Noise-Con 2010

Baltimore

Session: Standards in Psychoacoustics
Chair: Klaus Genuit
Status: *invited*

Need for standardization of psychoacoustics
Author: Klaus Genuit

In the last decades, psychoacoustic parameters gained more and more importance in the context of sound perception and assessment in various applications. In particular, loudness was introduced as a better parameter than A-weighted level, because it shows a much better correspondence with the subjective impression of "volume" (loudness). This parameter was the object of standardization in the last years and few loudness standards were established (DIN 45631/A1, ISO 532, ANSI S3.4). The calculation of sharpness is also standardized (DIN 45692) and the standardization of roughness is recently under consideration by the DIN. These efforts have led to a global acceptance and a widespread use of psychoacoustic parameters in the automotive and IT-field.

However, since the human signal processing is complex and the development of valid calculation models difficult, psychoacoustic phenomena must further be studied. Moreover, the validity, accuracy and applicability of psychoacoustic parameters to specific noises must be determined. Especially, in the context of the description and classification of environmental noise the potential of psychoacoustics has not been fully used so far.

The paper will show the current status of standardization of psychoacoustics and will discuss the needs for the future.

Special Session Title: 2.9 Standards in psychoacoustics
Equipment Needed for Presentation: PC, projection system, sound system
Preferred Method of Presentation: Oral
Paper Classification Codes:
PACS number:
66.Ba Models and theories of auditory processes
66.Lj Perceptual effects of sound
66.Yw Instruments and methods related to hearing and its measurement
INCE code:
63.1 Loudness
63. Psychological Effects

Find more event abstracts in our >> abstracts archive <<