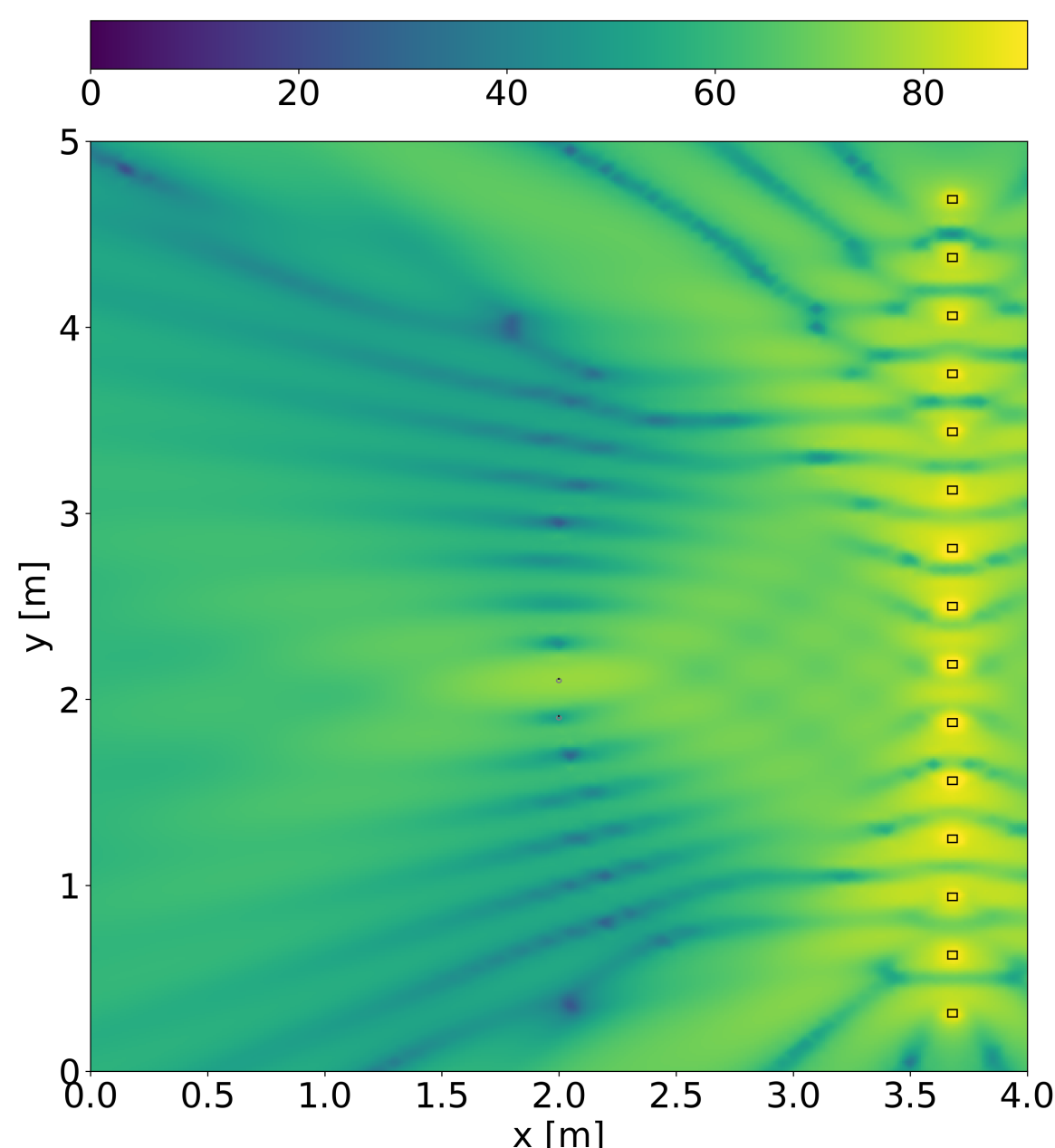


Personal and Spatial Audio Reproduction using Loudspeaker Arrays for Home Applications

Yazhou Li

2021



Finding

Accurate room acoustic modeling plays an important role for designing a transaural reproduction system. I investigate the impact of mismatched room acoustic modeling on the performance of the system in reverberant environments and find that modeling the early reflections using the image source method can provide satisfactory binaural listening experience.

Question

To improve the performance in different reverberant rooms, room equalization may be utilized. Whether we can estimate room impulse responses at different positions accurately enough (for example, based on sound field interpolation and other data-driven methods) for room equalization and personal audio remains unclear.

Supervisor(s): Joshua Reiss, Lin Wang