Special Session Proposal: Intelligent Signal Processing Techniques

Title: Intelligent Signal Processing Techniques: Innovations and Applications

Organizer(s):

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Overview:

The rapid advancement in intelligent signal processing (ISP) techniques has significantly impacted various fields such as communications, medical imaging, audio and speech processing, and autonomous systems. This special session aims to bring together researchers, practitioners, and industry experts to discuss recent innovations, challenges, and future directions in intelligent signal processing. By showcasing cutting-edge research and practical applications, this session will foster collaboration and inspire new developments in the field.

Objectives:

- To provide a platform for presenting recent advancements and innovations in intelligent signal processing techniques.
- To discuss the application of ISP techniques in various domains, including but not limited to communications, healthcare, and autonomous systems.
- To identify key challenges and potential solutions in the development and implementation of ISP techniques.
- To promote collaboration between academia, industry, and government organizations in the field of intelligent signal processing.

Topics of Interest:

- Machine learning and AI for signal processing
- Advanced algorithms for signal detection and estimation
- Signal processing techniques for 5G/6G communications
- Image and video signal processing
- Biomedical signal processing and imaging
- Audio and speech signal processing
- Sensor networks and Internet of Things (IoT)
- Real-time signal processing systems
- Adaptive and cognitive signal processing
- Signal processing in autonomous systems and robotics

Session Format:

The session will include invited talks, contributed paper presentations, and a panel discussion. Each invited talk will be 30 minutes, followed by a 10-minute Q&A session. Contributed paper presentations will be 20 minutes each, including Q&A. The panel discussion will focus on future trends, challenges, and collaborative opportunities in ISP.

Call for Papers:

We invite researchers and practitioners to submit original contributions to this special session. Submissions should align with the topics of interest and follow the conference guidelines for paper formatting and submission. All submitted papers will undergo a rigorous peer-review process.