

## NAG Library Chapter Contents

### f02 – Eigenvalues and Eigenvectors

#### f02 Chapter Introduction

Function Name	Mark of Introduction	Purpose
f02aac	1	nag_real_symm_eigenvalues All eigenvalues of real symmetric matrix <b>Note:</b> this function is scheduled for withdrawal at Mark 26, see Advice on Replacement Calls for Withdrawn/Superseded Functions for further information.
f02abc	1	nag_real_symm_eigensystem All eigenvalues and eigenvectors of real symmetric matrix <b>Note:</b> this function is scheduled for withdrawal at Mark 26, see Advice on Replacement Calls for Withdrawn/Superseded Functions for further information.
f02adc	1	nag_real_symm_general_eigenvalues All eigenvalues of generalized real symmetric-definite eigenproblem <b>Note:</b> this function is scheduled for withdrawal at Mark 26, see Advice on Replacement Calls for Withdrawn/Superseded Functions for further information.
f02aec	1	nag_real_symm_general_eigensystem All eigenvalues and eigenvectors of generalized real symmetric-definite eigenproblem <b>Note:</b> this function is scheduled for withdrawal at Mark 26, see Advice on Replacement Calls for Withdrawn/Superseded Functions for further information.
f02afc	1	nag_real_eigenvalues All eigenvalues of real matrix <b>Note:</b> this function is scheduled for withdrawal at Mark 26, see Advice on Replacement Calls for Withdrawn/Superseded Functions for further information.
f02agc	1	nag_real_eigensystem All eigenvalues and eigenvectors of real matrix <b>Note:</b> this function is scheduled for withdrawal at Mark 26, see Advice on Replacement Calls for Withdrawn/Superseded Functions for further information.
f02awc	2	nag_hermitian_eigenvalues All eigenvalues of complex Hermitian matrix <b>Note:</b> this function is scheduled for withdrawal at Mark 26, see Advice on Replacement Calls for Withdrawn/Superseded Functions for further information.
f02axc	2	nag_hermitian_eigensystem All eigenvalues and eigenvectors of complex Hermitian matrix <b>Note:</b> this function is scheduled for withdrawal at Mark 26, see Advice on Replacement Calls for Withdrawn/Superseded Functions for further information.
f02bjc	2	nag_real_general_eigensystem Computes all eigenvalues and, optionally, eigenvectors of real generalized eigenproblem, by $QZ$ algorithm <b>Note:</b> this function is scheduled for withdrawal at Mark 26, see Advice on Replacement Calls for Withdrawn/Superseded Functions for further information.
f02ecc	5	nag_real_eigensystem_sel Computes selected eigenvalues and eigenvectors of a real general matrix

f02ekc	24	nag_eigen_real_gen_sparse_arnoldi Selected eigenvalues and eigenvectors of a real sparse general matrix
f02gcc	5	nag_complex_eigensystem_sel Computes selected eigenvalues and eigenvectors of a complex general matrix
f02jcc	24	nag_eigen_real_gen_quad Solves the quadratic eigenvalue problem for real matrices
f02jqc	24	nag_eigen_complex_gen_quad Solves the quadratic eigenvalue problem for complex matrices
f02wec	1	nag_real_svd SVD of real matrix <b>Note:</b> this function is scheduled for withdrawal at Mark 26, see Advice on Replacement Calls for Withdrawn/Superseded Functions for further information.
f02wgc	9	nag_real_partial_svd Computes leading terms in the singular value decomposition of a real general matrix; also computes corresponding left and right singular vectors
f02xec	1	nag_complex_svd SVD of complex matrix <b>Note:</b> this function is scheduled for withdrawal at Mark 26, see Advice on Replacement Calls for Withdrawn/Superseded Functions for further information.

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