

## **ACOUSTICS2008/3234**

### **Improvement of speech intelligibility by audio hearing systems**

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All hearing aids and cochlea implants have algorithm to improve the speech intelligibility. The idea is to share human speech and noise to find different ratings. The result should be easier to understand by impaired people.

On the market there are big efforts to recognize speech and to separate it from noise. In this field we can notice a remarkable progress in the last years. But the reverberant sound in rooms or noise from same direction like the signal need a lot of work to suppress them effective.

The simplest way seems to be to gets the original speech signal direct from the source and to processes it individual in hearing devices. Induction loop systems as well as wireless infrared or radio frequency systems are used in churches, cinemas, theatres and conference rooms. But the available systems are very different in costs and benefit for management and clients. If these systems are used there is a considerable improvement of speech intelligibility.

The presentation will show the level of most used external audio hearing systems, their possibilities to improve the signal to noise ratio, the speech transmission index (STI) and the benefit for hearing aid or cochlear implant users.