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A MODERN READING OF ANCIENT THEATRES ARCHITECTURE

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Abstract

The ancient theatres, the cradle of past civilization, are now living structures and highly required by the world of contemporary entertainment. They still retain the charm of an architectural and detailed sound while showing, in some cases, obvious signs of passing time.

This paper presents a summary of the acoustic qualities of these spaces, oriented to the identification and evaluation of design criteria operated by the builders of the past and to the determination of best suited interventions aimed at recovering the original sound. The acoustic qualities of the considered environments were obtained by analyzing the impulse response of receivers placed within a grid of points.

From the comparison of experimental collected data, also developed in the form of global indexes and local assessment, it was possible to identify the main architectural and geometrical features that characterize the acoustics of ancient open-air theatres. This analysis resulted in a critical reading of the techniques about plays and types of representation found in ancient texts by Vitruvius and Aristotle. From the comparison of these spaces it is possible to understand the historical evolution of the geometry of the theatres and the past and present design choices, as well as developing, using appropriate numerical simulations, remedial measures aimed not only at using these structures in a modern way, but also at recreating lost in time atmospheres.