

17.2.-21/PA

## **Seminar programme, 2021**

**CS-E4070, Special Course in Machine Learning and Data Science: Signal processing and machine learning methods for speech-based biomarking of human health, 5 credits**

**SPA-EV, Signal processing and machine learning methods for speech-based biomarking of human health, 5 credits**

**ELEC029Z-LZ, Signal processing and machine learning methods for speech-based biomarking of human health, 5 credits**

### 1. Seminar

Date/time: 27.1.2021, 13:30-

Presenter: Paavo Alku

Topic: Course introduction

### 2. Seminar

Date/time: 10.2.2021, 13:30-

Presenter: Meghna Ranjit

Topic: Tsanas et al. Novel speech signal processing algorithms for high-accuracy classification of Parkinson's disease. *IEEE Trans. Biomed. Eng.* 59:1264-1271, 2012.

### 3. Seminar

Date/time: 17.2.2021, 14:00- (NOTE: starts at 14:00)

Presenter: Farhad Javanmardi

Topic: Jiang et al. Investigation of different speech types and emotions for detecting depression using different classifiers. *Speech Comm.* 90: 39-46, 2017.

### 4. Seminar

Date/time: 26.2.2021, 13:30- (NOTE: Friday)

Presenter: Manila Kodali

Topic: Arias-Vergara et al. Speaker models for monitoring Parkinson's disease progression considering different channels and acoustic conditions. *Speech Comm.* 101:11-25, 2018.

### 5. Seminar

Date/time: 3.3.2021, 13:30-

Presenter: Akshendra Garg

Topic: Mekyska et al. Robust and complex approach of pathological speech signal analysis. *Neurocomputing* 167: 94-111, 2015.

### 6. Seminar

Date/time: 10.3.2021, 13:30-

Presenter: Meghna Ranjit

Topic: Gomez-Garcia et al. On the design of automatic voice condition analysis systems. Part II: Review of speaker recognition techniques and study on the effects of different variability factors. *Biomedical Signal Processing and Control* 48: 128-143, 2019.

#### 7. Seminar

Date/time: 17.3.2021, 14:00- (NOTE: starts at 14:00)

Presenter: Farhad Javanmardi

Topic: He and Cao. Automated depression analysis using convolutional neural networks from speech. *Journal of Biomedical Informatics*, 83: 103-11, 2018.

#### 8. Seminar

Date/time: 24.3.2021, 13:30-

Presenter: Manila Kodali

Topic: Vasquez-Correa et al. Convolutional neural network to model articulation impairments in patients with Parkinson's disease. *Proc. Interspeech'17*.

#### 9. Seminar

Date/time: 31.3.2021, 13:30-

Presenter: Akshendra Garg

Topic: An et al. Automatic early detection of amyotrophic lateral sclerosis from intelligible speech using convolutional neural networks. *Proc. Interspeech'18*.