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Speech Signal Processing (SSV)

Examiners

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Exam date

02/15/2018

Department

Informatik

Speech Signal Processing

- Explain the source filter model
- Sketch the spectrum of a voiced speech segment and explain spectral characteristics
- How are the formants related to the model of speech production?
- How long is the impulse response of the vocal tract filter?
- Write down the Difference Equation for speech production
- What does the transfer function of this difference equation look like?
- How do we find the coefficients?
- What do we need to do in order to digitize a signal? Which steps are lossy?
- What are possible options for signal coding? Give examples
- What coding scheme is used for DECT and where is CELP coding used and why?
- What are possible ways of fundamental frequency estimation?
- How do we quantize the impact of quantization?
- Sketch the figure on slide 197, what is the y-axis and the x-axis?
- How does speech enhancement work? How do we derive the Wiener Filter?

