Chinese Ministry of Education to Integrate CUDA Programming Curriculum in Universities Nationwide

Underscores Growing Importance of GPU-Based Parallel Computing Skills for Tomorrow's Computing and Science Professionals

BEIJING -- GTC ASIA -- NVIDIA today announced that the Chinese Ministry of Education is planning to offer NVIDIA® CUDA® architecture-focused programming courses at potentially hundreds of universities nationwide beginning in the second half of 2012, resulting in up to 20,000 students being trained annually on the best CUDA and parallel-programming practices.

NVIDIA worked closely with the Ministry's National High-Quality Course Resource Center to develop the new course, entitled "GPU-Based Parallel Computing." It has been designed to help students master all aspects of parallel programing on heterogeneous and GPU-based computing systems, and apply this knowledge to a range of scientific and engineering disciplines.

"In the era of knowledge economy, technology education is critical in building students' competitiveness in a global environment," said Mr. Li Maoguo, division director of the higher education bureau, Chinese Ministry of Education. "We encourage universities and colleges to learn from industry enterprises about their leading technologies, and to cooperate with them to produce more curriculums of excellence. This will cater to the higher-education objective of supplying more capable talent for the development of contemporary Chinese society."

The goal of the CUDA programming course is to help students develop a solid background on parallel computing, as well as on algorithm and program design that solve real-world problems. It will cover a range of parallel programing concepts, including GPU hardware configurations, programming models, memory models, application acceleration, data-level parallel algorithms, and parallel complexity analysis.

"The practice of developing curriculum jointly between CNCRC and NVIDIA meets the ongoing requirement of reforming Chinese education, and sets an example by introducing parallel computing computer education discipline," said Mr. Wang Hongyu, deputy director of the China National Curriculum Resource Center. "This curriculum will play a profound role in enhancing students' ability in the current competitive job market. Meanwhile, this joint-effort is one of CNCRC's most important pilot projects whose vision is to develop curriculums of excellence of diversified industries."

"Already being the most powerful computing device, the GPU is revolutionizing the landscape of today's computing," said Deng Yangdong, associate professor of Institute of Microelectronics at Tsinghua University. "Its wide availability combined with the easy-to-use CUDA parallel programming model enables us to teach tomorrow's engineers and researchers on how to deliver a new wave of innovations by unleashing the power of modern parallel processors."

Chang'an University, located in Xi'an, is among the first Chinese universities to offer the new CUDA programming curriculum as an optional course for students in computer science, electronic engineering and related fields. Other institutions expected to begin offering the course in the spring term next year include Tsinghua University, and South China University of Technology. It is expected to be widely available in universities nationwide in the second term in 2012.

"Academic, engineering and scientific professionals are increasingly leveraging GPU computing to drive research and discovery across a broad range of fields," said David Luebke, director of research at NVIDIA. "We expect the adoption of parallel programing to continue growing exponentially worldwide in the coming years, and courses like this are vital to the next wave of programmers. NVIDIA will continue to work with the National High-Quality Course Resource Center to add a range of new CUDA and GPU computing courses for Chinese educators in the future."

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 the CUDA web site.

For more NVIDIA news, company and product information, videos/images, and other information, visit the NVIDIA newsroom.

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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.

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NVIDIA, CUDA, GPU, GPU computing, supercomputing, parallel computing, GPGPU, high performance computing, HPC, developers, research, scientific computing, Chinese Ministry of Education, National High-quality Course Resource Center, Chang'an University, Tsinghua University, South China University of Technology

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