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Title:

Standardization of the Sottek Hearing Model-based fluctuation strength calculation algorithm

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Abstract:

Fluctuating sounds are easily recognizable and have a significant impact on sound quality. Therefore, it is important to quantify them in a way that reflects human perception. Many studies have been reported in the literature on the perception of fluctuating sounds. However, there is currently no standardized calculation method. Especially for technical sounds, there is no reliable approach to estimate the perceived fluctuation strength. This article briefly introduces an improved method for calculating the perceived fluctuation strength of arbitrary sounds. This algorithm is based on the Sottek Hearing Model Roughness, published in the ECMA-418-2 standard, and on high-resolution spectral analysis (HSA) for the identification of low-rate modulations. The new method will also be published in ECMA-418-2. This article focuses on presenting the validation of the new method.

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