



AUDITORIA IN NORTH PORTUGAL: AN OVERVIEW

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ABSTRACT

Acoustical aspects of some of the most important auditoria (mainly for speech, theatre and music performances) in Metropolitan Area of Porto will be discussed in this paper. Details will be presented concerning the architectural properties, renovation facts and acoustical design criteria. Measurements of room acoustical data will be compared (as far as available) and related to geometrical and acoustical details like reflecting and scattering areas. Optimal acoustical conditions for speech and music are contradictory e.g. in clarity and reverberation times. Therefore, compromises have to be found for enabling best conditions for each purpose. The solutions realised in some of these halls will be explained also by calculations with a modern room acoustical simulation program. Auralization will be presented for some auditoria! The future application of neural network technology for the early design phase as a new tool for architects will also be presented. It is intended to collect and publish data of Portuguese auditoria like those presented here in a booklet containing photos, architectural data, room acoustical parameters and further relevant details.