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Plenary conference

Theory vs. Practical Cases in Room Acoustics

Abstract

In the process of teaching acoustics in general, many theoretical facts and underlying physical principles must be conveyed to the students. This is not always an easy task, especially if complex mathematics and/or non-linear behaviour is involved. The beauty in learning the principles of room and building acoustics is that people can use their own hearing experience to help them understand these principles. This also helps educators show and explain these phenomena more comprehensively. At the same time, following these principles in the design process of acoustically sensitive spaces without fully understanding them often leads to many flaws and shortcomings regarding the resulting acoustics of such spaces. This presentation will show several typical examples of theoretical principles that are demonstrated using practical, real-life cases in room and building acoustics. The intent is to show both best practice scenarios, but also acoustical defects and failures made either in the design phase or in-situ, when the spaces are already built.