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The Validation of Architectural and Acoustic Projects to Transform Ecclesiastical Architecture in Auditoria for Concert Music

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ABSTRACT

There is a new tendency to convert historic churches in auditoria for concert music following the assumption that visiting their architectural features can attract more residents and tourists to music and vice versa. Nevertheless to make these spaces suitable for music representations, several architectural modifications are necessary and, on the other side, these modifications must fulfill constraints connected to the preservation of the cultural heritage of the sites. It is often necessary to take decisions which are a compromise between several requirements. In this paper is presented the acoustic study of the baroque church of S.Maria della Pietrasanta in Naples (Italy) for its conversion in a concert hall. Several architectural non-invasive and removable solutions are presented in order to control acoustic parameters without modifying the emotional sensations of the visitors. Through a non-immersive virtual reality system based on the auralization and visualization of the solutions, a sample of visitors and experts has expressed their judgments on the proposed projects.