

Master's Thesis, Forschungspraxis

Source Separation in Vibrotactile Signals

Microscoping roughness sensations can be captured with the vibrations induced by sliding motion over a textured surface. However, the captured signals can be affected by various factors, such as other vibrations of external systems or sensor inaccuracies. An important goal is to be able to filter signals and remove noise components and imperfections. To do this, source separation is a promising approach. The idea is to separate different components in signals originating from different sources, respectively. After separation, it is possible to remove noise components and maintain only meaningful parts of the original signal. The student shall investigate different forms of distortions in vibrotactile signals and methods to separate and remove them.

Prerequisites

MATLAB, basics in signal processing, basics in audio processing

Advisors

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