

Enhanced speech segregation with low-latency DNN processing

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Hearing aid users are challenged in listening situations with noise and especially speech-on-speech situations with two or more competing voices. Specifically, the task of attending to and segregating two competing voices is particularly hard, unlike for normal-hearing listeners, as shown in a small sub-experiment. In the main experiment, the competing voices benefit of a DNN based stream segregation enhancement algorithm was tested on hearing-impaired listeners.

A mixture of two voices was separated using a DNN and presented to the two ears as individual streams and tested for word score. Compared to the unseparated mixture, there was a 13%-point benefit from the separation, while attending to both voices. The results indicate that DNNs have a large potential for improving stream segregation and speech intelligibility in difficult scenarios with two equally important targets without any prior selection of a primary target stream.