

## **Numerical Algorithms Group announces new functionality for the NAG Library**

July 2011. The Numerical Algorithms Group (NAG), provider of world-class numerical software and high performance computing services, has just announced the availability of the latest NAG Fortran Library. Now at Mark 23, the NAG Fortran Library contains over 1,700 powerful, reliable and flexible algorithms, ready for use from a wide range of operating systems, languages, environments and packages including Excel, Java, MATLAB and .NET/C#.

Over 100 new user-callable routines have been added at this release. There have been extensions in functionality included in the areas of statistics, optimization, wavelet transforms, nonlinear equations, ordinary differential equations, interpolation, surface fitting, matrix operations, linear algebra, and special functions. For example: the already extensive optimization chapters have been extended with new methods; new base generators augment the broad existing range of random number generators; and the interpolation chapter now includes routines for four- and five-dimensional data.

The NAG Library is embedded in thousands of applications at Fortune's 'Global 500' companies and is used by researchers at prestigious learning institutions because of its unrivalled quality, broad applicability and extensive numerical capabilities.

Professor Fred Hickernell, Chair of Applied Mathematics at Illinois Institute of Technology commented, 'It is good to see that this latest release of the NAG Library continues the sure-footed progress of new appropriate and useful mathematical methods from researchers to practitioners, while providing the level of support and clear detailed documentation that has become the NAG hallmark. In addition to the valuable optimization and statistical chapters, a prime example for me is the range of RNGs (Random Number Generators) – the Library provides both pseudo-random numbers generators and Low Discrepancy (quasi-random) Sequence generators, which makes the Library suitable for an ever wider range of applications.

Because of the library's flexible nature, routines can be easily called from Excel, .NET, Java, Python and many other languages and environments. Later in the year new functionality will become available for C and C++ programmers in the form of the NAG C Library. The NAG Toolbox for MATLAB will also be updated to feature the latest functionality.