

Supercomputers give unprecedented processing power to business and academics

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The UK's most powerful GPU-based supercomputer, "Emerald", will enter into service tomorrow, alongside the "Iridis 3" system.

The combination of these two [High Performance Computing](#) systems will give businesses and academics unprecedented access to their super-fast processing capability.

Using the newly-available technology researchers will tackle areas ranging from healthcare (Tamiflu and swine flu); astrophysics (real-time pulsar detection application for the forthcoming [Square Kilometre Array](#) Project to deploy the world's most powerful radio telescope), bioinformatics (analysis and statistical modelling of [whole-genome sequencing](#) data); climate change modelling; complex engineering systems; simulating 3G and 4G communications networks and developing new tools for processing and managing [medical images](#).

Both supercomputers will be unveiled tomorrow at the Science and Technology Facilities Council's Rutherford Appleton Laboratory (RAL), which will host and operate

Emerald, a GPGPU system utilising NVIDIA's Tesla accelerator technology. Iridis 3 is being hosted by the University of Southampton.

The occasion also marks the official launch of the e-Infrastructure South Consortium which comprises four of the UK's leading universities - Bristol, Oxford, University College London and Southampton.

The Consortium has collaborated with the Department of Scientific Computing at RAL to form the e-infrastructure South Centre for Innovation which will own and operate both supercomputers.

The Consortium will also share access between the partners, providing an infrastructure for the development of data-driven applications, simulation and software as well as training to create the next generation of scientists and engineers.

Both supercomputers have been funded by a £3.7 million grant from the Engineering and Physical Sciences Research Council (EPSRC), part of a £145 million Government investment in e-infrastructure.

Minister for Universities and Science David Willetts MP said: "These two new supercomputers form part of the Government's £145 million investment in e-infrastructure and will be invaluable assets to business and universities. They will drive growth and innovation, encourage inward investment in the UK and keep us at the very leading edge of science."

Dr Lesley Thompson, Director of EPSRC's Research Base said: "High performance computers based within the Consortium's research-intensive universities will enable better training and recruitment of world-class research talent, help develop new research ideas, and speed up the rate at which complex data can be processed.

These new supercomputers are crucial to maintaining the UK's leading science base and underpinning our national competitiveness and economic recovery."

Professor Anne Trefethen, Professor of Scientific Computing, University of Oxford said: "The high set-up costs both in terms of equipment and expertise can be a major barrier to SMEs expanding into

newer or bigger markets. This new centre will make it easier for them to step up into the next league. In turn, the supercomputers will help university-led researchers work with industrial partners to develop and test innovative new products and technologies.

Local businesses that will benefit from use of the supercomputers include Numerical Algorithms Group Ltd, Schlumberger Abingdon and InhibOx.

Provided by Engineering and Physical Sciences Research Council

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