, matrix already factorized by nag_zpptrf (f07grc), packed storage
f07guc	7	nag_zppcon Estimate condition number of complex Hermitian positive-definite matrix, matrix already factorized by nag_zpptrf (f07grc), packed storage
f07gvc	7	nag_zpprfs Refined solution with error bounds of complex Hermitian positive-definite system of linear equations, multiple right-hand sides, packed storage

f07gwc	7	nag_zpptri Inverse of complex Hermitian positive-definite matrix, matrix already factorized by nag_zpptrf (f07grc), packed storage
f07hdc	7	nag_dpbtrf Cholesky factorization of real symmetric positive-definite band matrix
f07hec	7	nag_dpbtrs Solution of real symmetric positive-definite band system of linear equations, multiple right-hand sides, matrix already factorized by nag_dpbtrf (f07hdc)
f07hgc	7	nag_dpbcon Estimate condition number of real symmetric positive-definite band matrix, matrix already factorized by nag_dpbtrf (f07hdc)
f07hhc	7	nag_dpbrfs Refined solution with error bounds of real symmetric positive-definite band system of linear equations, multiple right-hand sides
f07hrc	7	nag_zpbtrf Cholesky factorization of complex Hermitian positive-definite band matrix
f07hsc	7	nag_zpbtrs Solution of complex Hermitian positive-definite band system of linear equations, multiple right-hand sides, matrix already factorized by nag_zpbtrf (f07hrc)
f07huc	7	nag_zpbcon Estimate condition number of complex Hermitian positive-definite band matrix, matrix already factorized by nag_zpbtrf (f07hrc)
f07hvc	7	nag_zpbrfs Refined solution with error bounds of complex Hermitian positive-definite band system of linear equations, multiple right-hand sides
f07mdc	7	nag_dsytrf Bunch–Kaufman factorization of real symmetric indefinite matrix
f07mec	7	nag_dsytrs Solution of real symmetric indefinite system of linear equations, multiple right-hand sides, matrix already factorized by nag_dsytrf (f07mdc)
f07mgc	7	nag_dsycon Estimate condition number of real symmetric indefinite matrix, matrix already factorized by nag_dsytrf (f07mdc)
f07mhc	7	nag_dsyvfs Refined solution with error bounds of real symmetric indefinite system of linear equations, multiple right-hand sides
f07mjc	7	nag_dsytri Inverse of real symmetric indefinite matrix, matrix already factorized by nag_dsytrf (f07mdc)
f07mrc	7	nag_zhetrf Bunch–Kaufman factorization of complex Hermitian indefinite matrix
f07msc	7	nag_zhetrs Solution of complex Hermitian indefinite system of linear equations, multiple right-hand sides, matrix already factorized by nag_zhetrf (f07mrc)
f07muc	7	nag_zhecon Estimate condition number of complex Hermitian indefinite matrix, matrix already factorized by nag_zhetrf (f07mrc)
f07mvc	7	nag_zherfs Refined solution with error bounds of complex Hermitian indefinite system of linear equations, multiple right-hand sides
f07mwc	7	nag_zhetri Inverse of complex Hermitian indefinite matrix, matrix already factorized by nag_zhetrf (f07mrc)
f07nrc	7	nag_zsytrf Bunch–Kaufman factorization of complex symmetric matrix
f07nsc	7	nag_zsytrs Solution of complex symmetric system of linear equations, multiple right-hand sides, matrix already factorized by nag_zsytrf (f07nrc)

f07nuc	7	nag_zsycon Estimate condition number of complex symmetric matrix, matrix already factorized by nag_zsytrf (f07nrc)
f07nvc	7	nag_zsyrrfs Refined solution with error bounds of complex symmetric system of linear equations, multiple right-hand sides
f07nwc	7	nag_zsytri Inverse of complex symmetric matrix, matrix already factorized by nag_zsytrf (f07nrc)
f07pdc	7	nag_dsptf Bunch–Kaufman factorization of real symmetric indefinite matrix, packed storage
f07pec	7	nag_dsptfs Solution of real symmetric indefinite system of linear equations, multiple right-hand sides, matrix already factorized by nag_dsptf (f07pdc), packed storage
f07pgc	7	nag_dspcon Estimate condition number of real symmetric indefinite matrix, matrix already factorized by nag_dsptf (f07pdc), packed storage
f07phc	7	nag_dsprfs Refined solution with error bounds of real symmetric indefinite system of linear equations, multiple right-hand sides, packed storage
f07pjc	7	nag_dsptri Inverse of real symmetric indefinite matrix, matrix already factorized by nag_dsptf (f07pdc), packed storage
f07prc	7	nag_zhptf Bunch–Kaufman factorization of complex Hermitian indefinite matrix, packed storage
f07psc	7	nag_zhptfs Solution of complex Hermitian indefinite system of linear equations, multiple right-hand sides, matrix already factorized by nag_zhptf (f07prc), packed storage
f07puc	7	nag_zhpcon Estimate condition number of complex Hermitian indefinite matrix, matrix already factorized by nag_zhptf (f07prc), packed storage
f07pvc	7	nag_zhprfs Refined solution with error bounds of complex Hermitian indefinite system of linear equations, multiple right-hand sides, packed storage
f07pwc	7	nag_zhptri Inverse of complex Hermitian indefinite matrix, matrix already factorized by nag_zhptf (f07prc), packed storage
f07qrc	7	nag_zsptf Bunch–Kaufman factorization of complex symmetric matrix, packed storage
f07qsc	7	nag_zsptfs Solution of complex symmetric system of linear equations, multiple right-hand sides, matrix already factorized by nag_zsptf (f07qrc), packed storage
f07quc	7	nag_zspcon Estimate condition number of complex symmetric matrix, matrix already factorized by nag_zsptf (f07qrc), packed storage
f07qvc	7	nag_zsprfs Refined solution with error bounds of complex symmetric system of linear equations, multiple right-hand sides, packed storage
f07qwc	7	nag_zsptri Inverse of complex symmetric matrix, matrix already factorized by nag_zsptf (f07qrc), packed storage
f07tec	7	nag_dtrfs Solution of real triangular system of linear equations, multiple right-hand sides
f07tgc	7	nag_dtrcon Estimate condition number of real triangular matrix

f07thc	7	nag_dtrrfs Error bounds for solution of real triangular system of linear equations, multiple right-hand sides
f07tjc	7	nag_dtrtri Inverse of real triangular matrix
f07tsc	7	nag_ztrtrs Solution of complex triangular system of linear equations, multiple right-hand sides
f07tuc	7	nag_ztrcon Estimate condition number of complex triangular matrix
f07tvc	7	nag_ztrrfs Error bounds for solution of complex triangular system of linear equations, multiple right-hand sides
f07twc	7	nag_ztrtri Inverse of complex triangular matrix
f07uec	7	nag_dtptrs Solution of real triangular system of linear equations, multiple right-hand sides, packed storage
f07ugc	7	nag_dtpcon Estimate condition number of real triangular matrix, packed storage
f07uhc	7	nag_dtparfs Error bounds for solution of real triangular system of linear equations, multiple right-hand sides, packed storage
f07ujc	7	nag_dtptri Inverse of real triangular matrix, packed storage
f07usc	7	nag_ztptrs Solution of complex triangular system of linear equations, multiple right-hand sides, packed storage
f07uuc	7	nag_ztpcon Estimate condition number of complex triangular matrix, packed storage
f07uvc	7	nag_ztparfs Error bounds for solution of complex triangular system of linear equations, multiple right-hand sides, packed storage
f07uwc	7	nag_ztptri Inverse of complex triangular matrix, packed storage
f07vec	7	nag_dtbtrs Solution of real band triangular system of linear equations, multiple right-hand sides
f07vgc	7	nag_dtbcon Estimate condition number of real band triangular matrix
f07vhc	7	nag_dtbarfs Error bounds for solution of real band triangular system of linear equations, multiple right-hand sides
f07vsc	7	nag_ztbtrs Solution of complex band triangular system of linear equations, multiple right-hand sides
f07vuc	7	nag_ztbcon Estimate condition number of complex band triangular matrix
f07vvc	7	nag_ztbarfs Error bounds for solution of complex band triangular system of linear equations, multiple right-hand sides
