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Title: ***Energy and Power Consumption Trends in HPC***

Abstract:

Over the past few years, the energy consumption and power constraints have started playing a major role in the use of HPC systems. They have also become one of the major design constraints for building the future hardware for the hundred Peta- and the Exa-flop/s supercomputers. This talk will track some of the technological trends, that were the effect of this transition and are likely to continue into the future. Adapting to this dramatic shift in hardware constraints is believed to be one of the major issues for porting the essential applications of computational science and have them run efficiently on the upcoming systems. The examples in the talk will provide examples of software solution for better utilization of energy and adaptation of the power constraints.