Special Issue

Emerging Trends in Next-Generation mmWave Cognitive Radio Networks

Message from the Guest Editor

Millimeter-wave (mmWave) communications and cognitive radio networks (CRNs) are at the forefront of next-generation wireless systems, offering high data rates and dynamic spectrum access. However, challenges such as rapid channel variations, mobility management, interference control, and efficient resource allocation remain critical for real-world deployment. This Special Issue aims to gather cutting-edge research on advanced techniques and innovative solutions for resource management and mobility support in mmWave CRNs. Topics of interest include (but are not limited to) the following:

- Dynamic spectrum access in mmWave CRNs.
- Beamforming and directional antenna design for mobile CRNs.
- Intelligent handover and mobility management techniques.
- AI/ML-driven resource allocation and optimization.
- Spectrum sensing and prediction in high-frequency bands.
- Energy-efficient protocols for mmWave CRNs.
- Joint MAC and PHY layer optimization.
- Interference mitigation and coexistence strategies.
- Edge computing and distributed intelligence in mmWave CRNs.
- Security and privacy in cognitive mmWave communications.
- Use cases in vehicular networks, smart cities, and IoT.

Guest Editor

Dr. Gyanendra Prasad Joshi

Department of Electronic and AI System Engineering, Kangwon National University, Samcheok, Republic of Korea

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Sensors
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
sensors@mdpi.com

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

Editor-in-Chief

Prof. Dr. Vittorio M. N. Passaro
Dipartimento di Ingegneria Elettrica e dell'Informazione (Department of Electrical and Information Engineering), Politecnico di Bari, Via Edoardo Orabona n. 4, 70125 Bari, Italy

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