NAG Library Chapter Contents

E01 – Interpolation

E01 Chapter Introduction – a description of the Chapter and an overview of the algorithms available

Routine Name	Mark of Introduction	Purpose
E01AAF	1	nagf_interp_1d_aitken Interpolated values, Aitken's technique, unequally spaced data, one variable
E01ABF	1	nagf_interp_1d_everett Interpolated values, Everett's formula, equally spaced data, one variable
E01AEF	8	nagf_interp_1d_cheb Interpolating functions, polynomial interpolant, data may include derivative values, one variable
E01BAF	8	nagf_interp_1d_spline Interpolating functions, cubic spline interpolant, one variable
E01BEF	13	nagf_interp_1d_monotonic Interpolating functions, monotonicity-preserving, piecewise cubic Hermite, one variable
E01BFF	13	nagf_interp_1d_monotonic_eval Interpolated values, interpolant computed by E01BEF, function only, one variable
E01BGF	13	nagf_interp_1d_monotonic_deriv Interpolated values, interpolant computed by E01BEF, function and first derivative, one variable
E01BHF	13	nagf_interp_1d_monotonic_intg Interpolated values, interpolant computed by E01BEF, definite integral, one variable
E01DAF	14	nagf_interp_2d_spline_grid Interpolating functions, fitting bicubic spline, data on rectangular grid
E01EAF	25	nagf_interp_2d_triangulate Triangulation of two-dimensional scattered grid, method of Renka and Cline
E01EBF	25	nagf_interp_2d_triang_bary_eval Barycentric interpolation on function values provided on a two-dimensional scattered grid
E01RAF	9	nagf_interp_1d_ratnl Interpolating functions, rational interpolant, one variable
E01RBF	9	nagf_interp_1d_ratnl_eval Interpolated values, evaluate rational interpolant computed by E01RAF, one variable
E01SAF	13	nagf_interp_2d_scat Interpolating functions, method of Renka and Cline, two variables
E01SBF	13	nagf_interp_2d_scat_eval Interpolated values, evaluate interpolant computed by E01SAF, two variables
E01SGF	18	nagf_interp_2d_scat_shep Interpolating functions, modified Shepard's method, two variables
E01SHF	18	nagf_interp_2d_scat_shep_eval Interpolated values, evaluate interpolant computed by E01SGF, function and first derivatives, two variables
E01TGF	18	nagf_interp_3d_scat_shep Interpolating functions, modified Shepard's method, three variables
E01THF	18	nagf_interp_3d_scat_shep_eval Interpolated values, evaluate interpolant computed by E01TGF, function and first derivatives, three variables

E01TKF	23	nagf_interp_4d_scat_shep Interpolating functions, modified Shepard's method, four variables
E01TLF	23	nagf_interp_4d_scat_shep_eval Interpolated values, evaluate interpolant computed by E01TKF, function and first derivatives, four variables
E01TMF	23	nagf_interp_5d_scat_shep Interpolating functions, modified Shepard's method, five variables
E01TNF	23	nagf_interp_5d_scat_shep_eval Interpolated values, evaluate interpolant computed by E01TMF, function and first derivatives, five variables
E01ZMF	24	nagf_interp_nd_scat_shep Interpolating function, modified Shepard's method, d dimensions
E01ZNF	24	nagf_interp_nd_scat_shep_eval Interpolated values, evaluate interpolant computed by E01ZMF, function and first derivatives, d dimensions