Internoise 2016

SS: "Evaluation of steady state and unsteady sound"

Status: Invited

Title:

Human strategies to provide overall assessments of unsteady sound episodes

Author:

André Fiebig

Abstract:

There is a need for advanced models of human perception of time-variant noise stimuli. This is of particular interest, since almost all natural sounds have time-varying characteristics and human beings experience their surrounding world unfolding over time through a stream of transient states. In general, there is the question how, from moment to moment, people form an overall sound perception assessment. It seems that people tend to use selected moments of extended experiences to derive overall assessments, which goes beyond a simple parametric representation of a sound episode in terms of psychoacoustic variables.

The results of listening experiments will be presented, where synthetic as well natural sound sequences were judged with respect to different evaluation criteria. It was intended to investigate cognitive stimulus integration effects in the context of sound assessments and to determine whether key points of momentary experience in time affect retrospective evaluations in a greater amount. In general, it is uncertain whether observed stimulus integration strategies are due to high cognitive loads exceeding human cognitive capacities, or are based on elaborate and intricate heuristics. An understanding of these processes will help in predicting overall assessments of experiences of time-variant sound.