**Visually-guided Auditory Adaptation and Reference Frame of the Ventriloquism Aftereffect (Ing. Peter Loksa, doc. Ing. Norbert Kopco; Faculty of science, Pavol Jozef Safarik University)**

Ventriloquism aftereffect (VA) is observed as a shift in the perceived locations of auditory stimuli, induced by repeated presentation of audiovisual signals with incongruent locations of auditory and visual components. Since the two modalities use a different reference frame (RF), audition is head-centered (HC) while vision is eye-centered (EC), the representations have to be aligned. A previous study examining RF of VA found inconsistent results: the RF was a mixture of HC and EC for VA induced in the center of the audiovisual field, while it was predominantly HC for VA induced in the periphery [Lin *et al.*, JASA 121, 3095, 2007]. In addition, the study found an adaptation in the auditory space representation even for congruent AV stimuli in the periphery. Here, a computational model examines the origins of these effects. The model assumes that multiple stages of processing interact: 1) the stage of auditory spatial representation (HC), 2) the stage of saccadic eye responses (EC), and 3) some stage at which the representation is mixed (HC+EC). Observed results are most consistent with a suggestion that the neural representation underlying spatial auditory plasticity incorporates both HC and EC auditory information, possibly at different processing stages. [Supported by VEGA-1/1011/16]