

TESLA GPU Computing & CUDA Parallel Programming Architecture:

A Revolution in High Performance Computing and Visualization

Simon Green, NVIDIA Corp., USA

Abstract

With the world's first teraflop many-core processor, NVIDIA® Tesla computing solutions enable the necessary transition to energy efficient parallel computing power. With 240 cores per processor and a standard C compiler that simplifies application development, Tesla scales to solve the world's most important computing challenges – more quickly and accurately. This talk will introduce CUDA and show how it enables developers to utilize NVIDIA GPUs to solve the most complex computation-intensive challenges such as protein docking, molecular dynamics, financial analysis, fluid dynamics, structural analysis and many others.