

NAG Library Manual, Mark 23

Contents

Copyright Statement

Foreword

Introduction

Essential Introduction

NAG Fortran Library specific documentation

Mark 23 NAG Fortran Library News

NAG Library for SMP & Multicore specific documentation

Introduction to the NAG Library for SMP & Multicore

Mark 23 NAG Library for SMP & Multicore News

Tuned and Enhanced Routines in the NAG Library for SMP & Multicore

Thread Safety

Routines Withdrawn or Scheduled for Withdrawal

Advice on Replacement Calls for Withdrawn/Superseded Routines

Acknowledgements

Online Documentation

Indexes

Implementation-specific Information

Chapters of the Library

A00 – Library Identification

A02 – Complex Arithmetic

C02 – Zeros of Polynomials

C05 – Roots of One or More Transcendental Equations

C06 – Summation of Series

C09 – Wavelet Transforms

D01 – Quadrature

D02 – Ordinary Differential Equations

D03 – Partial Differential Equations

D04 – Numerical Differentiation

D05 – Integral Equations

D06 – Mesh Generation

E01 – Interpolation

E02 – Curve and Surface Fitting

E04 – Minimizing or Maximizing a Function

E05 – Global Optimization of a Function

F – Linear Algebra
F01 – Matrix Operations, Including Inversion
F02 – Eigenvalues and Eigenvectors
F03 – Determinants
F04 – Simultaneous Linear Equations
F05 – Orthogonalisation
F06 – Linear Algebra Support Routines
F07 – Linear Equations (LAPACK)
F08 – Least Squares and Eigenvalue Problems (LAPACK)
F11 – Large Scale Linear Systems
F12 – Large Scale Eigenproblems
F16 – Further Linear Algebra Support Routines
G01 – Simple Calculations on Statistical Data
G02 – Correlation and Regression Analysis
G03 – Multivariate Methods
G04 – Analysis of Variance
G05 – Random Number Generators
G07 – Univariate Estimation
G08 – Nonparametric Statistics
G10 – Smoothing in Statistics
G11 – Contingency Table Analysis
G12 – Survival Analysis
G13 – Time Series Analysis
H – Operations Research
M01 – Sorting and Searching
P01 – Error Trapping
S – Approximations of Special Functions
X01 – Mathematical Constants
X02 – Machine Constants
X03 – Inner Products
X04 – Input/Output Utilities
X05 – Date and Time Utilities
