

From the latency to the throughput age

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Resumen:

The talk will present a vision of the evolution of architectures and high end computing in the last years, how this is impacting the programming practices and I consider the nature of the changes that are and will happen in the next years. The fundamental assumption is that we must undergo a transition from the latency dominated age we come from to a throughput oriented age. This change holistically impacts architectures, programming models and applications, but beyond the specific technologies used at the different levels, really implies a mindset change in the actors involved at the different levels. I will present opinions on possible implications of this mindset change and how I believe it will help achieve higher productivities and system efficiency.

Sobre Jesus Labarta Mancho:

Jesus Labarta is full professor on Computer Architecture at the Technical University of Catalonia (UPC) since 1990. Since 2005 he is responsible of the Computer Science Research Department within the Barcelona Supercomputing Center (BSC). His major directions of current work relate to performance analysis tools, programming models and resource management. His team distributes the Open Source BSC tools (Paraver and Dimemas) and performs research on increasing the intelligence embedded in the performance analysis tools. He is involved in the development of the OmpSs programming model and its different implementations for SMP, GPUs and cluster platforms.