

عنوان مقاله:

Acoustical identification of historical mosques in Tabriz

محل انتشار:

دوفصلنامه مبانی نظری و کاربردی علم آکوستیک و ارتعاشات، دوره 10، شماره 1 (سال: 1403)

تعداد صفحات اصل مقاله: 12

نویسندگان:

Farzaneh Gholizadeh - Faculty of Architecture and Urbanism, Tabriz Islamic Art University, Tabriz, IRAN

Abbas Ghaffari - Faculty Of Architecture and Urban Planning Tabriz Islamic Art University

Mohammad Ali Kaynejad - Faculty of Architecture and Urbanism, Tabriz Islamic Art University, Tabriz, IRAN

Payam Mokhtari - Faculty of Architecture and Urbanism, Tabriz Islamic Art University, Tabriz, IRAN

خلاصه مقاله:

Paying attention to the sound quality of mosques is one of the architectural fundamentals of Islamic societies because the mosque is the most prominent ritual place of Islam, and speech and hearing are considered its main characteristics. In this research, the analysis of the most effective form in optimal sound quality was defined as the primary goal, and for this purpose, the historical mosques of Tabriz city were subjected to field analysis. The initial analysis of the samples from the perspective of the variables affecting the acoustics led to the selection of ۱۵ samples in three volume categories and five form groups, in which the selected standards for measurement are ۳۳۸۲-۱ and ۳۳۸۲-۲, and the measurement equipment are the ۲۲۶۰ B&K investigator and the SINUS Acoustic Camera. Among the acoustic variables, Background Noise, Sound Pressure Level, and Reverberation Time were analyzed, and the results of field measurement led to the framework becoming the final goal of the study. The results of this study show that acoustic behavior in samples regardless of their size and form is almost similar, which is due to the components such as materials and their implementation, as well as the overall formal frame within mosques, which were considered the same to reduce the interventional variables. The second achievement, which is the result of a visual data collection of the quality of sound playback, identifies the mentioned components and shows that the reflection and propagation of sound in selected mosques are from architectural elements that are common in all samples and form the overall frame of space. These two achievements framed the final goal of the study in the form of determining acoustic identification for historical mosques in Tabriz. The final result of this study is the analysis of data in MATLAB software which extracts the Background Noise, Sound Pressure Level, and Reverberation Time equation based on frequency in Tabriz historical mosques and spaces with a similar model.

کلمات کلیدی:

Architectural acoustics, mosque, Form, Volume, Proportions

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/2055338>

