Special Issue

Advances, Challenges and Future Trends in Software-Defined Networks (SDN)

Message from the Guest Editors

The rapid evolution of networking and computing paradigms has emerged in a new era where Software-Defined Networks (SDNs), edge computing, and cloud software management play a pivotal role in modern infrastructure. This Special Issue aims to explore cutting-edge research, innovations, and challenges in SDN architectures, edge and cloud software orchestration, AI-driven network management, security frameworks, and real-world applications in mobility and autonomous systems. Topics of interest include, but are not limited to, the following:

- Next-generation SDN architectures for dynamic and scalable network management;
- AI/ML-driven optimization and automation in SDN, edge, and cloud software management;
- AI-driven packet forwarding with programmable data planes;
- Security, trust, and privacy in software-defined infrastructure;
- Edge–cloud continuum and resource orchestration for latency-sensitive applications;
- Digital twins and virtualization techniques in SDVs;
- Case studies and real-world applications of software-defined technologies in automotive and mobility sectors.

Guest Editors

Dr. Eirini Liotou

Department of Informatics and Telematics, Harokopio University of Athens, 17676 Kallithea, Greece

Dr. George Dimitrakopoulos

Department of Informatics and Telematics, Harokopio University of Athens, 17676 Kallithea, Greece

Deadline for manuscript submissions

20 September 2025

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/journal/applsci

MDPI

About the Journal

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

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

Author Benefits

Open Access:
free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:
indexed within Scopus, SCIE (Web of Science), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:
JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)