

NAG C Library Chapter Contents

g05 – Random Number Generators

g05 Chapter Introduction

Routine Name	Mark of Introduction	Purpose
g05cac	1	nag_random_continuous_uniform Pseudo-random real numbers, uniform distribution over (0,1)
g05cbc	1	nag_random_init_repeatable Initialize random number generating functions to give repeatable sequence
g05ccc	1	nag_random_init_nonrepeatable Initialize random number generating functions to give non-repeatable sequence
g05cfc	1	nag_save_random_state Save state of random number generating functions
g05cgc	1	nag_restore_random_state Restore state of random number generating functions
g05dac	1	nag_random_continuous_uniform_ab Pseudo-random real numbers, uniform distribution over (a, b)
g05dbc	1	nag_random_exp Pseudo-random real numbers, (negative) exponential distribution
g05ddc	1	nag_random_normal Pseudo-random real numbers, Normal distribution
g05dyc	1	nag_random_discrete_uniform Pseudo-random integer from uniform distribution
g05eac	2	nag_ref_vec_multi_normal Set up reference vector for multivariate Normal distribution
g05ecc	2	nag_ref_vec_poisson Set up reference vector for generating pseudo-random integers, Poisson distribution
g05edc	2	nag_ref_vec_binomial Set up reference vector for generating pseudo-random integers, binomial distribution
g05ehc	3	nag_ran_permut_vec Pseudo-random permutation of an integer vector
g05ejc	3	nag_ran_sample_vec Pseudo-random sample without replacement from an integer vector
g05exc	2	nag_ref_vec_discrete_pdf_cdf Set up reference vector from supplied cumulative distribution function or probability distribution function
g05eyc	2	nag_return_discrete Pseudo-random integer from reference vector
g05ezc	2	nag_return_multi_normal Pseudo-random multivariate Normal vector from reference vector
g05fec	2	nag_random_beta Pseudo-random real numbers from the beta distribution
g05ffc	2	nag_random_gamma Pseudo-random real numbers from the gamma distribution
g05hac	3	nag_arma_time_series ARMA time series of n terms
g05hkc	6	nag_generate_agarchI Univariate time series, generate n terms of either a symmetric GARCH process or a GARCH process with asymmetry of the form $(\epsilon_{t-1} + \gamma)^2$
g05hlc	6	nag_generate_agarchII Univariate time series, generate n terms of a GARCH process with asymmetry of the form $(\epsilon_{t-1} + \gamma\epsilon_{t-1})^2$