

IGSN - SYMPOSIUM

Monday, October 25th 2021 • 15.00 (3 pm)

Auditory perception: the meaning of sounds, their relevance in decision making and crossmodal integration in healthy and disease individuals

FRANCESCO PAVANI

Department of Psychology and Cognitive Science, University of Trento, Rovereto, Italy

Measuring and training spatial hearing in cochlear implant users: a novel approach based on virtual reality

Cochlear implants (CIs) are the most successful neural-prosthesis to date, as they allow people who are profoundly deaf to partially recover hearing. In bilateral CI (BCI) users spatial hearing can also be partially restored. However, there appears to be a gap between the measures of spatial hearing obtained in laboratory and clinical settings, and the satisfaction for this regained skill reported by BCI patients. In addition, whether spatial hearing abilities of BCI users can be trained and improved remains to be ascertained. In this talk, I will present a new approach to measuring and training spatial hearing in BCI users, based on real sounds brought into visual virtual reality, and kinematic tracking of the participant. Using this system we examined the effects of head movements and reaching to sounds in fostering spatial hearing abilities in BCI users, as well as in people with normal hearing listening with one ear plugged. I will present new results showing that spatial hearing skills of BCI users can be improved using multisensory and motor training procedures. I will also discuss the implications of active listening for the study of spatial hearing.

Host:

GABRIELE RUSSO

Department of Neurophysiology, Faculty of Medicine, Ruhr Universität Bochum

Virtual guests are welcome!

