



## NVIDIA Names Barcelona Supercomputing Center, Moscow State University as CUDA Centers of Excellence

November 14, 2011

*Organizations join list of 13 elite institutions dedicated to advancing GPU computing research and education*

SEATTLE, Nov. 14 -- NVIDIA today added two institutions to the list of 13 global CUDA Centers of Excellence: the Barcelona Supercomputing Center and Lomonosov Moscow State University.

The CUDA Center of Excellence designation is the highest honor given to institutions for ground-breaking work leveraging NVIDIA GPUs and NVIDIA CUDA technology. Recipients receive a range of GPU computing equipment and grants from NVIDIA.

Barcelona Supercomputing Center, a high-performance computing research center associated with the Universitat Politècnica de Catalunya/Barcelona Tech, is Spain's national supercomputing facility and home to one of Europe's most powerful supercomputers, the MareNostrum. It has also recently deployed Spain's fastest compute cluster with 256 NVIDIA Tesla M2090 GPUs and quad-core CPUs, delivering a peak performance of 186 teraflops. The Center's research projects are focused on the fields of computational sciences, life sciences and earth sciences, and its supercomputing systems have been used by hundreds of researchers from over 40 countries.

In addition to offering a range of parallel computing courses and training programs, Barcelona Supercomputing Center today announced plans to build the world's first ARM-based CPU/GPU hybrid supercomputer using energy efficient NVIDIA Tegra ARM CPUs and high-performance NVIDIA CUDA GPUs.

Lomonosov Moscow State University is one of the world's leading supercomputing centers dedicated to applying computational resources to vital scientific problems. Home to more than 40,000 graduate and post-graduate students, and 5,000 researchers, the university hosts four supercomputing clusters, including the 'Lomonosov' system, which is ranked 13th on the Top500 list of the world's most powerful supercomputers.

More than 500 scientific groups from Moscow University, institutes of the Russian Academy of Sciences and other research institutions in Russia use Moscow University's supercomputing center, focused on scientific research across a variety of disciplines. MSU-sponsored research is focused on the following areas: magneto-hydrodynamics, quantum chemistry, seismology, drug design, geology, and material science among others.

Other CUDA Centers of Excellence include: John Hopkins University, Stanford University, Harvard University, Institute of Process Engineering at the Chinese Academy of Sciences, National Taiwan University, Tokyo Tech, Tsinghua University (China), University of Cambridge, University of Illinois at Urbana-Champaign, University of Maryland, University of Tennessee, Georgia Tech, and University of Utah. For more information on the NVIDIA CUDA Center of Excellence program, visit <http://research.nvidia.com/content/cuda-centers-excellence>.

CUDA is NVIDIA's parallel computing architecture, which enables dramatic increases in computing performance by harnessing the power of GPUs. NVIDIA CUDA GPUs support all GPU computing programming models, APIs, and languages, including CUDA C/C++/Fortran, OpenCL, DirectCompute, and the recently announced Microsoft C++ AMP. More than 470 universities and institutions worldwide teach the CUDA programming model within their curriculum. For more information on NVIDIA CUDA technology, visit [www.nvidia.com/cuda](http://www.nvidia.com/cuda).

### About BSC

The Barcelona Supercomputing Center (BSC, [www.bsc.es](http://www.bsc.es)) houses MareNostrum, one of the unique supercomputers in a renovated old chapel-style building. Its mission is to research, develop and manage information technology in order to facilitate scientific progress. With this objective, the center counts with research areas in Computer Sciences, Life Sciences, Earth Sciences and Computational Applications in Science and Engineering. In the context of this multi-disciplinary approach, the BSC

has a large number of researchers and experts in HPC (high performing computing), which facilitate scientific progress together with state-of-the-art supercomputing resources. More than 350 people work at BSC on research and 100 of those are from outside Spain. This Spanish multi-disciplinary supercomputing center was established by a consortium made up by the current Ministry of Science and Innovation (MICINN), by the Ministry of Economy and Knowledge of the local Government of Catalonia and by the Universitat Politècnica de Catalunya/Barcelona Tech (UPC) and is headed by Professor Mateo Valero.

### **About Moscow State University**

Lomonosov Moscow State University (MSU - [www.msu.ru/en/](http://www.msu.ru/en/)) is renown as one of the leading computer science centers excelling in application of computational resources to address most vital scientific problems. MSU comprises two separate departments solely dedicated to computer related studies (Faculty of Computational Mathematics and Cybernetics, Research Computing Center of Moscow State University), as well as a number of faculties in the area of natural sciences that have many research groups pursuing state-of-the-art scientific studies using high performance computing in specific areas.

### **About NVIDIA**

NVIDIA (NASDAQ: NVDA) awakened the world to computer graphics when it invented the GPU in 1999. Today, its processors power a broad range of products from smart phones to supercomputers. NVIDIA's mobile processors are used in cell phones, tablets and auto infotainment systems. PC gamers rely on GPUs to enjoy spectacularly immersive worlds. Professionals use them to create visual effects in movies and design everything from golf clubs to jumbo jets. And researchers utilize GPUs to advance the frontiers of science with high-performance computing. The company holds more than 2,100 patents worldwide, including ones covering ideas essential to modern computing. For more information, see [www.nvidia.com](http://www.nvidia.com).

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*Source: NVIDIA Corp.*

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