

Special Issue

New Advances in Digital Signal Processing

Message from the Guest Editors

Digital Signal Processing (DSP) is evolving rapidly, driven by the integration of classical theory with AI, edge computing, high-performance hardware, and next-generation communications. While fundamental principles remain unchanged, current research focuses on intelligent, adaptive, and computationally efficient algorithms for real-world challenges. This Special Issue presents advances in DSP methodologies, algorithms, architectures, and applications. Topics include AI-driven processing, hybrid model-data approaches, adaptive filtering, sparse processing, compressed sensing, foundation models, multi-modal processing, and hardware acceleration on GPUs, FPGAs, TPUs, and embedded platforms. The Special Issue welcomes research addressing new DSP applications in radar and remote sensing, biomedical engineering, medical imaging, speech and audio processing, multimedia forensics, deepfake detection, intelligent sensing, the Internet of Things (IoT), autonomous systems, and other emerging domains. We welcome theoretical and applied contributions that demonstrate gains in performance, efficiency, robustness, or scalability, as well as visionary overviews of DSP's future.

Guest Editors

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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.

Editor-in-Chief

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