Beyond Moore's Law: Hardware Specialization and Advanced System on Chip

Guest Editor:

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Message from the Guest Editor

As the continuous scaling and miniaturization of transistors, the Moore's Law has been guiding the semiconductor industry over 50 years, making modern ICs faster and smaller, less power dissipation, and cheaper to manufacture. Though the Moore's Law is coming to an end due to the physical limitation, there is no doubt about the continuation of performance improvement for computing in a variety of other areas. Typical examples include purpose-built architectures such as Google tensor processing unit, and application-specific designs such as Nervana's AI architecture, Facebook's Big Sur, and Microsoft's FPGA (field-programmable gate array) Configurable Cloud. Accordingly, this Special Issue seeks to showcase research papers and review articles that focus on advanced SoC architectures and specialized designs for various applications including but not limited to FPGA acceleration on neural networks, software-hardware co-design with FPGA, ASIC implementation with high-level synthesis, high abstract level design with HCL (hardware construction language), novel verification methods/methodologies, energy-efficient SoCs, custom IP designs, etc.

Special Issue

Editor-in-Chief

Message from the Editor-in-Chief

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