

## **Evaluation of urban soundscapes:**

### **Field vs. laboratory assessments using binaural recordings**

It is well-acknowledged that soundscape investigations must be carried out in the original context. In order to investigate the influence of acoustic cues on the perceptual measurements, binaural recordings were performed during soundwalks in the center of Gothenburg (Sweden) using a calibrated binaural headset. The participants were 20 students from the Chalmers Technical University. The evaluations were carried out in-situ regarding, e.g., loudness, appropriateness, pleasantness and eventfulness at eight different outdoor gathering spaces. The group of students was divided into four groups. Two groups went from location 1 to 8, separated in time by 15 minutes. The other two groups went from location 8 to 1. At all eight locations each group recorded the acoustic environment (overall 32 recordings).

The laboratory assessments were performed with the same students the next day using four recordings measured at four different locations. First, the evaluations were performed simultaneously in the classroom using Sennheiser HD 414 headphones, and second in groups of four students using four calibrated binaural headsets in playback mode.

The paper describes the experiments performed in the original and laboratory context, and discusses the results of the different approaches. Additionally, instrumental parameters such as representative values for loudness are compared to the perceptual results: a relevant aspect regarding the second part of the international standard on soundscape dealing with data collection.

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