

Special Issue

Energy-Efficient Computing Systems for Deep Learning

Message from the Guest Editors

Deep learning (DL) is receiving much attention these days due to the impressive performance achieved in a variety of application areas. Aimed at achieving ever-faster processing of these DL workloads in an energy-efficient way, a myriad of specialized hardware architectures and accelerators are emerging.

The main objective of this Special Issue is to discuss and disseminate the current work in this area, showcasing new and novel DL algorithms, programming paradigms, software tools/libraries, and hardware architectures oriented at providing energy efficiency, in particular (but not limited to): Novel energy-efficient DL systems: heterogeneous multi/many-core systems, GPUs, and FPGAs; Novel energy-efficient DL hardware accelerators and associated software; Emerging semiconductor technologies with applications to energy-efficient DL hardware acceleration; Cloud and edge energy-efficient DL computing: hardware and software to accelerate training and inference; In-memory computation and in-network computation for energy-efficient DL processing; Machine-learning-based techniques for managing energy efficiency of computing platforms.

Guest Editors

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Deadline for manuscript submissions

closed (31 December 2021)



Sustainability

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CiteScore 7.7



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