Call for Papers

Low-Resource Audio Codec (LRAC) Workshop

IEEE ICASSP 2026 Satellite Workshop

Date: May 4, 2026
Location: Barcelona, Spain
Duration: Single-day workshop
Website: https://lrac.short.gy/workshop
Contact: lrac-workshop@cisco.com

We invite you to submit papers to the first edition of the **Low-Resource Audio Codec (LRAC) Workshop** aimed at advancing the state of the art in neural audio coding for resource-constrained devices. This inaugural edition of the workshop will focus on **low-resource neural speech codecs** aimed to operate under **everyday noise and reverberation** conditions, and designed under joint **computational complexity**, **latency**, and **bitrate** constraints.

Overview

The growing demand for **speech interfaces** across a wide range of **resource-constrained** environments—including general-purpose computing platforms with limited processing or power budgets, embedded systems, and mobile devices—requires **speech codecs** for **real-time communication** that are efficient in terms of **compute**, **bitrate**, and **latency**, while also delivering **high-quality speech** under **real-world conditions**. Although recent neural coding methods excel at optimizing for these constraints individually, addressing all three simultaneously remains an open challenge.

The first edition of the LRAC Workshop is dedicated to bridging this gap and advancing the state of the art in **speech codecs** under **joint resource constraints**. We especially encourage research addressing performance in **realistic noise** and **reverberation environments**.

Goals

1. Drive advances in state-of-the-art low-resource low-bitrate speech coding methods.
2. Highlight challenges in creating efficient codecs under practical constraints.
3. Foster collaboration and discussion across academia and industry.
4. Encourage development and benchmarking under real-world acoustic conditions.

Topic Areas

1. **Low-Resource Low-Bitrate Speech Coding Methods**
   - Solution papers for the 2025 LRAC Challenge entries
   - Neural speech coding under joint compute, bitrate, and latency constraints
   - Quantization techniques for efficient speech codecs
   - Model complexity and size reduction strategies
   - Generative machine learning approaches for speech codecs
   - Joint speech enhancement and coding for practical applications
   - Designing for robustness to noise and reverberation
   - Efficient modeling of semantic, acoustic, and prosodic information in speech codecs
   - Resilience to network conditions for streaming low-resource speech codecs
2. **Broader Impacts and Applications of Low-Resource Neural Speech Codecs**
   - Neural speech codecs as universal feature extractors for downstream tasks e.g., spoken dialogue systems, multimodal language models
   - Open challenges for real-world deployment of neural speech codecs
   - Application domains (e.g., IoT, edge) for low-resource speech codecs
3. **Evaluation, Benchmarking, and Reproducibility**
   - Objective metrics and listening test methodologies for evaluation
   - Availability and use of public train/test datasets
   - Data curation for speech codec development
   - Ensuring reproducibility in codec research

Paper Submission Tracks

1. **Archival Track**
   - General workshop paper submissions.
   - 2025 LRAC Challenge paper submissions for systems following challenge rules.
   - **Submission deadline:** October 22, 2025.
   - Each submission will undergo a peer-review process.
   - Accepted papers will be presented at the workshop and archived as part of the ICASSPW Proceedings, published in IEEE Xplore.
2. **Non-Archival Track**
   - Submissions of works in progress, previously published research, or system demonstrations.
   - **Submission deadline:** February 7, 2026.
   - Each submission will undergo a screening process.
   - Accepted papers will be presented at the workshop and featured on the workshop website, but will not be otherwise officially published.

Important Dates

Date	Event
Oct 22, 2025	Archival track paper submission deadline
Dec 10, 2025	Archival track paper acceptance notification
Jan 7, 2026	Archival track camera ready paper deadline
Feb 7, 2026	Non-archival track paper submission deadline
May 4, 2026	Full-day ICASSP 2026 Satellite Workshop

Student Travel Grants

The organizers of the **LRAC Workshop** are pleased to announce the availability of three travel grants, each up to $1,500 USD, generously sponsored by the **IEEE Signal Processing Society (SPS) Challenge Program**. These grants are offered exclusively to student participants in the **2025 LRAC Challenge**, providing an opportunity to collaborate, engage, and showcase their contributions at the **2026 LRAC Workshop**.

For more details and application information, please visit: https://lrac.short.gy/grants

Organizers

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Sponsors

- Speech and Language Processing Technical Committee (IEEE Signal Processing Society)
- Audio and Acoustic Signal Processing Technical Committee (IEEE Signal Processing Society)

Get Involved

Join us at the LRAC Workshop to shape the future of efficient speech communication technologies!

Latest workshop details and participation information: https://lrac.short.gy/workshop

For questions, reach out to the workshop organisers via lrac-workshop@cisco.com