NAG Fortran Library Chapter Contents

G13 – Time Series Analysis

Note: please refer to the Users' Note for your implementation to check that a routine is available.

G13 Chapter Introduction

Routine Name	Mark of Introduction	Purpose
G13AAF	9	Univariate time series, seasonal and non-seasonal differencing
G13ABF	9	Univariate time series, sample autocorrelation function
G13ACF	9	Univariate time series, partial autocorrelations from autocorrelations
G13ADF	9	Univariate time series, preliminary estimation, seasonal ARIMA model
G13AEF	9	Univariate time series, estimation, seasonal ARIMA model (comprehensive)
G13AFF	9	Univariate time series, estimation, seasonal ARIMA model (easy-to-use)
G13AGF	9	Univariate time series, update state set for forecasting
G13AHF	9	Univariate time series, forecasting from state set
G13AJF	10	Univariate time series, state set and forecasts, from fully specified seasonal ARIMA model
G13ASF	13	Univariate time series, diagnostic checking of residuals, following G13AEF or G13AFF
G13AUF	14	Computes quantities needed for range-mean or standard deviation-mean plot
G13BAF	10	Multivariate time series, filtering (pre-whitening) by an ARIMA model
G13BBF	11	Multivariate time series, filtering by a transfer function model
G13BCF	10	Multivariate time series, cross-correlations
G13BDF	11	Multivariate time series, preliminary estimation of transfer function model
G13BEF	11	Multivariate time series, estimation of multi-input model
G13BGF	11	Multivariate time series, update state set for forecasting from multi-input model
G13BHF	11	Multivariate time series, forecasting from state set of multi-input model
G13BJF	11	Multivariate time series, state set and forecasts from fully specified multi-input model
G13CAF	10	Univariate time series, smoothed sample spectrum using rectangular, Bartlett, Tukey or Parzen lag window
G13CBF	10	Univariate time series, smoothed sample spectrum using spectral smoothing by the trapezium frequency (Daniell) window
G13CCF	10	Multivariate time series, smoothed sample cross spectrum using rectangular, Bartlett, Tukey or Parzen lag window
G13CDF	10	Multivariate time series, smoothed sample cross spectrum using spectral smoothing by the trapezium frequency (Daniell) window
G13CEF	10	Multivariate time series, cross amplitude spectrum, squared coherency, bounds, univariate and bivariate (cross) spectra
G13CFF	10	Multivariate time series, gain, phase, bounds, univariate and bivariate (cross) spectra
G13CGF	10	Multivariate time series, noise spectrum, bounds, impulse response function and its standard error
G13DBF	11	Multivariate time series, multiple squared partial autocorrelations
G13DCF	12	Multivariate time series, estimation of VARMA model
G13DJF	15	Multivariate time series, forecasts and their standard errors
G13DKF	15	Multivariate time series, updates forecasts and their standard errors
G13DLF	15	Multivariate time series, differences and/or transforms
G13DMF	15	Multivariate time series, sample cross-correlation or cross-covariance matrices
G13DNF	15	Multivariate time series, sample partial lag correlation matrices, χ^2 statistics and significance levels
G13DPF	16	Multivariate time series, partial autoregression matrices