

Ακουστικός Σχεδιασμός Αιθουσών Ακροατηρίου

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Abstract

Although sound as a physical phenomenon has been the subject of study since the time of the ancient Greek classics, the application of this knowledge to the design of listening spaces only became the subject of scientific research at the end of the last century. Just when the need to revise classical forms of architecture, dictated by the modern movement, was preparing the architect to welcome knowledge and willingly bid farewell to the beaten track, i.e. the method of copying the halls of the past. The purpose of this paper is to consider the principles according to which sound behaves in architectural space, to interpret acoustic quality in space as perceived by the listener in terms of this behaviour, and finally, to delve into the application of this knowledge to the design of concert halls, lyric theatres, etc. The material in the text is structured around six cores and is approached through a series of illustrations and examples that follow,

in order to make acoustics as illustrative as possible. The first core is introductory and reviews some basic points concerning the physical phenomenon of sound and its perception. The second introduces us to the way in which sound behaves in enclosed spaces and the key answers that architectural design provides in view of this behaviour. The third core introduces us to the principles of designing a modern lecture hall, with the aim of moving towards the 'Epidaurus' of the future, echoing knowledge. The fourth core takes us on a tour of the magical world of our technological culture, with the aim of introducing us to the design principles of modern concert halls, opera houses, etc. The fifth core will introduce us to the mythical world of the total variability of the shell of a space with state-of-the-art technologies. Finally, the sixth core deals with the galloping invasion of contemporary musical creation into the field of architecture.

