

Prominence marking in typical and neurodiverse speech system
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Acknowledging the dynamic nature of the mind (Spivey 2007) and searching for ways to overcome limitations of symbolic approaches, many researchers working on human cognition have turned to dynamical systems theory. Various cognitive processes have been described on the basis of this framework, including the production and perception of speech sounds and their cognitive representations as well as movement coordination (Haken et al. 1985; Kelso 1995; Goldstein, Byrd & Saltzman 2006; Iskarous & Pouplier 2022; Mücke et al. 2024).

In the present talk we will discuss the role of dynamical systems in exploring prosodic modulations in different speech systems from a linguistic and kinematic perspective. We investigate the role of categorical and gradient modulations in a multidimensional phonetic space (Roessig, Winter & Mücke 2022), and we shed light on the implementation of the visual domain (Pagel et al. 2023; Mertz et al. 2024). Therefore, we showcase data from different neurotypical and neurodiverse systems including Morbus Parkinson and REM Sleep Behaviour Disorder (Thies et al. 2023). We conclude that prominence modulations may be associated with basic principles of coarticulation/compensation that are triggered and constrained by the demands of a linguistic system.