

## Acoustic speech analysis in movement disorders

Jan Ruz, Czech Technical University, Prague

Most patients with movement disorders have speech impairments resulting from sensorimotor abnormalities that affect phonatory, articulatory, and prosodic speech subsystems. Four vocal tasks, namely sustained vowel, sequential and alternating motion rates, reading passage and monologues, are integral aspects of motor speech assessment. Nowadays, vocal performance via these tasks can be reliably and automatically assessed using modern methods of acoustic analysis. This presentation will describe several acoustic vocal speech features, including their hypothesized pathomechanisms with regard to typical occurrences in dysarthria of movement disorders. Using these acoustic features and experimental speech data, the presentation will also demonstrate the application of acoustic analysis for differential diagnosis of dysarthria.