

Internoise 2013, Innsbruck

Session:

SS67 Psychoacoustics of Environmental And Mobile Noise Sources

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Title: **Psychoacoustic Evaluation of Urban Noise**

Abstract:

In the context of the COST network on soundscape of European cities and landscapes various in-situ acoustical and perceptual measurements were performed over three years in order to study perceptual phenomena in complex acoustic sceneries. In addition to the assessments of environmental noises in field experiments, the different acoustical stimuli were also subject to listening tests in laboratory. As expected, simple acoustic indicators cannot reflect the varying responses to the different multi-source scenarios with spatially distributed sound sources in field and laboratory context. It is widely known, that the analysis of psychoacoustic properties and further hearing-related parameters of noise can effectively help to understand human reactions to noise far beyond simple level considerations. Thus, the explanatory power and range of psychoacoustics regarding the collected data was investigated in detail. It is clear that some relevant cognitive aspects, like source identification, source connotation or attention processes, lies beyond psychoacoustics and cannot be explained by any acoustical parameter. Thus, the benefits as well as limitations of psychoacoustics with respect to environmental noise assessment are critically discussed.

PACS: 43.66.Lj (Perceptual effects of sound); 43.50.Qp (Effects of noise on man and society)

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