SCIENCE DU DISCOURS - PSYCHOLINGUISTIQUE - PSYCHOACOUSTIQUE – Bourse post-doctorale – « A new framework for understanding the Dynamic Rhythms and Decoding of Speech » – ENS - Laboratoire des systèmes perceptifs – CNRS – avant le 31 juillet 2023

vendredi 30 juin 2023, par **Rhuthmos**

DRhyaDS

A new framework for understanding the Dynamic Rhythms and Decoding of Speech

Job Title - Postdoctoral Researcher

Disciplines and Areas of Research - Speech science, Psycholinguistics, Psychoacoustics

Contract Duration - 1 Year

Research Overview :

The DRhyaDS project aims to develop a new framework for understanding the dynamic rhythms and decoding of speech. It focuses on exploring the temporal properties of speech and their contribution to speech perception. The project challenges the conventional view that speech rhythm perception relies on a one-to-one association between specific modulation frequencies in the speech signal and linguistic units. One of the key objectives of the project is to investigate the impact of language-specific temporal characteristics on speech dynamics. The project team will analyze two corpora of semi-spontaneous speech data from French and German, representing syllable-timed and stress-timed languages, respectively. Various acoustic analyses will be conducted on these speech corpora to explore the variability of slow temporal modulations in speech at an individual level. This comprehensive acoustic exploration will involve extracting and analyzing prosody, spectral properties, temporal dynamics, and rhythmic patterns. By examining these acoustic parameters, the project aims to uncover intricate details about the structure and variation of speech signals across languages and speakers, contributing to a more nuanced understanding of the dynamic nature of

spoken language and its role in human communication.

Environment :

The selected candidate will be an integral part of an international research team and will work in a collaborative and stimulating lab environment. The project brings together a Franco-German team of experts in linguistics, psychoacoustics and cognitive neuroscience, led by D^r. Léo Varnet (CNRS, ENS Paris) and D^r. Alessandro Tavano (Max Planck Institute, Goethe University Frankfurt). The successful candidate will work under the supervision of Dr Léo Varnet, at the Laboratoire des Systèmes Perceptifs (ENS Paris).

Job description :

This is a one-year postdoctoral contract position, offering a net salary in accordance with French legislation (2500€/month + social and medical benefits). Women and minorities are strongly encouraged to apply.

The successful candidate will participate in research activities, collaborate with team members, and contribute to scientific publications and communications. Additionally, they will have the autonomy to suggest and implement their own analysis techniques and approaches. Their responsibilities will include :

- Taking a lead role in collecting a comprehensive corpus of French speech data, adhering to a rigorous data collection protocol

- Collaborating closely with the German team to leverage the existing German speech corpus for comparative analysis and cross-linguistic investigations

- Conducting in-depth acoustic analysis of the corpora, employing advanced techniques to investigate the variability and dynamics of slow temporal modulations in speech

- Actively participating in team meetings, workshops, and conferences to present research progress, exchange ideas, and contribute to the intellectual growth of the project

- Engaging in science outreach activities to promote the project's research outcomes and facilitate public understanding of speech perception and language processing.

Qualifications :

- A recently obtained PhD in a relevant field (e.g., linguistics, psychology, neuroscience, computational sciences)

- Strong expertise in linguistics, speech perception, acoustic analysis, and statistical methods

- Proficiency in programming languages commonly used in speech research. Knowledge of MATLAB would be particularly valuable for data processing and analysis within the project.

- Strong written and verbal communication skills in English. Candidates with proficiency in French and/or German language skills would be particularly appreciated, as it would enable a deeper understanding of the linguistic characteristics of the respective corpora.

Application process :

To apply for this position, please submit a CV and a cover letter (in French or English) along with the names and contact information of 2 referees to Léo Varnet (leo.varnet@cnrs.fr). The application deadline is 31th July 2023. Interviews will be conducted in September. The ideal start date is October-November 2023, with some flexibility allowed. Feel free to get in touch informally to discuss this position.