

IEEE SPS Student Design Challenge

2024 Cycle 2 Member Driven Initiative

Chennai, India

1st November 2024 to 25th February 2025



IEEE SPS Student Design Challenge

AV Zoom: Audio Visual Zooming Application for Smartphone

Description:

This challenge aims to inspire young minds to tackle practical technical problems. Smartphones are now indispensable, offering features that simplify daily tasks—from health tracking to entertainment. One exciting development is audio zooming, which allows smartphones to focus on specific sounds while reducing background noise. This feature is especially useful in noisy environments like public gatherings, railway stations, and stadiums. While this technology has appeared in high-end models, it remains limited or ineffective in many devices.

The challenge focuses on designing a robust audio zooming system, which includes:

- *Designing a microphone array configuration*
- *Developing algorithms*
- *Creating Android / iOS application*
- *Real-time implementation and evaluation of two proposed scenarios*

For detailed information about the task description, expected demonstrations, official rules, challenge phases, award prizes, important dates, registration, precursor lectures and venue, visit: www.ieeespsavzoom.in

Open to: UG and PG Students

Challenge Phases:

- Phase 1: Proof of Concept (PoC) - *Remote Mode*
- Phase 2: Video Presentation (VP) - *Remote Mode*
- Phase 3: Precursor Lectures and Real-Time Demonstration (RTD) - *Physical Mode*

Award Prizes:

- Champion Team – USD 350
- Runner-up – USD 200
- Appreciation Prizes – USD 170 (total)*

*Excluding the Champion Team and Runner-up

Important Dates:

- **1 November 2024:**
Registration for Phase 1 of the challenge
- **15 December 2024:**
Deadline for submission of Phase 1 - PoC
- **25 December 2024:**
Announcement of the Phase 1 results
- **1 February 2025:**
Deadline for submission of Phase 2 - VP
- **10 February 2025:**
Announcement of the Phase 2 results (Finalist)
- **25 February 2025 (FN):**
Precursor lectures
- **25 February 2025 (AN):**
Phase 3 – RTD; Prizes will be awarded

Contact Us:

Dr. Ashok Chandrasekaran

Program Chair

School of Computing and Data Science

Sai University, Chennai, India

Email: ieeespsavzoom@gmail.com

