Special Issue

Approximate Computing: Design, Acceleration, Validation and Testing of Circuits, Architectures and Algorithms in Future Systems

Message from the Guest Editor

The applicability of approximate computing has represented a breakthrough in many scientific areas, making AC a step closer to being one of the mainstream computing approaches in future systems. For several application domains, especially those related to human perception, the approximate results might turn out to be hard to distinguish from perfect results, opening the application of AC for system designers. Suitable solutions will not be fully realized in a single layer only. Therefore, applying AC in different layers of hardware, architecture, software and algorithms should be investigated. Moreover, while the hidden cost of AC is a reduction of an application's inherent resiliency to errors, AC has also recently been demonstrated to be effective in safety-critical applications. This Special Issue on AC will explore exciting, new ideas in the field of approximate computing, covering cross-layer design methodologies bridging the circuit, architecture and algorithm levels. It will also include connections between the AC paradigm and the safety, verification, testing and reliability of digital systems.

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Message from the Editor-in-Chief

Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

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