

Call for Papers

Space-Air-Ground Smart Computing Integration Networks (SAG-SCIN)

The 23rd International Conference on Wireless Communications and Mobile Computing

Website: <http://iwcmc.net/2027/>

Submission Link: <https://conferences.sparcly.ai/IWCMC2027>

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Scope:

Space-air-ground integrated networks connect satellites, high-altitude platforms, unmanned aerial vehicles, and terrestrial infrastructure to extend connectivity across diverse environments. Equipping these platforms with distributed computing resources and artificial intelligence (AI) capabilities creates new opportunities for jointly delivering communication and intelligent computing services. Such integration supports the collection and processing of distributed data, the deployment of AI models across heterogeneous nodes, and the coordination of network operations over multiple domains. It also raises a central research question: how can communication, computation, and intelligence be jointly designed to provide dependable AI services under dynamic connectivity, limited onboard resources, and diverse service requirements? Addressing this question requires advances in fundamental theory, system architecture, and practical implementation. Dynamic network topologies, intermittent links, heterogeneous computing capabilities, and constrained energy budgets complicate the placement and execution of intelligent workloads. Communication delays, data availability, model partitioning, and computing-resource allocation jointly affect service latency and inference quality. Large language models, multimodal models, and collaborating AI agents introduce further requirements for task orchestration, resource discovery, and verifiable decision-making. Meanwhile, cross-domain cooperation must account for privacy, security, execution correctness, and accountability. These challenges call for communication-computing co-design, adaptive coordination mechanisms, and evaluation methods that capture the operational constraints of both spaceborne and airborne platforms.

This workshop aims to bring together researchers and practitioners working on space-air-ground networking, intelligent computing, and AI-driven network management. It invites original contributions on foundational models, network architectures, resource-management algorithms, trustworthy collaboration, and experimental validation. Contributions may address autonomous network diagnosis and recovery, emergency communications, distributed remote-sensing analytics, or other applications that benefit from integrated communication and intelligent computing. The workshop also welcomes testbeds, prototypes, measurement studies, and discussions of interoperability and standardization.

Topics:

Accepted papers will be published in the IEEE IWCMC 2027 proceedings and will be submitted to the IEEE digital library (IEEE Xplore). Authors are welcome to submit original papers (not published before and/or simultaneously to another venue) with topics that include but are not limited to:

- Architectures and protocols for space-air-ground smart computing integration networks
- Joint communication, computation, and AI-service resource allocation and scheduling
- Satellite onboard computing, airborne edge computing, and terrestrial edge-cloud coordination
- Topology-aware task offloading, model placement, service migration, and mobility management
- Task-oriented and semantic communications for distributed intelligent computing
- AI-agent cooperation, workflow orchestration, and autonomous network management
- Security, privacy, and trustworthy cross-domain resource sharing and service execution
- Blockchain, trusted execution environments, and zero-knowledge proofs for verifiable computing
- Energy-aware networking and sustainable intelligent computing on spaceborne and airborne platforms
- Testbeds, hardware-in-the-loop experiments, prototypes, and field trials

Submitted papers are encouraged to address novel technical challenges or industrial and standard aspects of the key technologies for sustainable and secure cognitive buildings/cities.

NB: All accepted and presented Workshop papers will appear under the main conference list in IEEE Xplore.

Important Dates:

All deadlines are the same as those of the main conference.

Note: Within this workshop, there will be one Best Paper Award.