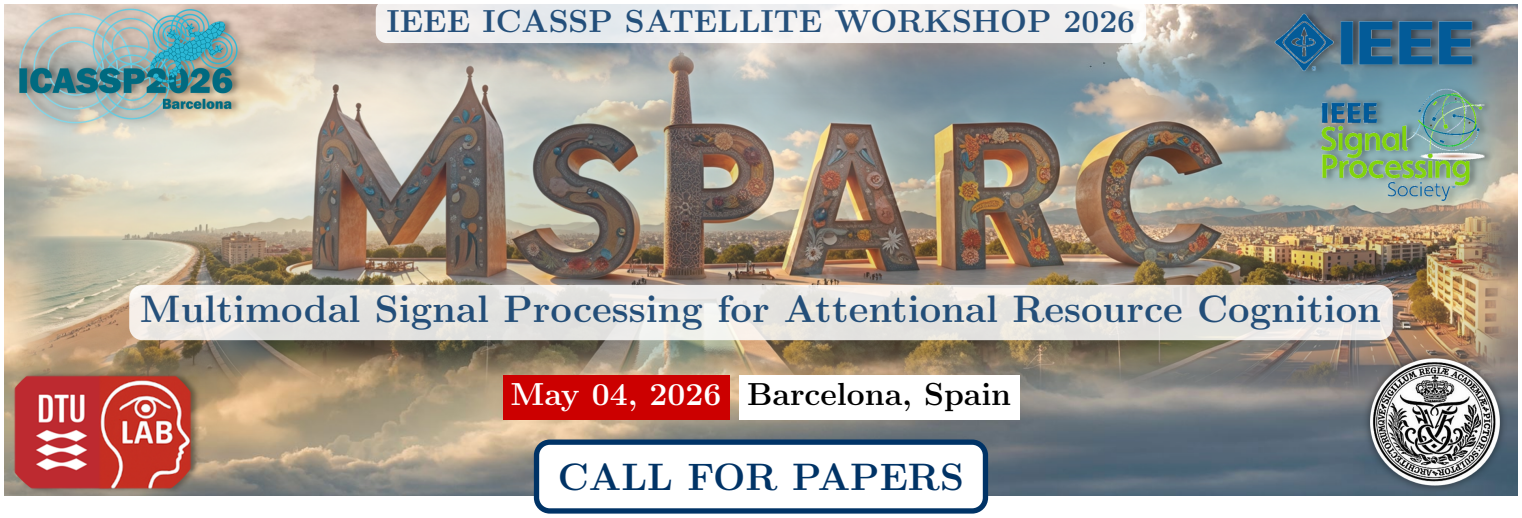

CALL FOR PAPERS

Organizing Committee

Per Bækgaard
DTU Denmark

Sofie Beier
Royal Danish Academy Denmark

Ashkan Tashk
DTU Denmark

C. M. Aqdus Ilyas
DTU & University of Cambridge

Important Dates

Paper Submission Deadline
October 22, 2025

Acceptance Notification
December 10, 2025

Camera-Ready Deadline
January 7, 2026

Multimodal Signal Processing for Attentional Resource Cognition (**MSPARC**) investigates how Modeling Eye, Brain, Speech, and Behavioral Signals for Cognitive Resource Allocation can deepen our understanding of attentional resource management in human cognition. By integrating signals from brain activity (EEG/fMRI), eye movements, pupilometry, speech, and behavior, we can build comprehensive models of how cognitive resources are distributed and modulated in real-time. The workshop brings together signal processing experts, cognitive neuroscientists, and human-computer interaction (HCI) researchers to address the following topics:

- **Multimodal Signal Processing**: Integration of EEG, fMRI, MEG, eye-tracking, pupilometry, speech, and behavior for attention and resource models
- **Real-Time Cognitive Monitoring**: Low-latency algorithms, edge computing, wearables for continuous assessment of attention, load, and workload
- **Machine Learning for Attention**: Deep learning, transformers, LLMs for lapse prediction, individual modeling, and personalized resource management
- **Clinical Tools**: Biomarkers, diagnostics (ADHD, TBI), neurofeedback, cognitive rehabilitation, and attention-enhancement interventions
- **Educational Applications**: Attention-aware LMS, adaptive content, engagement monitoring, and personalized pacing
- **Workplace Systems**: Overload prevention in aviation, surgery, transport; driver monitoring, fatigue detection, and team load balancing
- **Immersive Tech**: Attention-adaptive AR/VR, BCIs, gaze-based interaction, and cognitive load-responsive mixed reality
- **Auditory Attention**: Hearing aids, attended speech enhancement with EEG/eye-tracking, adaptive acoustic processing, and scene analysis
- **Theoretical Frameworks**: Attention as resource, standardized protocols, benchmark datasets, ecological validity, and cross-modal validation

Other Important Information:

- Submitted workshop papers should abide by the ICASSP 2026 paper style, format, and length, and the peer-reviewing process will follow the main conference reviewing guidelines.
- The workshop papers will be published at the IEEE Xplore Digital Library (with a separate conference record number).
- The paper submission and review process will be managed through the ICASSP 2026 paper management system, as indicated in the submission section of the workshop webpage.
- There must be an author of each accepted workshop paper who will present it in person.
- The workshop attendance will cost an extra amount of 5$ for the main conference registrants, while a reduced registration fee will be charged to workshop-only attendees.

For more information: msparc.compute.dtu.dk — **Contact:** msparc@compute.dtu.dk