Chest

Agreement Overview

nAG

nAG

Available to purchase until 31/07/2026

nAG (Numerical Algorithms Group) produces and distributes numerical, symbolic, statistical, visualisation and simulation software for the solution of problems in a wide range of applications in areas including science, engineering, financial analysis and research.

Key Facts

This Agreement has been extended for one year from 1 August 2025

Benefits

- Site or Department licence
- Simplified “per operating system” licensing model

Important Dates

Agreement start: 1 August 2020

Agreement end: 31 July 2026

Commitment Period for the 1-Year Extension

From the licence start date to 31 July 2026. Please see the Terms and Conditions tab for further information.

Eligible Institutions

Higher and Further Education in the United Kingdom, and Universities and Colleges of Further Education in the Republic of Ireland.

Other organisations aligned with Jisc’s charitable objectives of supporting education, research bodies, charities and the public sector may ask to participate in the Agreement. Chest will liaise with the Supplier about any such requests.

Background Information

This long established Chest Agreement has been extended for a further year to support the many sites that use NAG’s software products.

Product Information

Supplier Details

Licensor: The Numerical Algorithms Group Ltd, registered in England and Wales (company number 1249803), whose registered office is 30 St Giles, Oxford, OX1 3LE.

Product Description

The ***n*AG Library** gives academic staff and students access to 1900+ high quality mathematical and statistical routines from the language or environment of their choice (e.g. C/C++, C#/.NET, Python, Java, Fortran, MATLAB, VBA/Excel). These can be **accessed from University and personal computers** for academic use.

The *n*AG Library is now at Mark 31.0 - find out more here.

The ***n*AG Fortran Compiler** is considered the world's best checking Fortran Compiler, speeding your development of high quality compliant/portable Fortran code. It continues to progress and support the latest Fortran Standards available for Linux, Windows and Mac o/s and includes the Fortran Builder (GUI interface) on Windows.

Available *n*AG Resources

- **Contacting *n*AG Technical Support**
- **Technical report repository** and **posters**
- **Webinar repository**
- ***n*AG GitHub** (includes lots of Python code examples and more)
- **Insights**

***n*AG continues to collaborate with academics** and is actively involved with several UK Universities with partnerships for KTPs, Doctoral Centres, MSc projects and more.

*n*AG is a not for profit organisation with roots firmly planted in industrial, academic and research collaborations.

Service and Support

Trials

Free evaluation trials are available. These can be accessed through the following pages:

- **Getting started with the *n*AG Library**
- **Getting started with the *n*AG Compiler**

Product Documentation

Product documentation may be downloaded from **here**.

Technical Support

Sites holding site-wide licences are entitled to a maximum of twelve Technical Contacts. Sites holding department licences are entitled to two Technical Contacts. Support will be provided by *n*AG to the designated Technical Contact(s) or his/her deputy(ies).

***n*AG Contact Details:**

- Technical Support: **support@nag.com** / **https://support.nag.com**
- Account Manager: Catherine Julian
- Email: **operations@nag.com**
- Address: The Numerical Algorithms Group Ltd, 30 St Giles, Oxford, OX1 3LE

On-site support will be provided, upon request. For current charges contact *n*AG. *n*AG will provide consultancy support, as requested on a chargeable basis.

The software is controlled by licence keys. New keys are issued by the *n*AG Response Centre **support@nag.com**.

Supplier Web Address

Supplier home pages:

- **https://nag.com**
- **https://support.nag.com**

System Releases, New Versions and Functionality

One copy of system releases and/or new versions and/or new supporting documentation will be sent by *n*AG to Licensed Sites as and when they become commercially available.

Platforms

Windows (32 and 64 bit), Linux (including 64-bit), Solaris, and Mac OS X. Hardware requirements are available from *n*AG.

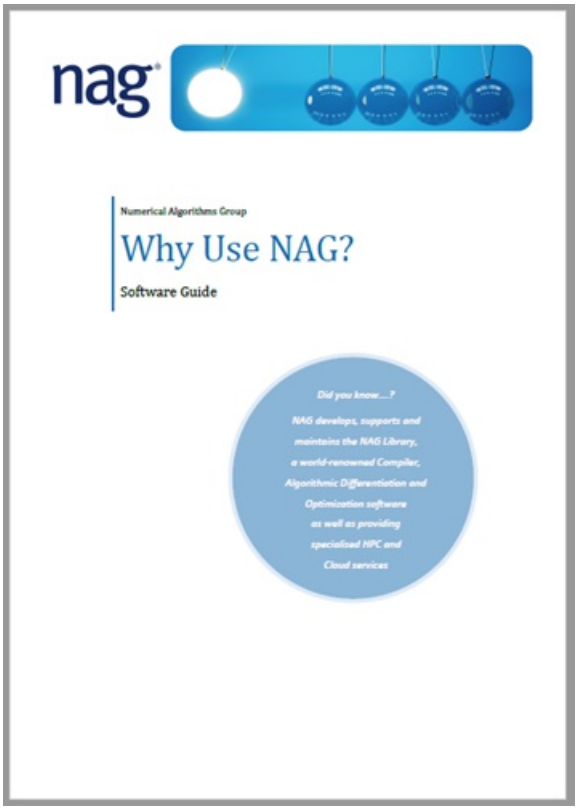
Method of Delivery of Products

Software is delivered via electronic download - download the latest versions from **here**. The software is controlled by licence keys. New keys are issued by the *n*AG Response Centre **support@nag.com**.

Useful Resources

What is *n*AG and why use it?

For anyone unfamiliar with *n*AG, this **PDF document** is a great introduction to the product, the people behind it, and how *n*AG helps students and instructors around the world. Click on the image below or the above link to read more.



Other *n*AG Resources

- **Contacting *n*AG Technical Support**
- **Technical report repository** and **posters**
- **Webinar repository**
- ***n*AG Github** (includes lots of Python code examples and more)
- **Insights**

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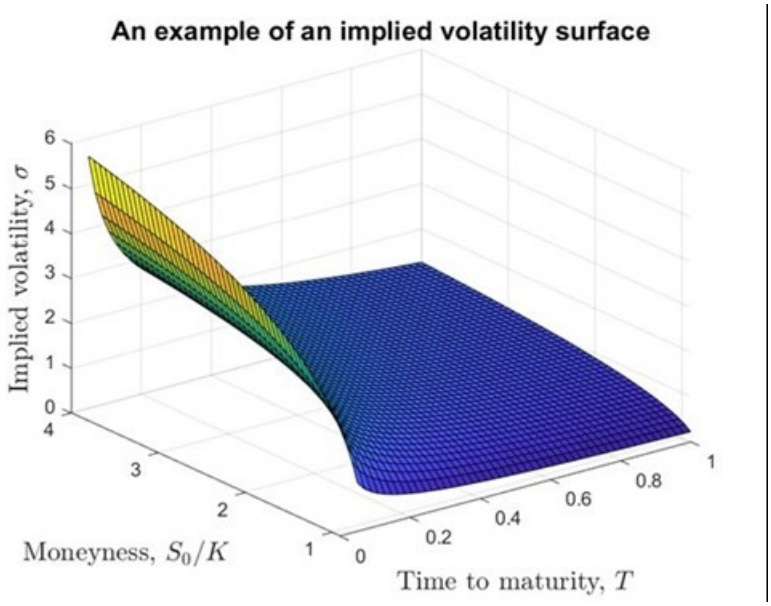
Centres, MSc projects and more.

*n*AG is a not for profit organisation with roots firmly planted in industrial, academic and research collaborations.

Fast Implied Volatility with Very High Accuracy

Very high accuracy is achieved using the new ***n*AG Library solver** for computing the implied volatility of a European option contract – even for the most difficult of volatility surfaces. The new solver features in the latest *n*AG Library available to download **here**.

The volatility surface can be highly curved, making it difficult to accurately compute the implied volatility. *n*AG's new solver, developed in collaboration with Dr Kathrin Glau (and team) at Queen Mary University, London, gives high accuracy and better performance for large datasets. *n*AG Library users now have solver options for single precision or the Jäckel method for even higher accuracy. Learn more **here. Java** and **Python** examples can be found on the ***n*AG GitHub**.



How to access the new *n*AG Library functionality

As with all new releases, *n*AG encourage *n*AG Library users to upgrade to the latest Mark to access the new content and performance improvements. *n*AG Library downloads are available **here**.

If you don't have access to the *n*AG Library and you'd like to try the new functionality, *n*AG offer **full product trials**. If you have any questions or need help, do get in touch with ***n*AG's Technical Support team**.

New *n*AG Library Functionality - Solvers for QCQP, Data Fitting Problems, AD, and Fast Implied Volatility

We are happy to announce the latest functionality available in the *n*AG Library at Mark 27.1. New additions expanding the Optimisation Modelling Suite include a novel **nonlinear least squares solver** for unconstrained and bound-constrained data fitting (calibration) problems, and functionality to simplify **building and solving quadratically constrained quadratic programming (QCQP) problems**.

Joining the major Optimisation updates are more Adjoint solvers – available in the *n*AG AD Library which ships with the *n*AG Library. When used with *n*AG's AD tool **dco/c++**, the *n*AG AD Library offers a smooth workflow which makes it easy to incorporate *n*AG solvers into a user's AD codes.

Of specific interest to finance industry professionals is a **new solver** for computing the implied volatility of a European option contract. This new *n*AG Library solver achieves very high accuracy even for the most difficult of volatility surfaces.

How to access the new *n*AG Library functionality

As with all new releases, we encourage *n*AG Library users to upgrade to the latest Mark to access the new content and performance improvements. *n*AG Library downloads are available **here** (look for product codes NLW6I271EL and NLL6I271BL). The latest Mark functionality is also available in the ***n*AG Library for Python**.

If you don't have access to the *n*AG Library and you'd like to try the new functionality, we offer **full product trials**. If you have any questions or need help, do get in touch with ***n*AG's Technical Support team**.

First-Order Active-Set Method

A Highly Competitive Optimisation Solver - Now in the ***n*AG Library**

New in the *n*AG Library at the latest Mark is a **First-order Active-set Method** (FOAS). FOAS is based on a nonlinear conjugate gradient for large-scale bound-constrained nonlinear optimisation. The solver is ideal for very large problems (tens of thousands or more variables) where the first-order derivatives are available or are relatively cheap to estimate.

Implementations of first-order methods are not only ubiquitous and have widespread use, but they have also demonstrated enduring the challenges of ever-growing problem sizes imposed by industry. Most notable are applications in statistics, e.g. parameter calibration and nonlinear model regression, amongst many others. First-order methods and the conjugate gradient method have been a research subject for well over 50 years and continue to be improved.

Learn more **here**.

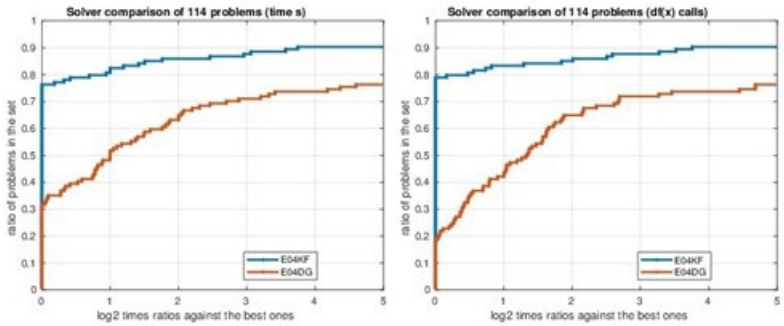


Figure 1: Performance profiles comparing solvers e04kf and e04dg over 114 CUTEst unconstrained NLP problems. Performance measures are: time (left) and number of gradient calls (right). For the time plot (left), the higher line indicates faster solver. For the right plot, the higher line represents fewer gradients calls.

*n*AG and Performance Optimisation and Productivity

*n*AG is a partner in the Performance Optimisation and Productivity Centre of Excellence (POP). POP was created with the aim of boosting the productivity of EU research and industry by providing free of charge services to advise on improving the performance of high performance computing (HPC) parallel software. Please **click here** to view a flyer.

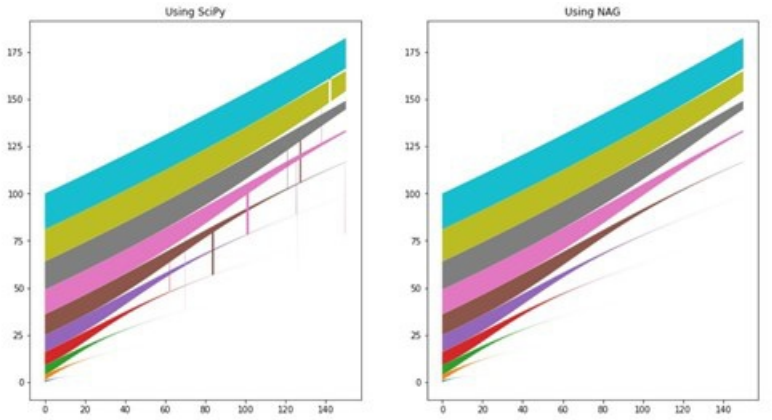
To find out more about the project, please visit **https://pop-coe.eu**.

Mathieu Functions on the *n*AG Library Demonstrating *n*AG's Commitment to Accuracy

*n*AG introduced **Mathieu functions** to the *n*AG Library at its recent update (Mark 27). Mathieu functions have a range of applications in the solution of problems involving elliptic structures including propagation within elliptical waveguides, the physics of capacitor microphones and scattering from dielectric elliptical cylinders.

Computing Mathieu functions accurately can be difficult and there are many papers on the subject. Here is a demonstration, taken from a **StackOverflow question**, showing how Python's SciPy implementation occasionally struggles.

The *n*AG implementation computes the correct results as shown in the plot below:



Learn more about this work on **GitHub**, and for the *n*AG Library Mathieu function routine documentation **click here**.

2020-25 Pricing

For reference, please see the table below for the 2020-25 pricing previously listed:

Product Name	OS	Term (Years)	Payment	2020/21 (£)	2021/22 (£)	2022/23 (£)	2023/24 (£)	2024/25 (£)
Compiler	1	3	Annual	1,660	1,660	1,660		
Compiler	1	5	Annual	1,530	1,530	1,530	1,530	1,530
Compiler	1	3	One-off	4,640				
Compiler	1	5	One-off	6,890				
Compiler	2	3	Annual	2,690	2,690	2,690		
Compiler	2	5	Annual	2,510	2,510	2,510	2,510	2,510
Compiler	2	3	One-off	7,540				
Compiler	2	5	One-off	11,300				
Compiler	All	3	Annual	3,000	3,000	3,000		
Compiler	All	5	Annual	2,840	2,840	2,840	2,840	2,840
Compiler	All	3	One-off	8,410				
Compiler	All	5	One-off	12,780				
Complier Gold	1	3	Annual	2,610	2,610	2,610		
Complier Gold	1	5	Annual	2,480	2,480	2,480	2,480	2,480
Complier Gold	1	3	One-off	7,490				
Complier Gold	1	5	One-off	11,640				
Complier Gold	2	3	Annual	3,640	3,640	3,640		
Complier Gold	2	5	Annual	3,460	3,460	3,460	3,460	3,460
Complier Gold	2	3	One-off	10,390				
Complier Gold	2	5	One-off	16,050				
Complier Gold	All	3	Annual	3,950	3,950	3,950		
Complier Gold	All	5	Annual	3,790	3,790	3,790	3,790	3,790
Complier Gold	All	3	One-off	11,260				

Complier Gold	All	5	One-off	17,530				
Library	1	3	Annual	4,040	4,040	4,040		
Library	1	5	Annual	3,710	3,710	3,710	3,710	3,710
Library	1	3	One-off	11,310				
Library	1	5	One-off	16,700				
Library	2	3	Annual	6,000	6,000	6,000		
Library	2	5	Annual	5,670	5,670	5,670	5,670	5,670
Library	2	3	One-off	16,810				
Library	2	5	One-off	25,520				
Library	3	3	Annual	8,070	8,070	8,070		
Library	3	5	Annual	7,520	7,520	7,520	7,520	7,520
Library	3	3	One-off	22,610				
Library	3	5	One-off	33,840				
Library	All	3	Annual	9,940	9,940	9,940		
Library	All	5	Annual	9,270	9,270	9,270	9,270	9,270
Library	All	3	One-off	27,830				
Library	All	5	One-off	41,720				
Library Gold	1	3	Annual	4,990	4,990	4,990		
Library Gold	1	5	Annual	4,660	4,660	4,660	4,660	4,660
Library Gold	1	3	One-off	14,160				
Library Gold	1	5	One-off	21,450				
Library Gold	2	3	Annual	6,950	6,950	6,950		
Library Gold	2	5	Annual	6,620	6,620	6,620	6,620	6,620
Library Gold	2	3	One-off	19,660				
Library Gold	2	5	One-off	30,270				
Library Gold	3	3	Annual	9,620	9,620	9,620		
Library Gold	3	5	Annual	8,470	8,470	8,470	8,470	8,470
Library Gold	3	3	One-off	25,460				
Library Gold	3	5	One-off	38,590				
Library Gold	All	3	Annual	11,840	11,840	11,840		
Library Gold	All	5	Annual	11,170	11,170	11,170	11,170	11,170
Library Gold	All	3	One-off	33,530				
Library Gold	All	5	One-off	51,220				
Compiler & Library	1	3	Annual	5,070	5,070	5,070		
Compiler & Library	1	5	Annual	4,470	4,470	4,470	4,470	4,470
Compiler & Library	1	3	One-off	14,200				

Compiler & Library	1	5	One-off	20,120				
Compiler & Library	2	3	Annual	7,250	7,250	7,250		
Compiler & Library	2	5	Annual	6,760	6,760	6,760	6,760	6,760
Compiler & Library	2	3	One-off	20,290				
Compiler & Library	2	5	One-off	30,420				
Compiler & Library	3	3	Annual	9,630	9,630	9,630		
Compiler & Library	3	5	Annual	8,940	8,940	8,940	8,940	8,940
Compiler & Library	3	3	One-off	26,960				
Compiler & Library	3	5	One-off	40,230				
Compiler & Library	All	3	Annual	11,800	11,800	11,800		
Compiler & Library	All	5	Annual	11,120	11,120	11,120	11,120	11,120
Compiler & Library	All	3	One-off	33,040				
Compiler & Library	All	5	One-off	50,040				
Compiler & Library Gold	1	3	Annual	6,020	6,020	6,020		
Compiler & Library Gold	1	5	Annual	5,420	5,420	5,420	5,420	5,420
Compiler & Library Gold	1	3	One-off	17,050				
Compiler & Library Gold	1	5	One-off	24,870				
Compiler & Library Gold	2	3	Annual	8,200	8,200	8,200		
Compiler & Library Gold	2	5	Annual	7,710	7,710	7,710	7,710	7,710
Compiler & Library Gold	2	3	One-off	23,140				
Compiler & Library Gold	2	5	One-off	35,170				
Compiler & Library Gold	3	3	Annual	10,580	10,580	10,580		
Compiler & Library Gold	3	5	Annual	9,890	9,890	9,890	9,890	9,890
Compiler & Library Gold	3	3	One-off	29,810				
Compiler & Library Gold	3	5	One-off	44,980				
Compiler & Library Gold	All	3	Annual	13,700	13,700	13,700		
Compiler & Library Gold	All	5	Annual	13,020	13,020	13,020	13,020	13,020

Compiler & Library Gold	All	3	One-off	38,740
Compiler & Library Gold	All	5	One-off	59,540

Terms and Conditions

Licensor: The Numerical Algorithms Group Ltd, registered in England and Wales (company number 1249803), whose registered office is 30 St Giles, Oxford, OX1 3LE.

The Chest Order, together with the Licence Terms and Conditions, and any exceptions listed below, create a legally binding contract between your institution, organisation or company and the Licensor. Therefore please read the terms and conditions carefully and only submit a Chest Order if its terms and conditions are acceptable to your institution, organisation or company and you have the authority to make the financial commitment shown.

Licence Type

The Department and Site licences are subject to the terms and conditions for the **Standard Chest Licence for Software (June 2011)**. Please see the additional exceptions listed in the 'Exceptions to the Terms and Conditions' section at the bottom of the page.

Copying of the Software is allowed in accordance with the terms and conditions for the Standard Chest Licence for Software.

Payment Terms

On receipt of a completed Chest Order sites will be invoiced for the one-year extension period.

The extension Licence period is of one year duration, commencing 1 August 2025. For sites placing orders after this date, prorating of Fees shall apply where the Order is either to upgrade an existing Licence or is from a first-time subscriber.

Chest is an Enterprise of Jisc. All Purchase orders must be made out to Jisc Services Ltd, 4 Portwall Lane, Bristol, BS1 6NB to cover all charges plus VAT.

All terms contained in a PO are expressly rejected and do not form part of the Licence or vary the Licence terms in any way.

Payments are due within thirty days of invoice date; recipients of late payments are entitled to interest in accordance with ***UK statutory provisions***.

Termination Clauses

At the end of any Licence Period, unless a further Licence Period is entered into, Licensee must cease all use of the Licensed Product and de-install and destroy all copies in its possession.

Location and Use Permissions

The product(s) may be used by any Authorised User of the Licensee for Educational Purposes which includes the administration and management of the licensee's educational and research operations. These permissions are described in the terms and conditions for the Standard Chest Licence for Software.

Students	Yes
Academic Staff	Yes
Non-Academic Staff	Yes
Administration and management	Yes
Staff home use rights	Yes
Student home use rights	Yes
Installation on hosted server, virtualisation and remote access rights*	Yes

*Installation on hosted server, virtualisation and remote access rights are described in the Exceptions to the Terms and Conditions at the bottom of the page.

Personal Licences

As home-use rights are already included as standard, personal licences are not required under this Agreement.

Licensor GDPR Information

Please see ***n*AG's Privacy Policy**.

Exceptions to the Terms and Conditions

Please note, an additional term 2.2(f) is added to term 2 (Licence Grant) of Schedule 4 (Standard Chest Software Licence): “For the purpose of clarification, Licensees should note that both installation on hosted servers and virtualisation (either via a virtual desktop or virtualisation technologies such as AppsAnywhere) are permitted. Remote access to installations on campus computers is also permitted.”

Products and Pricing

Licence Term

Institutions are committed until 31 July 2026. Please see the tables below which show the options and pricing per year in UK Pounds (£s). All prices exclude VAT which shall apply at the appropriate rate.

Pricing is based on a per operating system model.

There are three tables below, as follows:

- The first (*n*AG Department Licence) allows you to tell us if you are ordering a Department licence instead of a Site licence
- The second (Operating Systems) allows you to tell us which OS you are ordering for. The number of OS you select here must correspond with the number in the product you order. Unless you are purchasing for all OS, you must tick the relevant boxes here
- The third (Products) allows you to select the product you require

Payment terms are shown on the Terms and Conditions tab.

How to Order

Making a selection in the tables below will pass through to the online order form when you click on **Order now** (having logged in to the Chest website).

If you have any questions, please contact **Chest Help**.

1. nAG Department Licence

Institutions may choose to purchase a Department licence instead of a Site licence by ticking the Department Option - Discounts applied box below:

- **A single operating system** Department licence is 60% of the single operating system Site licence fee
- **Two or more operating systems** Department licence is 50% of the relevant multi-operating system Site licence fee

Product Name	Price
Department Option - Discounts applied	TBA

2. Operating Systems

If you are ordering for one Operating System, please only tick one of the following boxes, if you are ordering for two please only tick two and so on.

Operating System	Price
Linux	N/A
Mac	N/A
Solaris	N/A
Windows	N/A

3. Products

Please tick one of the Site licence products below.

Product Name	OS	2025/26
Compiler	1	£1,759.50
Compiler	2	£2,886.50
Compiler	All	£3,266.00
Library	1	£4,266.50
Library	2	£6,520.50
Library	3	£8,648.00
Library	All	£10,660.50
Compiler & Library	1	£5,140.50
Compiler & Library	2	£7,774.00
Compiler & Library	3	£10,281.00
Compiler & Library	All	£12,778.00