NAG C Library Chapter Contents

d02 – Ordinary Differential Equations

d02 Chapter Introduction

Routine Name	Mark of Introduction	Purpose
d02cjc	2	nag_ode_ivp_adams_gen Ordinary differential equation solver using a variable-order variable-step Adams method (Black Box)
d02ejc	3	nag_ode_ivp_bdf_gen Ordinary differential equations solver, stiff, initial value problems using the Backward Differentiation Formulae
d02gac	3	nag_ode_bvp_fd_nonlin_fixedbc Ordinary differential equations solver, for simple nonlinear two-point boundary value problems, using a finite difference technique with deferred correction
d02gbc	3	nag_ode_bvp_fd_lin_gen Ordinary differential equations solver, for general linear two-point boundary value problems, using a finite difference technique with deferred correction
d02pcc	3	nag_ode_ivp_rk_range Ordinary differential equations solver, initial value problems over a range using Runge–Kutta methods
d02pdc	3	nag_ode_ivp_rk_onestep Ordinary differential equations solver, initial value problems, one time step using Runge–Kutta methods
d02ppc	3	nag_ode_ivp_rk_free Freeing function for use with the Runge–Kutta suite (d02p functions)
d02pvc	3	nag_ode_ivp_rk_setup Setup function for use with nag_ode_ivp_rk_range (d02pcc) and/or nag_ode_ivp_rk_onestep (d02pdc)
d02pwc	3	nag_ode_ivp_rk_reset_tend A function to re-set the end point following a call to nag_ode_ivp_rk_onestep (d02pdc)
d02pxc	3	nag_ode_ivp_rk_interp Ordinary differential equations solver, computes the solution by interpolation anywhere on an integration step taken by nag_ode_ivp_rk_onestep (d02pdc)
d02pzc	3	nag_ode_ivp_rk_errass A function to provide global error assessment during an integration with either nag_ode_ivp_rk_range (d02pcc) or nag_ode_ivp_rk_onestep (d02pdc)
d02qfc	2	nag_ode_ivp_adams_roots Ordinary differential equation solver using Adams method (sophisticated use)
d02qwc	2	nag_ode_ivp_adams_setup Setup function for nag_ode_ivp_adams_roots (d02qfc)
d02qyc	2	nag_ode_ivp_adams_free Freeing function for use with nag_ode_ivp_adams_roots (d02qfc)
d02qzc	2	nag_ode_ivp_adams_interp Interpolation function for use with nag_ode_ivp_adams_roots (d02qfc)
d02rac	3	nag_ode_bvp_fd_nonlin_gen Ordinary differential equations solver, for general nonlinear two-point boundary value problems, using a finite difference technique with deferred correction