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**ROOM ACOUSTICS MODELLING: PAST, PRESENT AND THE FUTURE**

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**ABSTRACT**

Room acoustics modeling has a long history. Before computers, the sound propagation was often investigated with scale models, and those are used even today. However, most of the room acoustics modeling is nowadays conducted computationally. For that, there are two basic approaches that are based on fundamentally different assumptions. In geometrical acoustics the sound is supposed to propagate as rays, whereas wave-based modeling techniques aim to solve the wave equation numerically. Nevertheless, all the current modeling techniques tend to be either too inaccurate or computationally too heavy. This presentation will summarize the cornerstones in the history of room acoustics modeling and finally envisions how the future could be.