

IEEE ICC 2024 Workshop WS-10: Catalyzing Spectrum Sharing via Active/Passive Coexistence

Call for Papers

The wireless spectrum is a vital natural resource that impacts our lives in numerous ways. While we often associate it with mobile broadband, its significance extends to various domains such as weather forecasting, climate science, astronomy, space exploration, and civil/military navigation. The escalating demand for spectrum has led to a corresponding increase in congestion as these vastly different services converge to utilizing many of the same bands. Consequently, conflict over spectrum has arisen between services utilizing adjacent or overlapping bands, resulting in the potential for harmful interference.

To unlock the full potential of 6G and future wireless systems, while ensuring our continued Earth and space exploration, it is crucial to ensure effective and efficient active/passive spectrum coexistence. The vision is to enable seamless spectrum sharing among disparate users based on time, frequency, space, and geometry, without creating detrimental interference. Research in this field is at an early and developing stage, thus this workshop aims to promote new and exciting research findings, to bring together contributors from academia, government, and industry to explore practical implementations and applications, and to identify key technical and policy challenges for future exploration. Panel discussions and open forums will facilitate interactive exploration and ideation, catalyzing ongoing efforts in spectrum coexistence.

Topics of Interest

This workshop seeks novel, unique, transformative papers covering various aspects of active and passive spectrum sharing and coexistence, including, but not limited to, the following areas:

1. Spectrum Sensing and Spectrum Decision Techniques for passive-active sharing
2. Digital Twins for passive-active Spectrum Sharing and Management
3. Spectrum Resource Allocation and Sharing Models for passive-active Coexisting Networks, Including Between Satellite and Terrestrial Networks.
4. Experimental zones and testbeds
5. Coexistence Mechanisms for Satellite Transmissions and Radio Astronomy Observatories
6. Coexistence Mechanisms and Strategies for Active and Passive Systems
7. Interference Management and Mitigation for Radio Astronomy and Remote Sensing
8. Interference Avoidance and Coordination Strategies in Satellite and Terrestrial Networks
9. Spectrum, Propagation, and Interference Measurements and Modeling for Shared Spectrum
10. Cooperative and Collaborative Spectrum Sharing Techniques

Submission Guidelines

Submissions should present novel contributions and demonstrate a clear relevance to advancing the state-of-the-art in active/passive spectrum sharing and coexistence.

All papers should be submitted via EDAS. Full instructions on how to submit papers is provided on the IEEE ICC 2024 website

<https://icc2024.ieee-icc.org/authors/call-workshop-papers> as well as our workshop website <https://sites.google.com/view/ieee-icc-catalyzing-workshop24>.

All papers will be peer-reviewed by a technical program committee, and selected based on their technical quality, originality, and relevance to the workshop.

Important Dates

- Paper Submission Deadline: January 20, 2024
- Decision Notification: March 6, 2024
- Camera-Ready Paper Submission: March 15, 2024
- Registration Deadline: March 15, 2024
- Workshop Date: June 9, 2024

Workshop Organizers

WORKSHOP General Chair Mariya Zheleva, University of Albany, USA

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