Special Issue

Model-Based Deep Learning: Integrating Signal Processing and Machine Learning

Message from the Guest Editors

This SI will focus on **Model-Based Deep Learning (MBDL)** as a unifying paradigm that hybridizes these two approaches. We seek contributions that leverage partial domain knowledge to structure, guide, and enhance the robustness of deep learning systems, while simultaneously using data-driven methods to complete or accelerate traditional models. The goal is to foster the development of systems that are more data-efficient, interpretable, reliable, and high-performing than purely data-driven or purely model-based approaches alone. The central emphasis of this SI will be on novel methodologies and applications in which deep learning architectures and training paradigms are explicitly designed around, or integrated with, established signal processing models. This SI will cover a wide range of topics at the nexus of signal processing and machine learning.

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Deadline for manuscript submissions

15 February 2027

Electronics

an Open Access Journal by MDPI

Impact Factor 2.9
CiteScore 7.0

mdpi.com/si/260238

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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 guestedited by leading experts in selected topics of interest.

Editor-in-Chief

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