

## **The Numerical Algorithms Group is participating in Intel Many Integrated Core developments**

The Numerical Algorithms Group (NAG) has today announced that it is working closely with Intel Corporation in the evaluation of the suitability of Intel® Many Integrated Core (Intel® MIC) architecture for advanced numerical algorithms. A focused development team at NAG has had early access to the Intel MIC software development platform (codenamed “Knights Ferry”) and early versions of the associated software stack. The NAG team has been successful in porting NAG routines to this new environment.

‘We have been able to produce working NAG routines quickly on the “Knights Ferry” platform’ said Mike Dewar, the Chief Technical Officer for NAG. ‘It certainly seems that this architecture will be very attractive to users with applications written in standard high-level programming languages who wish to take advantage of a co-processor optimized for highly parallel problems. Since Knights Ferry uses fully programmable CPU cores, running some of our C and Fortran code using OpenMP has been a relatively straightforward process. This experience has given us good insight into how some of our algorithms could scale up to a hundred cores and more’.

Paresh Pattani, Intel’s Director of HPC and Many Core Computing, said, “NAG is a leading library provider with expertise in numerical routines underlying many HPC applications. We are fortunate to have NAG amongst the first set of software developers to work with the “Knights Ferry” software development platform. This is a natural extension of our many years of working closely with NAG and we are pleased that NAG’s use of “Knights Ferry” and the Intel® Math Kernel Library proved an effective part of their development support work for Intel® MIC. We knew that NAG would provide valuable feedback on our hardware and software development environments. These efforts will benefit our mutual customers as they optimize their applications for future Intel® MIC products.”

NAG works with leading chip manufacturers by producing customised versions of complex numerical algorithms, by training their software engineers in specialist parallel optimization for numerical code and by participating in collaborative numerical library projects.

The NAG Library, which now comprises over 1,700 routines, continues to provide an industry benchmark for accuracy, quality, reliability and documentation standards. At each release more routines are made available in forms that are specially tailored for OpenMP cluster and parallel MPI computer systems, thereby making it easy for potential users to see the benefits of running on parallel systems.