NAG Library Chapter Contents

C05 – Roots of One or More Transcendental Equations

C05 Chapter Introduction – a description of the Chapter and an overview of the algorithms available

Routine Name	Mark of Introduction	Purpose
c05auf	23	nagf_roots_contfn_brent_interval Zero of continuous function, Brent algorithm, from a given starting value, binary search for interval
c05avf	8	nagf_roots_contfn_interval_rcomm Binary search for interval containing zero of continuous function (reverse communication)
c05awf	23	nagf_roots_contfn_cntin Zero of continuous function, continuation method, from a given starting value
c05axf	8	nagf_roots_contfn_cntin_rcomm Zero of continuous function, continuation method, from a given starting value (reverse communication)
c05ayf	23	nagf_roots_contfn_brent Zero of continuous function in a given interval, Brent algorithm
c05azf	7	nagf_roots_contfn_brent_rcomm Zero of continuous function in a given interval, Brent algorithm (reverse communication)
c05baf	22	nagf_roots_lambertw_real Real values of Lambert's W function, $W(x)$
c05bbf	23	nagf_roots_lambertw_complex Values of Lambert's W function, $W(z)$
c05mdf	26.1	nagf_roots_sys_func_aa_rcomm Solution of a system of nonlinear equations using Anderson acceleration (reverse communication)
c05qbf	23	nagf_roots_sys_func_easy Solution of a system of nonlinear equations using function values only (easy-to-use)
c05qcf	23	nagf_roots_sys_func_expert Solution of a system of nonlinear equations using function values only (comprehensive)
c05qdf	23	nagf_roots_sys_func_rcomm Solution of a system of nonlinear equations using function values only (reverse communication)
c05qsf	23	nagf_roots_sparsys_func_easy Solution of a sparse system of nonlinear equations using function values only (easy-to-use)
c05rbf	23	nagf_roots_sys_deriv_easy Solution of a system of nonlinear equations using first derivatives (easy-to-use)
c05rcf	23	nagf_roots_sys_deriv_expert Solution of a system of nonlinear equations using first derivatives (comprehensive)