

## Expression of Interest Letter

Project Title:     **Psychoacoustics Lab: Sound, Space and Emotion**  
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The proposal is to create a dedicated Lab for research on sound, space and emotion. The lab should provide an immersive sound system for investigating these relationships from multidisciplinary research perspectives such as psychoacoustics, sound studies, digital audio technology, human-machine interfacing and music composition. The proposal aims to include current research on brain, cognitive science, and artificial intelligence.

The immersive sound system is a digital set of tools for creating sounds for empirical research with subjects, who will experience the immersive sound system as listeners but also will be provided with digital tools for interacting with the system. A prototype of this research is the 32 channel immersive sound system that has been recently installed in the Experimental Acoustics Research Studio (EARS), a research facility of the Music Department, which is currently located off campus (1935B Chicago Ave, Chicago Gateway).

The two attached pictures show the final phase of the set up of the 32 channel immersive sound system. The speakers are mounted on the four trusses forming a square. An example of the research with this setup is investigating the emotional response of subjects placed inside the immersive environment when listening to sounds with different spatial characteristics and also actively interacting with the system.

I would like to express my interest in installing the Psychoacoustics Lab in in MRB 1, precisely in two contiguous rooms of approximately 400 square feet each one. One room will be used for setting the equipment for the immersive sound system, and the other as control and research room.

The Psychoacoustics Lab will promote interdisciplinary research across departments and colleges. It aims to provide impulses for research that bridges gaps between science, humanities and art.



32-channel immersive sound system – front view



32-channel immersive sound system – back view