

## DAGA 2023 – 49. Jahrestagung für Akustik

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**Place:**

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**Title:**

Modeling the fluctuation strength of technical sounds

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**Abstract:**

Fluctuating sounds easily attract the listener's attention and have a significant impact on sound quality, so their appropriate quantification in terms of human perception is an important task. However, currently there is no standardized calculation method and, especially for technical sounds, no approach that can reliably estimate the perceived fluctuation strength of sounds.

This paper describes an algorithm for calculating the perceived fluctuation strength of technical sounds and extends a method we presented in a previous paper in DAGA 2022. The algorithm is based on the roughness calculation in the ECMA-418-2 standard and the HSA (high-resolution spectral analysis) for identifying low-rate modulations.

We have validated the algorithm using the results of jury tests with technical sounds and synthetic data. The algorithm is expected to be included in a future version of the ECMA-418-2 standard.

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