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From Milliwatts to PFLOPS - High-Performance and Energy Efficient General Purpose x86 Multi/Many-Core Architecture

Tuesday, August 27, 2013 9:00 AM (40 minutes)

As we see Moore's Law alive and well, more and more parallelism is introduced into all computing platforms and on all levels of integration and programming to achieve higher performance and energy efficiency. We will discuss the new Intel® Many Integrated Core (MIC) architecture for highly-parallel workloads with general purpose, energy efficient TFLOPS performance on a single chip. This also includes the challenges and opportunities for parallel programming models, methodologies and software tools to archive high efficiency, highly productivity and sustainability for parallel applications. At the end we will discuss the journey to ExaScale including technology trends for high-performance computing and look at some of the R&D areas for HPC and Technical Computing at Intel.

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