Special Session on Tools for Energy Efficient Computing

Bialystok, Poland, September 8-11, 2019

1 Topics

This special session focuses on tools designed to improve the energy-efficiency of HPC applications. With the steaming out of Moore's law and the end of Dennard's scaling the pace dictated on the performance increase of High Performance Computing Systems among generations has led to power constrained architectures and systems. In addition power consumption represents a significant cost factor in the overall HPC system economy. For this reasons it is important to develop new tools and methodologies to measure and optimize the energy consumption of large scale high performance system installation. Due to the link between energy consumption, power consumption and execution time of the application executed by the final user it is important for these tools and methodology to consider all these aspects empowering the final user and the system administrator with the capability of finding the best configuration given different high level objectives. This special session aims to provide a forum to discuss and present innovative solutions in following topics:

- tools for fine grained power measurements and monitoring of HPC infrastructures,

- tools for hardware and system parameter tuning and its challenges in HPC environment,

- tools and libraries for dynamic tuning of HPC application during runtime,

- tools and methodology for identification of potential of dynamic tuning for runtime and energy,

- application evaluation in terms of runtime and energy savings.

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2   Paper Submission and Publication

Original papers are invited for this special session. Authors should submit full papers (draft version, PDF file, together with abstract) using the online submission system before April 21. Regular papers are not to exceed 10 pages (LNCS style). Papers will be refereed and accepted on the basis of their scientific merit and relevance to the conference topics. Abstracts of accepted papers will be available during the conference in form of a brochure. Only papers presented at PPAM 2019 will be included into the proceedings, which will be published after the conference by Springer in the LNCS series. Full camera-ready versions of accepted papers will be required by November 2, 2019.

3   Session Organizers

- Tomáš Kozubek (IT4Innovations, VSB – Technical University of Ostrava, Czech Republic), **tomas.kozubek@vsb.cz**

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4   Important dates

- Submission of Papers: May 15, 2019

- Notification of Acceptance: June 15, 2019

- Conference: September 8 - 11, 2019