Abstract

Currently we are working on methodologies to characterize, evaluate and optimize acoustic environments with different approaches. One methodology is based on the evaluation of temporal energetic behavior of acoustic environment through the use of parameters associated with the autocorrelation function (ACF). In this case the main objective is to verify the variability of the temporal behavior of urban acoustic environments depending on the sound sources that are part of them. We evaluate the temporal energetic behavior in 10 urban acoustic environments using ACF in two major cities, Brasilia (Brazil) and Bogotá (Colombia).

The second methodology is based on the design of an experiment to improve and optimize acoustic environments on the basis of the auditory subjective experiences of the people. It has been designed a LabVIEW application for psychoacoustic laboratory tests to evaluate the subjective perception of people. The main objective is to evaluate how adding sound signals in acoustic environments with traffic noise could improve the experience of the users.

Subjective design of sound quality in open spaces

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