

CFP: IEEE GLOBECOM 2019 Workshop on Advancements in Spectrum Sharing

Workshop webpage:

<https://globecom2019.ieee-globecom.org/workshop/ws-22-advancements-spectrum-sharing>

Important Dates

- Paper Submission Deadline: June 30, 2019
- Paper Acceptance Notification: August 15, 2019
- Camera-Ready: September 15, 2019

Call for Papers

Though limited spectrum bandwidth resources cannot effectively meet the increasing demands of wireless communications, some licensed or dedicated spectrum bands have been well under-utilized, such as the 3.5 GHz Citizens Broadband Radio Service (CBRS) frequency band, some ISM bands, and some 5G mmWave bands. To improve spectrum efficiency and meet user demand, spectrum sharing among incumbent and new systems is a key solution.

There is an urgent need to develop standards and techniques for constructive spectrum sharing among heterogeneous systems and networks in unlicensed, license-assisted, or tiered-access bands. The relevant research and development involve standards, system design, simulation and analysis, and experimental validation to achieve adequate protection of incumbent services, accurate evaluation of measurement uncertainty, and optimization of coexistence performance. This workshop provides a venue to bring together standards developers, leading researchers, and engineers from government, industry, and academia to present and discuss recent progress and results in spectrum sharing.

We invite papers that include, but are not limited to, the following topics. Accepted papers will be published in [IEEE Xplore](#).

- Recent policy and standardization progress
 - Rules and specifications on unlicensed or shared spectrum systems, related with 5G New Radio Unlicensed spectrum (NR-U), CBRS, ISM bands, or mmWave bands
- Tiered-access sharing via Spectrum Access Systems (SAS)
 - Measurements and propagation models for SAS interference calculations
 - Coexistence and resource allocation for General Authorized Access (GAA) users
 - Environmental Sensing Capability (ESC) sensors for detection of federal incumbent signals
 - Models and forecasts for commercial deployment
 - Field trials of the 3.5 GHz CBRS
- Dynamic spectrum sharing among cellular, WLAN and WPAN systems
 - New designs for systems and protocols related to LTE-U, LAA, LWA, Multefire, and others

- Spectrum sensing and sharing in 5G-and-Beyond systems in sub-6 GHz band or mmWave band
- Coexistence system modelling, analysis, and optimization
 - Stochastic models, or aggregate interference and traffic models for network planning
 - Computational techniques for dynamic calculation of aggregate interference statistics
 - Joint optimization of coexistence systems based on their diverse QoS targets
 - Machine learning, or other physical- and MAC-layer optimization techniques
 - Interference protection for incumbent systems; coexistence of radar and commercial LTE
- Signal detection and classification in heterogeneous bands
 - Machine learning or other algorithms for classification of signals in shared spectrum
 - RF waveform libraries for training and evaluation of detection and classification algorithms
- Shared spectrum metrology
 - Methods to quantify measurement uncertainties of coexistence systems
 - Estimation of key performance indicator (KPI) uncertainty and likelihood of coexistence
- Coexistence Testing
 - Novel techniques and results on test design, automated test, SDR, conductive or radiated test, in-field measurement, and test data processing for emerging SS systems
 - Recent testing results following procedures given by 3GPP, IEEE, ANSI C63.27, CBRS, and others
- Security and privacy issues in shared spectrum
- Energy-efficient sensing and sharing
- AI models for spectrum resource allocation

Workshops Co-chairs

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Technical Program Committee (last updated, 6/11/2019).

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Paper Submission

Workshop paper submissions must be written in English and be no longer than 6 pages (10-point font). Please follow the formatting instructions given in the [call for symposium papers](#).

All papers should be submitted via EDAS: <https://edas.info/N26278>