

Special Issue

Energy Aware Scientific Computing on Low Power and Heterogeneous Architectures

Message from the Guest Editors

Energy consumption is becoming one of the most relevant issue for computing platforms running scientific applications and workloads. The use of energy-efficient processors, ranging from many-core architectures, like GP-GPU and Xeon-Phi, to Systems-on-Chip (SoCs) is required to obtain a high performance-per-watt ratio. However, on such systems, careful programming and optimization are needed to reach a high level of computing performances. The driving forces of high computational power demands, power consumption limitations and cost effectiveness are, in fact, leading to a convergence of the scientific computing and mobile/embedded sectors, historically very isolated and confined to specific markets. This Special Issue provides a selection of papers concerning energy aware computing (and storage) on high-end heterogeneous systems, as well as on off-the-shelf low-power Systems-on-Chip, originally designed for the embedded and mobile markets.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

Journal of Low Power Electronics and Applications is an open access journal which provides an advanced forum for rapid dissemination of innovative research and important results in all aspects of low power electronics and design.

It publishes reviews, regular research papers and short communications. Our aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. The full experimental details must be provided so that the results can be reproduced.

Editor-in-Chief

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