

Special Issue

Neural Networks for Circuit Design

Message from the Guest Editors

Recent advancements in neural networks have opened new avenues in the field of circuit design, offering innovative approaches to enhance performance and simplify design complexity. This Special Issue focuses on cutting-edge research in which neural networks are applied to various aspects of circuit design, including reduced-order modeling, compact modeling, optimization, and synthesis. As circuits become more intricate, neural networks provide efficient solutions for modeling, simulation, and fault diagnosis, especially in analog, digital, RF, and mixed-signal systems. Recent research on neural network-driven circuit design has shown great promise for improving simulation complexity and accelerating design workflows. We welcome contributions that explore novel applications, architectures, and algorithms leveraging neural networks for circuit optimization, automated design, performance prediction, and compact modeling, showcasing the transformative potential of these technologies in electronic design automation (EDA).

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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