



Call for Papers for Cognitive Radio and AI-Enabled Networks Symposium

SYMPOSIUM CHAIRS AND CO-CHAIRS:

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SCOPE AND MOTIVATION

Emerging cognitive radio and artificial intelligence (AI)-enabled networking technologies potentially provide a promising solution to efficient spectrum utilization and resource allocation in wireless access, improving the interoperability and coexistence among different wireless/mobile communications systems and making the future generation radio devices/systems autonomous and self-reconfigurable. The ultimate goal of the intelligent radio and networks is to make the communication network self-adaptive, self-managed, and truly cognitive. The aim of this symposium is to bring together and disseminate state-of-the-art research contributions that address various aspects of analysis, design, optimization, implementation and standardization, and applications of intelligent radio and networking technologies.

TOPICS OF INTEREST

The scope of this symposium includes (but is not limited to) the topics below.

- Intelligent resource allocation in cognitive radio and networks
- Intelligent spectrum sensing, sharing and access
- Intelligent medium access control, interference management and modelling
- Intelligent distributed cooperative spectrum sensing and multi-user access
- Challenges and issues in designing intelligent radio communications
- Challenges and issues in designing intelligent wireless networks
- Modelling and performance evaluation for intelligent radio and networks
- Deep learning for cognitive radio and networks
- Reinforcement learning for cognitive radio and networks
- Machine learning for resource allocation in wireless networks
- Cognitive radio and AI-enabling network standards, testbeds, simulation tools, and hardware prototypes



- Distributed adaptation and optimization in cognitive radio and networks
- Economic aspects of spectrum sharing

- Energy-efficient cognitive radio communications and networking
- Handoff and routing protocols for intelligent radio and networks
- Physical-layer security in cognitive radio networks
- Privacy and security of cognitive radio and spectrum sharing
- Attack modelling, prevention, mitigation, and defense in cognitive radio systems
- Quality of service provisioning in AI-enabled radio and networks
- Regulatory policies and their interactions with communications and networking
- Self-configuration, interoperability and co-existence issues
- Spectrum measurements and statistical modelling and learning of spectrum usage
- Spectrum sensing, learning, sharing, and access for Internet of Things
- Spectrum sensing, learning, sharing, and access for millimetre-wave (mmWave) systems
- Spectrum sensing, learning, sharing, and access for terahertz systems
- Spectrum sensing, spectrum sharing, and spectrum learning and prediction
- Waveform design, modulation, and interference aggregation for cognitive radio and AI enabling networks
- Resource allocation in device to device networks and vehicular networks.
- Applications and services (e.g., cognitive networking in TV whitespace, adaptation with LTE networks such as LTE unlicensed)
- Integration of cognitive radio and networks with emerging scenarios, i.e., UAV networks, intelligent reflecting surface.

IMPORTANT DATES

Paper Submission: 15 April 2020

Notification: 25 July 2020

Camera Ready and Registration: 1 September 2020

SUBMISSION INSTRUCTION

All papers for technical symposia should be submitted via EDAS through the following link: <https://edas.info/N27054>