Special Issue

Trends and Applications of Distributed Artificial Intelligence (AI) and Associated Systems

Message from the Guest Editors

Distributed Artificial Intelligence (DAI) represents a significant paradigm shift in the development of intelligent systems, emphasizing decentralized, collaborative, and autonomous agents that work together to solve complex problems. DAI distributes these tasks across multiple interconnected nodes or agents, often leading to more scalable, fault-tolerant, and robust AI applications. Recent advancements in computing technologies, such as the proliferation of edge devices, the growth of Internet of Things (IoT), and the emergence of blockchain and federated learning, have catalyzed the evolution of DAI systems. This Special Issue aims to bring together cutting-edge research on the theoretical foundations, system architectures, and practical implementations of distributed AI. We encourage contributions that explore multi-agent systems, federated learning approaches, and decentralized decision-making mechanisms, with a focus on their applications in large-scale systems and real-world use cases. The exploration of challenges such as communication overhead, security concerns, and coordination among agents will also be a central theme in this Issue.

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Deadline for manuscript submissions

15 October 2025

Electronics

an Open Access Journal by MDPI

Impact Factor 2.6
CiteScore 6.1

mdpi.com/si/233743

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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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