Voice restoration with Silent Speech Interfaces based on Electro-Myographic signals

RESEARCH POSITION OFFER

CONTACT INFO

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DESCRIPTION

In recent years, Silent Speech Interfaces (SSIs) have emerged as a promising alternative to restore oral communication by decoding speech from non-acoustic (silent) speech-related biosignals generated during speech production. Electromyography (EMG), which captures facial muscle activity using surface electrodes, offers a fundamentally new solution to restore communication capabilities to speech-disabled persons. In this approach, audible speech is directly generated from silent speech data by mapping the EMG generated signals into a suitable speech representation and then generating a waveform from the estimated speech parameters. Most commonly, deep neural networks (DNNs) are applied to model the EMG-to-speech mapping. The goal of the contract will be to research novel deep neural network architectures for silent speech generation.

The work will be developed in the framework of the "Voice Restauration with Silent Speech Interfaces (ReSSint)" project, funded by the Agencia Estatal de Investigación in collaboration with the University of Granada and the Cognitive System Lab of the University of Bremen.

We offer a 6 months research contract with possibility to be extended to a maximum of 2 years. Options to develop a PhD can be analyzed.

CANDIDATE BACKGROUND

The candidate should preferably have a BSc degree in telecommunications engineering, mathematics, physics, or computer science, and a MSc. in communications, signal processing or machine learning. The degree must be officially approved.

The candidate must also have proved research experience and good programming skills. Outstanding curriculum vitae, strong motivation, team working skills, and fluent spoken and written English will be highly appreciated.

APPLICATION

The candidate should send an e-mail in English to inma.hernaez@ehu.eus with a CV and a brief description of the applicant particular merits to get the position. All applications will be evaluated. Open until filled.