

PhD Studentship: Microscopic models of speech perception

Language and Speech Laboratory, University of the Basque Country

Starting date: 1st October 2012

Closing date for applications: 15 April 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

As a PhD student you will conduct research as part of the project *Microscopic models of speech perception: allocating audible components to speech streams*. Some aspects of the effect of noise on speech perception, such as the way speech components are masked by energetic noise components, are reasonably well-understood. However, little is known about subsequent processes which determine how audible speech components are segregated from noise to form an ongoing speech hypothesis. The aim of this project is to develop a computational model capable of predicting listeners' confusions caused by noise, starting from an existing model of energetic masking.

Host

The project will be carried out at the Language and Speech Laboratory (LASLAB, <http://laslab.org>) at the University of the Basque Country, Spain. LASLAB is a multidisciplinary group of linguists and engineers within the Faculty of Letters focusing on speech perception by listeners and machines, especially in multilingual settings. You will also spend some months at the second host, the Speech and Hearing Group (<http://spandh.dcs.shef.ac.uk/>) in the Department of Computer Science at the University of Sheffield, UK under the supervision of Dr Jon Barker.

Employment conditions

- full-time, 36 months duration
- the annual salary is €28126 before taxes
- in addition to the salary, you will receive travel and training allowances on the basis of generous Marie Curie ITN provisions

Requirements

You should

- hold a Master's degree in engineering or science
- have a strong background in some of the following: computer science, signal processing, machine learning, mathematical and/or statistical modelling
- have excellent programming skills
- be willing to spend several months on two placements: in the Dept. of Computer Science at the University of Sheffield, and at one of the associated partners.
- be available to start on 1st October 2012

Prior exposure to courses in linguistics or speech- or hearing-related fields would be an advantage. You must also comply with the FP7 Marie Curie rules for ITNs:

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

The University of the Basque Country 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 at

<http://www.ru.nl/clst/projects/speech/inspire/>
or contact Prof. Martin Cooke, m.cooke@ikerbasque.org

How to apply

Your application must consist of

- a CV
- a 2-page description of your research interests explaining why the 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 send your application, stating vacancy code INSPIRE-ESR-UPV, to m.cooke@ikerbasque.org before 15 April 2012.