This thesis deals with HRTF customization by regression. Five different regression approaches were investigated, implemented and compared to one another. All the regression algorithms were executed with different variations and modifications in order to find ways to improve the results. These results were then compared to both non-customized HRIRs and individually measured HRIRs, acquired at the LDV audio laboratory. The evaluation is based on spectral distortion, but the run time, the complexity and the effort of the different methods were taken into consideration as well. The goal of this thesis is to provide a wide comparison between several different possible solutions in order to provide a good foundation for further research. The results showed that the PCA’s results were the worst and that changing it to a 2DPCA improved the results significantly. GLRAM and Tensor SVD, despite better SD values, are less suited for regression as they take much longer to execute than the PCA and the 2DPCA. The best results were achieved by using the PLSR.
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