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Title: Perception of Fluctuating Sounds

Author/s: Roland Sottek, Serafima Anisovich, Julian Becker, Thiago Lobato

Abstract:

Fluctuating sounds easily attract the listener's attention and can therefore have a profound impact on sound quality. To better understand the human perception of fluctuating sounds and to model it for automatic quantification, it is necessary to evaluate this sensation through jury tests.

The stationary perception of fluctuating sounds was examined in detail for synthetic sounds depending on various modulation parameters (e.g.: modulation rate, modulation type AM/FM, degree of modulation, modulation index). Several jury test results can be found in the literature for this type of signal.

However, these existing studies are insufficient to provide an accurate model that takes temporal effects into account and can be applied for technical sounds. This paper therefore describes jury tests that were carried out to obtain the necessary information about the fluctuation perception of less-investigated phenomena such as temporal effects, as well as the fluctuation perception for technical sounds.