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The audiological key to previously encrypted conversational constellations for hearing aid wearers

In any social events or family gatherings, a hearing aid wearer is conversing or communicating with one or multiple persons. This can be either in a café, a crowded restaurant, or simply at home. To improve understanding of speech and reduce listening effort in noisy situations, at least two key factors need to be considered:

The first factor is the so called 'conversation layout'. Is the hearing aid wearer communicating with a single or multiple conversation partners? Where are they sitting or positioned with respect to the hearing wearer?

The second key factor is the 'conversation turn-taking'. How is the flow of conversation? Is it a continuous or alternating dialogue between the speakers?

Through a novel analysis within the signal processing, the key factors mentioned can be analysed continuously, and decoded by a unique binaural multi-stream system. This makes it possible for each speaker in the given communication layout to receive their own directivity pattern, and thus stand out against the background noise in a conversational situation.

In addition to a detailed explanation of the technological concepts, first study results on the benefit of this novel approach will be presented.