4 PhD Positions

TV-L E13

Four three-year PhD positions are being offered at the German Hearing Center Hannover[1] in the Auditory Prosthetic Group[2] (Prof. Waldo Nogueira) at the Hannover Medical School[3], Germany, in the scope of the ERC-Consolidator Grant READIHEAR (2 PhD Positions) and at Universitat Autonoma de Barcelona, Spain, in the scope of the ATRAE grant NEUROHEAR (2 PhD Positions). The positions focus on the investigation of interactions between acoustic and electric stimulation (EAS) in cochlear implant (CI) users with residual hearing in the same ear, hearing impaired and normal hearing subjects. The PhD students will investigate interactions between acoustic and electric stimulation using computational models combined with psychophysical and electrophysiological measurements. The PhD candidates will implement experiments in Matlab/Python coupled to CI research interfaces or to research current sources for electric stimulation. Statistical analysis will follow to interpret the results and physiological and phenomenological models will be used to understand and predict the effects in individual subjects.

Job Tasks:

- Design of a computational model of electric acoustic interaction
- Implementation and design of psychophysical experiments in research interfaces for electric stimulation of the auditory system in humans
- Evaluation of acoustic electric interactions in patients with residual hearing and CIs and normal hearing listeners
- Preparation of patient testing including preparation of study protocol, ethical approval
- Analysis of medical imaging to assess electrode positions in the cochlea
- Analysis and modelling of results

Requirements:

- Master's degree in physics, biomedical engineering, hearing technology & audiology, electrical engineering, applied mathematics, computer science or neuroscience
- Experience with Matlab/Python
- Experience with psychoacoustic or electrophysiological experiments (not mandatory)
- Interested in working with patients and in an interdisciplinary team
- Ability to fluently communicate and document in English
- Self-dependent team player

The position will be integrated in the Auditory Prosthetic Group within the Cluster of Excellence "Hearing4all"[4] which offers great training possibilities, including the PhD Academy "Hearing4all", and cooperation with other research institutions within the Medical University Hannover, the University of Oldenburg and the Universitat Autonoma de Barcelona. Salary and benefits are competitive.

Deadline for application: 31.12.2024

Please send a statement of interest and CV to: nogueiravazquez.waldo@mh-hannover.de

1 http://www.hoerzentrum-hannover.de

2 https://www.vianna.de/01_workgroups/nogueira.html

3 https://www.mh-hannover.de/hno.html

4 http://hearing4all.eu