

Biographies of the Members of the Scientific Committee

Michael Ashworth



Leader of the Advanced Research Computing Group¹ in the Computational Science & Engineering Department² at STFC's Daresbury Laboratory since 2002.

The Group is engaged in the development and optimization of large-scale applications for high-performance systems across a wide range of scientific disciplines. Mike manages the delivery of computational science and engineering support under the HPCx³ Terascaling programme and a range of High-End Computing activities funded by the Department's Service Level Agreement with EPSRC. The Group has also been highly successful in bidding for projects under the HECToR⁴ Distributed CSE Support programme

His own work focuses on the development and optimization of environmental modelling and CFD codes, including performance engineering and application of Grid technologies. He has worked with scientists at the Proudman Oceanographic Laboratory⁵ on the optimisation of the POLCOMS coastal ocean model, its coupling to ecosystem, wave and sea ice components and the introduction of data assimilation techniques. Current projects include an application of POLCOMS to study coastal and marine ecosystem processes on a global scale (GCOMS) and work on the NEMO ocean code within the project "Generic Scalability of the Unified Model".

He also manages STFC's Petascale project in which we are exploring the potential for key applications to scale to the very large number of processors (100,000-1,000,000) expected in near-future Petascale systems. Important issues include scalability, memory hierarchy, multi-core processors, fault-tolerance, data management and visualisation.

Publication list at <http://epubs.cclrc.ac.uk/search?st=browse-by-person&pid=1187>

¹ <http://www.cse.scitech.ac.uk/arc/>

² <http://www.cse.scitech.ac.uk/>

³ <http://www.hpcx.ac.uk/>

⁴ <http://www.hector.ac.uk/>

⁵ <http://www.pol.ac.uk/>