JOB ADVERTISING

Twelve Early Stage Researcher positions: Understanding and predicting developmental language abilities and disorders in multilingual Europe (PredictAble)

The Marie Skłodowska-Curie Actions (MSCA) Innovative Training Networks (ITN) "PredictAble" invites applications for twelve positions for Early Stage Researchers (ESRs), available from September 1st, 2015. The network studies the cognitive mechanisms that underlie typical and atypical development of spoken and written language taking a cross-linguistic perspective with a unique and novel combination of cutting-edge approaches and techniques for studying mono- and bilingual children. Collaborating partners are the University of Potsdam (Germany), CNRS-Université Paris Descartes (France), University of Jyväskylä (Finland), University Pompeu Fabra (Barcelona, Spain), and NIRx Medizintechnik GmbH (Berlin, Germany).

DESCRIPTION OF PARTNERS

The University of Potsdam (Germany) hosts leading institutions in the field of language acquisition, linguistics, and (developmental) cognitive neuroscience in its research center Cognitive Sciences. The Baby Lab and NOLA lab focus on language acquisition and language processing in infants, children, and adults using multi-methodological approaches. Potsdam is a historical German city close to Berlin, one of the most culturally vibrant cities in the world.

The University Paris Descartes (France), hosting the Laboratoire Psychologie de la Perception (LPP), a CNRS and University Paris Descartes joint lab, is located at the heart of Paris. The Speech Perception research group of the LPP focuses on early language acquisition in typical and atypical populations using a cross-linguistic approach and state-of-the-art research methods (looking time measures, eye-tracking, EEG, NIRS, etc.).

The University of Jyväskylä (JYU, Finland) hosts the Research Forum of Learning Difficulties, a network for research on learning and learning difficulties, and the Jyväskylä Centre for Interdisciplinary Brain Research (CIBR) with state-of-the-art eye-tracking, EEG, and MEG laboratories. Their research group is conducting longitudinal research of reading difficulties and is an expert in child EEG methods. Jyväskylä is a lively student town surrounded by beautiful lakes and nature.

The University Pompeu Fabra is located in Barcelona (Spain) and hosts the Centre of Brain and Cognition (CBC). Researchers at the CBC investigate how specific biological mechanisms routinely support the emergence of cognitive functions, leading to insights into why experience is so important for normal brain development. The CBC hosts the SAP and RICO research groups and the UPF Babylab.

NIRx is widely recognized as an industry leader and key innovator in the field of functional NIRS imaging and maintains close research collaborations with a number of international academic institutions. The German branch is located in the heart of Berlin, one of the most culturally vibrant cities in the world and home to a lively start-up scene.

DESCRIPTION OF POSITIONS

ESR1: Development of continuous speech tracking and speech production in typical and language delayed children.

University of Jyväskylä (supervisor: Hämäläinen)

In this project, the capacity of the child brain to process and produce speech is investigated using EEG and MEG. These brain mechanisms are examined in the context of typical and late talking children. Collaborative visits to Haskins Laboratories (Yale, USA) and University of Potsdam complement the training.

ESRs 2 and 3: Perception of relevant acoustic cues in early talkers, on-time talkers and late talkers – electrophysiological and hemodynamic markers of underlying mechanisms: evidence from German (ESR 2) and French (ESR 3)

University of Potsdam (ESR2, supervisor: Wartenburger); Université Paris Descartes (ESR3, supervisor: Gervain)

The general objective of ESRs 2 and 3 is to assess the basic auditory perception of acoustic cues relevant for speech processing in young children. Specifically, they will be involved in assessing the processing of the acoustic dimensions of pitch, duration and intensity with psychoacoustic, hemodynamic and electrophysiological measures in children with different vocabulary sizes. These measures will be taken longitudinally in young German and French participants, and tested cross-linguistically to identify language-general and language-specific factors. Techniques: EEG, NIRS.

ESR4: Multilingual exposure and development of early phonology

Universitat Pompeu Fabra, Barcelona (supervisor: Sebastian-Galles)

There is growing evidence that infants know several words by 6 months of age, before the phonetic categories have been acquired. The goal of this project is to explore how the overlap at the lexical level between bilinguals' two languages interplays with the establishing of phonetic categories. The research will focus on infants from 6 to 24

months. Behavioural as well as eye-tracking and EEG recordings will be used. This project will be developed in collaboration with Université Paris Descartes.

ESR5: Relations between spoken language and reading acquisition in children with or without risk for dyslexia.

University of Potsdam (supervisor: Noiray)

This project will investigate reading versus spoken language fluency in beginning readers of English and German with and without risk for dyslexia. The successful candidate will collect and analyse data from both speech and reading across the two languages. She/he will work with behavioural and neuroimaging techniques (ultrasound imaging, acoustics, NIRS). The position is mainly located at University of Potsdam with collaborative visits to Haskins Laboratories (Yale, USA) and the University of Jyväskylä. Requirements: experience in speech production, phonetics/phonology, acoustics, and/or articulatory analysis.

ESRs 6, 7, and 8: Phonological, morphological and lexical effects on word learning in children with low and high vocabulary: Evidence from German (ESR6), French (ESR7), and Hungarian (ESR8)

University of Potsdam (ESR6, supervisor: Höhle); Université Paris Descartes (ESR7, supervisor: Nazzi); Université Paris Descartes (ESR8, supervisor: Gervain)

This project will study the processing of phonetic and morphological information during early lexical processing, using eye-tracking and ERPs. To study these effects, this project will be run with German-, French- and Hungarian-learning infants in close collaboration between University of Potsdam, Université Paris Descartes and Central European University, Budapest, Hungary. The position for ESR6 is mainly located at the University of Potsdam, the positions for ESR7 and ESR8 are mainly located at Université Paris Descartes.

ESR9: Multilingual exposure and integration of cross-modal information: Consequences for language and social development

Universitat Pompeu Fabra, Barcelona (supervisor: Sebastian-Galles)

The goal of this project is to investigate the consequences of the reported differences in the developmental patterns of attention to the eye and mouth areas observed in infants growing up in multilingual environments. This project will be developed in collaboration

with Dr. Agnes Kovacs at Central European University in Budapest (Hungary). Behavioural as well as eye-tracking and EEG recordings will be used.

ESR10: Strategies of early word acquisition in different linguistic populations

Universitat Pompeu Fabra, Barcelona (supervisor: Bonatti)

The goal of this project is to study how being exposed to different kinds of linguistic experience, and/or being part of at-risk populations, influences word learning, and the acquisition of morphosyntax. The project will compare mono- and bilingual children exposed to languages with different phonological and syntactic properties using standard behavioural and eye-tracking methods. This position will be mainly based at the Universitat Pompeu Fabra with exchange visits to the University of Potsdam.

ESR11: Neurocognitive development of phonology, word recognition and reading in children with or without risk for dyslexia.

University of Jyväskylä (supervisor: Leppänen)

The aim of this project is to examine sub-processes of reading acquisition, word recognition and reading problems (dyslexia) and to understand how these processes are deficient in children with risk for dyslexia and in dyslexic readers. The methods used include cognitive behavioural assessments, EEG and MEG combined with eye-tracking. Main collaborating partners are Haskins Laboratories (Yale, USA) and University of Potsdam.

ESR15: Neural processes of word recognition and reading fluency in children with dyslexia and comorbid ADHD.

University of Jyväskylä (supervisor: Leppänen)

In this project the goal is to examine sub-processes related to reading fluency, integration of semantic information and the role of attention in these processes, to understand how these processes are deficient in dyslexic readers and how attention problems (ADHD) adds to this. The role of attention, working memory, and executive control on e-reading and text reading fluency are studied using EEG and MEG combined with eye-tracking. Main collaborating partners are Haskins Laboratories (Yale, USA) and University of Potsdam.

GENERAL INFORMATION, relevant for all positions

The working language for all positions is English and/or the language(s) of the host country. The duration of the appointments is 36 months. Salary (living allowance, mobility allowance, and, if applicable: family allowance) is given in accordance with Marie Curie European regulations.

Applicants should have a solid background in language and cognition, psycholinguistics, linguistics, developmental psychology, cognitive psychology, or related fields. Demonstrated knowledge of and experience with the specific experimental methods (especially their application with young children and infants) including data analysis is desired. Knowledge of the languages studied is a plus.

Candidate Requirements: For Marie-Skłodowska-Curie positions, candidates can be accepted only if they have not lived for longer than 12 months in the past three years in the country of the host institution. The ESR shall, at the time of recruitment by the host organisation, be in the first four years (full-time equivalent) of their research career and have not been awarded a doctoral degree.

Please send your application including: (1) a statement of research interests and motivation, (2) a full CV (including precise details about residency in the last 3 years), (3) the names and email addresses of at least two referees, (4) academic transcript, (5) list of publications/talks/posters, (6) and a writing sample (e.g. copy of the master's thesis, other publications) as a single PDF, to: predictable [-at-] uni-potsdam.de. Please clearly indicate in the subject line for which of the ESR-positions you are applying. **Positions are now open, and will be filled as soon as possible. Applications will be accepted until the positions are filled. If you are applying to more than one position, please provide a ranking of your preferences. For more information see http://www.uni-potsdam.de/predictable.**