# Numerical Algorithms Group

# Experts in numerical software and HPC services

The Numerical Algorithms Group (NAG) is dedicated to applying its unique expertise in numerical software engineering to delivering high quality computational software and high performance computing services. For four decades NAG experts have worked closely with world-leading researchers in academia and industry to create powerful, accurate and flexible software which is today relied on by tens of thousands of users, companies, learning institutions as well as numerous independent software vendors.

Established as a collaborative inter-university venture and steeped in numerical history, including world firsts, NAG's present and future is equally as exciting as its past. Comprising collaborative projects, including being a partner to HECToR – the UK's national supercomputing service, and the continual development of NAG's highly renowned numerical libraries, the strategy is well established but also challenging.

Fundamental to NAG's longevity and success is its ethos for collaboration and support of research, development and learning. Its not-for-profit status allows it to focus on the advancement of its staff, the research and development of its products and services, and the fostering of new numerical and scientific talent. NAG's expertise, gained through the provision and support of its globally renowned numerical libraries and HPC services, is the cornerstone upon which all projects and research into future technologies and products is based.

NAG currently employs over 100 people in its offices in Oxford, Manchester, Chicago, Tokyo and Taipei and has a worldwide network of distributors.

•• The reputation for reliability of NAG software gave us the confidence that we would get the right results \*\*

Jean Gaul Head of the development team, SETRA





## NAG products and services

#### Numerical Libraries

- NAG Fortran Library
- NAG C Library
- NAG Library for SMP & multicore
- NAG Toolbox for MATLAB

#### Compilers

- NAG Fortran Compiler
- NAG Fortran Builder

#### Services

- NAG HPC Services
- NAG Partner Program



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## **Numerical Libraries**

Produced by experts for use in a variety of applications the NAG Libraries are the largest commercially available collections of numerical, statistical and data mining algorithms in the world. With over 1,600 tried and tested routines that are renowned for correctness and flexibility the NAG Libraries are at the core of tens of thousands of applications spanning the globe. Whether you're working on a PC, or a cluster of supercomputers, the NAG Library has the functionality and capabilities to fit your model. It is available for many different programming languages, environments and packages including: C, C++, C#, Fortran, Java, Maple, MATLAB, Microsoft Excel, Microsoft .NET, Octave, Python, R, Visual Basic, Scilab, Labview.

### **Compilers**

NAG Fortran Compiler - (derived from the world's first Fortran 90 Compiler, developed by NAG) is robust, highly tested and valued by developers for its checking capabilities and detailed error reporting. Available on a wide range of Unix platforms.

**NAG Fortran Builder** – is an Integrated Development Environment for the NAG Fortran Compiler for Microsoft Windows. It provides key features including a graphical user interface making it easy to use.

#### **Services**

HPC Services - Organizations can achieve an enhanced commercial advantage from computation by partnering with NAG's HPC Consulting Service. NAG experts support the whole business lifecycle including requirements review, HPC strategy, resource and service delivery planning and acquisition, and parallel software engineering support.

ISV, Hardware & Software Consulting – Many blue chip software and hardware vendors and ISVs have chosen to partner with NAG to enhance their own product offerings. See NAG's website for case studies.

#### **NAG** mission

To create high quality, commercially relevant computational software and services for commerce and research.

#### **NAG** vision

To be universally recognized as the preferred source for computational products and services and the preferred partner for collaboration.

#### **NAG values**

Integrity, quality and profound respect for the individual in our dealings with customers, staff, members and partners.

#### **NAG ethos**

Collaborative, consultative, consensus-based, principled, transparent.



#### **Collaboration, collaboration, collaboration**

Throughout its history, NAG has been involved in collaborative ventures with universities, research and commercial organizations worldwide, ensuring that NAG remains at the forefront in research and development. This collaboration with other organizations and individuals is a continuing activity within NAG and part of NAG's company ethos.

#### NAG participated projects include:

- ADVISE Research project Analysis of Data in a VISual Environment
- MKM Mathematical Knowledge Management Network
- MONET Investigation into mathematical web services
- EUREDIT Developing and evaluating new methods for editing and imputation
- PINEAPL High Performance Computing and Networking
- STABLE Statistical Visual Computing Environments
- FRISCO Esprit Reactive LTR Scheme
- OpenMath Esprit Multimedia Standards Initiative
- DECISION Integrated optimisation strategies for increased engineering design complexities
- NICONET Development and evaluation of numerically reliable software in control engineering and its implementation in production technologies
- VIVRE Visualization through an Interactive Virtual Reality Environment
- METROS Development of an effective mechanism for software reuse in Metrology

# **Contact us**

#### NAG Ltd – Oxford, UK

www.nag.co.uk +44 1865 511245

www.nag.com +1 630 971 2337

#### Nihon NAG - Tokyo, Japan

www.nag-j.co.jp +81 3 5542 6311

#### NAG Inc - Chicago, USA NAG Ltd - Taipei, Taiwan

www.nag-gc.com +886 2 25093288



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