

## **PhD Position: Characterization and prediction of perceptual consequences of individual hearing loss**

**Centre for Applied Hearing Research, Technical University of Denmark (DTU)**

Proposed starting date: September 1, 2012

Closing date for applications: May 15, 2012

### **The INSPIRE Marie Curie Initial Training Network**

As a PhD student you will participate in the FP7 Marie Curie Initial Training Network Investigating Speech Processing In Realistic Environments (INSPIRE). This network provides research opportunities for 13 PhD students and 3 postdocs. You will become a member of an international team of researchers whose aim is to gain a better understanding of how listeners recognize speech, even under non-ideal circumstances. You will contribute to urgently needed solutions that help alleviate the serious communication problems that arise, especially for older and hearing-impaired persons, when different combinations of 'adverse' conditions affect the speech processing system.

### **Topic**

There are enormous differences in hearing performance across individual listeners. To choose the right compensation strategy one needs to understand what the sources of this variability are. In this project, you will characterize individuals' hearing loss based on estimates of sensitivity, amplitude compression, spectral and temporal resolution, cognitive capabilities, and their relation to speech intelligibility performance. A computational auditory model will be used to predict the consequences of individual deficits and to account for the variability in the data across listeners. The results are expected to have implications for advanced compensation strategies in hearing instrument technology.

### **Host**

This project will be supervised by Prof. Torsten Dau and carried out at the Centre for Applied Hearing Research (CAHR) at the Technical University of Denmark (DTU). At the centre, we conduct fundamental and applied research with a focus on human speech communication, auditory processing and perception, hearing impairment and hearing instruments. For more information about CAHR, please visit our website: <http://www.dtu.dk/centre/cahr/English.aspx>

This position will also be co-supervised by Dr Bert Cranen (B.Cranen@let.ru.nl), Centre for Language and Speech Technology (<http://www.let.ru.nl/>), Radboud University, The Netherlands. As part of the project, you will also spend a few months at Radboud University.

## **Employment conditions**

- Full-time, 36 months duration
- The annual salary is in accordance with both ITN and Danish regulations.
- In addition to the salary, you will receive travel and training allowances on the basis of generous Marie Curie ITN provisions

## **Requirements**

To apply, you should have the following:

- Hold a Master's degree in engineering or science
- Have a strong background in some of the following: auditory perception; audiology; auditory signal processing, auditory neuroscience; engineering acoustics
- Be willing to spend several months at two placements: Radboud University and with one of the associated INSPIRE partners.
- Be available to start on September 1, 2012

You must also comply with the FP7 Marie Curie rules for ITNs:

- You must not have resided or performed your main research activity in Denmark for more than 12 months in the last three years
- You must be willing to work in at least one other country in the INSPIRE network
- You must have fewer than 4 years of research experience since you obtained your Masters degree, and not hold a PhD

The Technical University of Denmark is an equal opportunity employer. Female researchers are strongly encouraged to apply for this vacancy.

## **To find out more**

Further information about INSPIRE can be found here:

<http://www.ru.nl/clst/projects/speech/inspire/>  
or contact Prof. Torsten Dau, [tdau@elektro.dtu.dk](mailto:tdau@elektro.dtu.dk)

## **How to apply**

If interested, please send the following to Caroline van Oosterhout ([cvo@elektro.dtu.dk](mailto:cvo@elektro.dtu.dk)):

- CV
- 2-page description of your research interests explaining why this position e INSPIRE goals appeal to you, how the INSPIRE team may benefit from your participation, and your career perspectives as expected from INSPIRE
- university transcripts
- names and email addresses of two referees that we will contact

Please submit your application before May 15, 2012