





Special Issue Reprint

# System-on-Chip (SoC) and Field-Programmable Gate Array (FPGA) Design

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Edited by Nicola Lusardi

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The evolution of digital technology is firmly steered by key concepts such as Field-Programmable Gate Arrays (FPGAs) and the evolution of System-on-Chip (SoC). These pivotal elements seamlessly integrate programmable logic, creating a potent synergy that manifests in spatial and temporal computing. While SoCs stand as a milestone in technological evolution, incorporating processors and reconfigurable logic areas, FPGAs emerge as fundamental devices for the rapid development of complex digital circuits. Together, SoCs and FPGAs create an ecosystem that not only accelerates the time to market but also opens the doors to a new computing paradigm, where flexibility and spatial-temporal optimization are at the forefront of digital innovation. The significance of these FPGA and SoC architectures extends beyond mere computing power, influencing the design of advanced devices in sectors such as artificial intelligence, the Internet of Things, and robotics, radically transforming how we interact with technology in our daily lives.





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