

(Research Article)
**Investigating the formal effect of rear wall structure on acoustic parameters
of speech halls**

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Abstract

Referring to the rear wall in a hall is the furthest element rather than the voice source, therefore the reflections of this structural member play an important role in music and speech intelligibility, especially for one-third behind audiences. Hence the form of these structures can be very effective in the acoustical quality of speech halls and auditoria. In this study, four formic structures are examined in EASE acoustical software. Due to results, the columned shape structure was more optimum in speech range and concave shape was most reverberant. Along with this research, halls with plane and concave shape were proposed for music performances and convex as well as columned shapes for speech approaches. The achieved results can be used for other effective walls in similar studies.

Keywords: Acoustical investigation, Speech hall, Rear wall, Acoustical simulation.

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