

Soundscape Classification using Acoustical Patterns Analysis. Andre Fiebig and Klaus Genuit, Prof.
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Urban locations can be characterized by acoustical fingerprints, composed of specific sound sources dynamically emerging at certain times. This results in specific noise features and patterns of the soundscape, which allow for the identification of the urban place. To study this phenomenon at several locations distributed over the city of Aachen short-term recordings of few minutes with a binaural headset were made. Eight sites with different noise characteristics were chosen along a route through the city. Each location was measured twice with a certain time delay between the recordings to study the robustness of measuring the particular noise patterns and acoustical specifics of the respective place. The acoustical data as well as the subjective evaluations collected in-situ on the basis of the soundwalk method were analyzed with respect to the identification of the uniqueness of the investigated places. The general aim of this study was to give recommendations and derive actions with respect to the preservation of pleasant noise features as well as the reduction of adverse noise aspects. The paper will highlight the feasibility of the approach as well as the applicability and acceptance of developed measures and actions.

Suggested Special Session: **"Invited"** Soundscape in Progress: Applications in Communities

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