

Konstanz, 16.03.2020

## Assignment 3

### „Multimedia“

**Deadline 22.06.2020.**

#### Description of assignment

In this assignment the fast Fourier transform (FFT) is to be used to encode audio data. As for the LPC method the audio data is decomposed into blocks. Each block is transformed to the frequency domain using the `fft` (Matlab) command. After that the frequencies with smallest amplitudes are removed. The resulting data vector is then transformed back to the time domain using `ifft` (Matlab) and the output signal is combined from the sequence of the resulting vectors. Because many low-amplitude frequencies are masked, the differences are audible as slight distortions only, even if many frequencies are removed.

For the solution use the following templates and audio files:

1. `run_fft.m/fft.py`: Template for the transformation.
2. `*.wav`: Audio files.