Speech Science

WiSe 2023

Exercise 6: Acoustic analyses II

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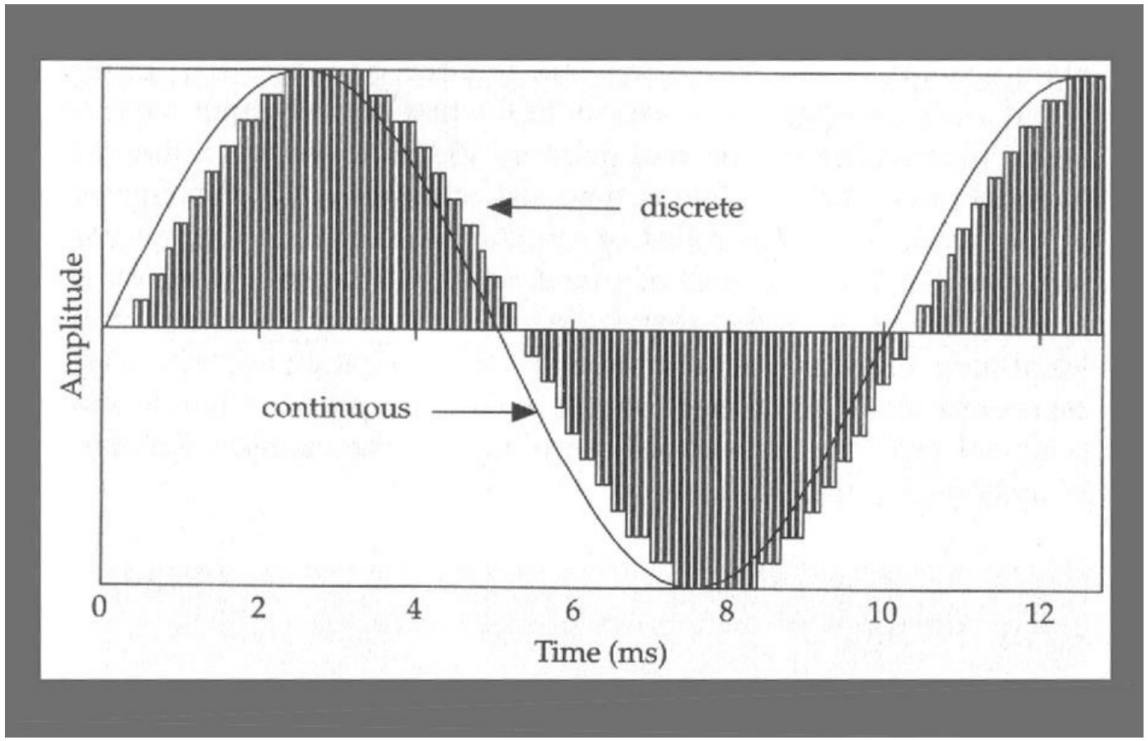
Analogue to digital conversion

Continuous and discrete signals



continuous vs. discrete sine wave [Johnson, 1997, p.23]

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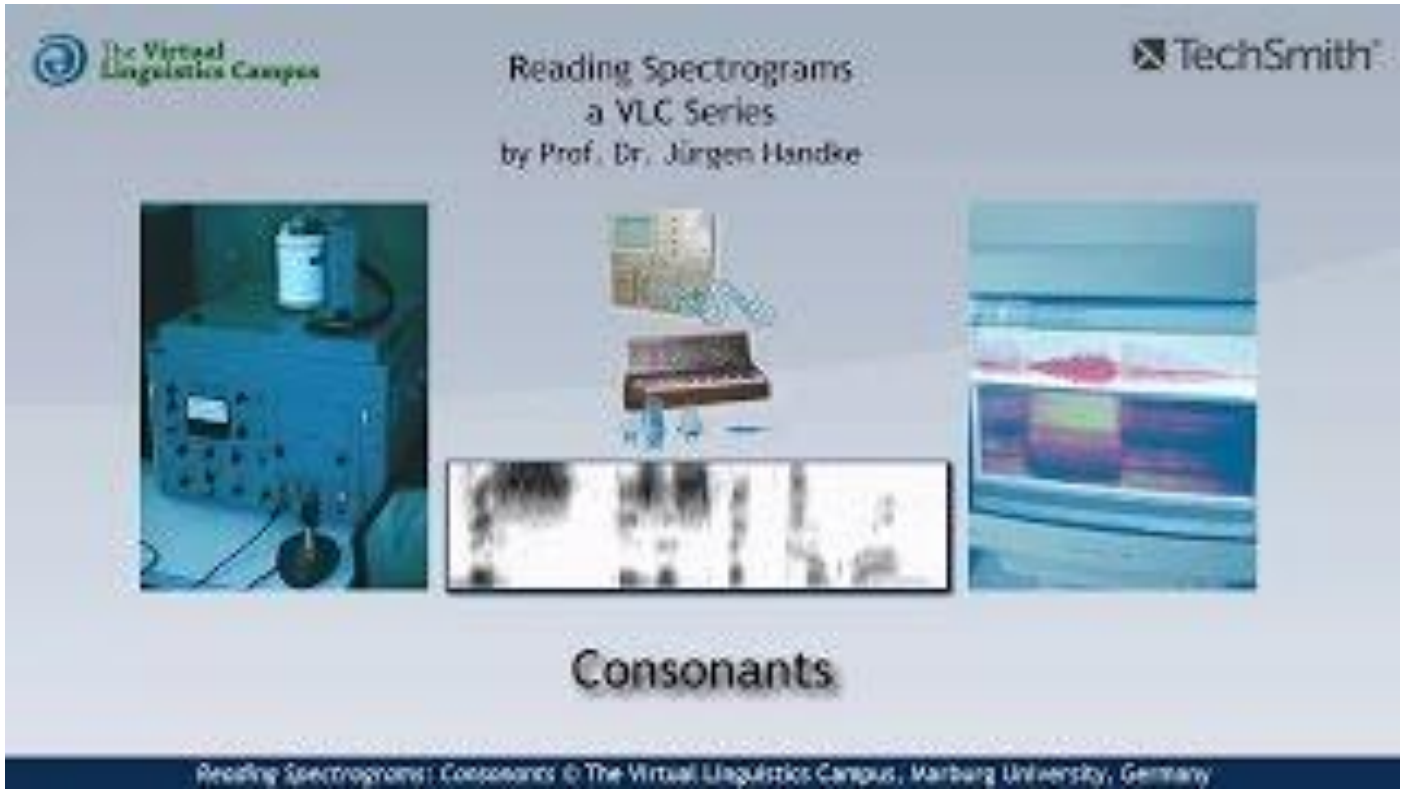
See slides from 23.11.2023

complex waves

Any complex wave can be broken down into sine waves that when added together give the original complex wave .

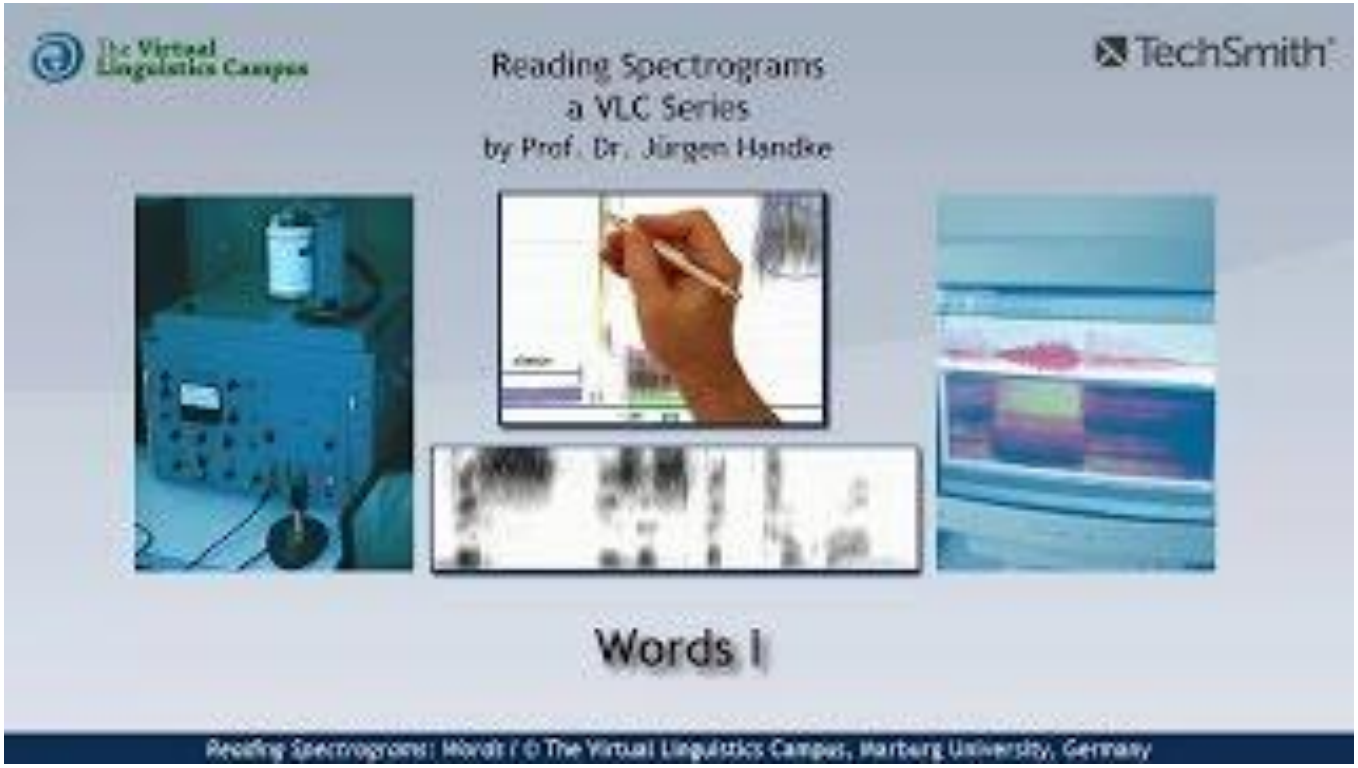
Praat Practice

Read Spectrograms: Consonants



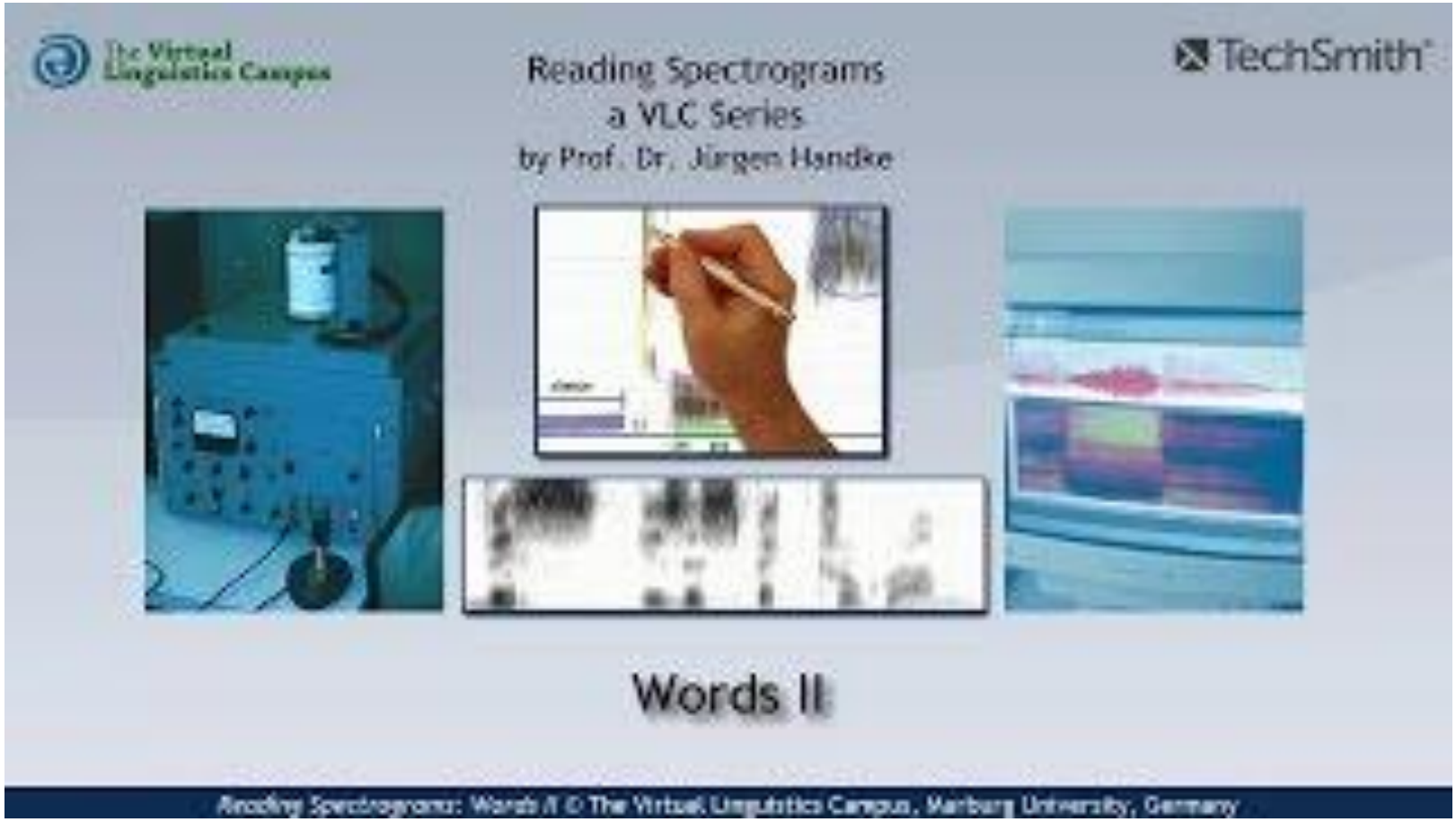
https://www.youtube.com/watch?v=J-RVpvofhSY

Read Spectrograms: Words I



https://www.youtube.com/watch?v=TEOiAnXNFFQ

Read Spectrograms: Words II



https://www.youtube.com/watch?v=j9olhC9QRPg

Praat Practice

- Individual differences between speakers
- Praat scripting:
  - loop through files and conduct analysis

Assignment

Instructions:

1. Record yourself or use an audio file you have on hand (duration: 1 -3 minutes)
2. Create two interval tiers (vowels and word)
3. Annotate the vowels in the first tier and the words in the second tier
4. Manually (or with a Praat script) collect the following information: F1/F2 and intensity for vowels, and average pitch for each word.
5. Collect this information in a table