Assessing the interaction between different auditory profiles and benefit from six hearing aid processing strategies: Insights from the BEAR project

The current study forms part of the Better hEAring Rehabilitation (BEAR) project, which aims at developing and evaluating new clinical tools for individual hearing loss characterization and hearing aid benefit assessment. The purpose of the current study was to assess the interaction between four different auditory profiles and two outcome measures of aided performance obtained for six selected hearing-aid processing strategies (Sanchez-Lopez et al., Euronoise 2018). Sixty older habitual hearing-aid users who participated in the study were previously classified into four auditory profiles based on a data-driven approach (Sanchez-Lopez et al., Trends in Hearing 2018). All stimuli were generated with the help of a hearing aid simulator and presented via headphones. Speech recognition in noise was assessed at fixed signal-to-noise ratios based on individual 50%-correct speech reception thresholds measured in a realistic noise environment. Subjective ratings of overall quality and noise annoyance were measured using a multiple stimulus comparison paradigm. It is hypothesized that the four auditory profiles will have different needs in terms of compensation so perceptual outcomes for the six hearing aid processing strategies are expected to be different.