

### **3 PhD Positions in Language Evolution (SocialContext)**

With the launch of a new ‘NCCR Evolving Language’, which involves nearly 40 different research groups from a large variety of disciplines across Switzerland, we seek to fill three PhD positions (4 years) for the project on Social Context.

Our goal is to make progress in understanding the role of social context in the disambiguation of signal meaning in humans and non-human primates. To this end, we plan to carry out a set of studies, investigating how humans and apes integrate extra-linguistic cues with vocal utterances, and when and how they learn to recognise and interpret them.

The project will encompass research with chimpanzees in the wild and captivity, human infants in their natural surroundings, and computational models of learning to interpret in context. It will be lead by Prof Sabine Stoll (Uni Zurich), Prof Simon Townsend (Uni Zurich), and Dr James Henderson (Idiap). The three successful PhD students will become part of a large interdisciplinary team of scientists tackling the topic of language evolution.

Research with chimpanzees (PhD1) will be conducted at the Budongo Conservation Field Station (Uganda) and Basel Zoo (Switzerland). We will use observational and experimental approaches to understand the impact of social context on call comprehension. Successful candidates will have a strong academic background in a relevant discipline, such as zoology, anthropology, psycholinguistics or psychology, ideally with prior field experience. The chimpanzee research project will be conducted in collaboration with Prof Klaus Zuberbuhler, University of Neuchatel. This project will require a strong commitment to working under difficult field conditions for a total period of around 18 months. The successful candidate for research with human infants (PhD2) will join the ACQDIV group (<https://www.acqdiv.uzh.ch/en.html>) at the Department of Comparative Language Science (<https://www.comparativelinguistics.uzh.ch/en.html>) at the University of Zurich where he/she will become part of a team of linguists and computational scientists working on maximally diverse languages. The main task will be to build a large longitudinal and cross-sectional corpus of Vietnamese in collaboration with local and international colleagues. The project involves long period of field work in Vietnam and subsequent analysis of the data at the Center for the Interdisciplinary Study of Language Evolution (ISLE, <https://www.isle.uzh.ch/de.html>) of the University of Zurich, Switzerland. The successful candidate will have an MA in linguistics (typology, language acquisition and/or quantitative methods), a strong interest in corpus linguistics, a solid background in statistics and in at least one scripting language (e.g., R, Python), and ideally fieldwork experience.

Research on computational models of learning (PhD3) will be conducted in the Natural Language Understanding group at Idiap Research Institute, with the PhD awarded by EPFL conditional on a parallel application process. The main task will be developing deep learning

models of discovering the meaningful units in language and learning their meaning from their linguistic and extra-linguistic context. The ideal PhD candidate should hold a Master degree in computer science, computational linguistics or a related field. She or he should have a background in machine learning, optimisation, or natural language processing, and have strong programming skills.

We aim to generate a work programme that maximally fits the candidates' own interest -- within the limits of the project's goals -- so we will look for evidence of personal initiative, independent work ethics, and a strong interest in theory. Successful candidates should have excellent teamwork skills and be interested to go beyond disciplinary boundaries.

For consideration for PhD1 and PhD2, please compile the following documents into a single PDF labelled '**WP SocialContext-YourSurname.pdf**' and send to [fabienne.leuenberger@uzh.ch](mailto:fabienne.leuenberger@uzh.ch): cover letter (qualifications, PhD position(s) of interest, 1 page max); curriculum vitae; contacts of two referees; writing sample (2 pages max). For consideration for PhD3, please apply to the relevant position at <http://www.idiap.ch/webapps/jobs/ors/>. The NCCR places great emphasis on gender balance; we particularly encourage women to apply.

The positions are available until filled (we start evaluating the applications **April 6, 2020**). For questions about PhD1 contact [simonwilliam.townsend@uzh.ch](mailto:simonwilliam.townsend@uzh.ch), for PhD2 contact [sabine.stoll@uzh.ch](mailto:sabine.stoll@uzh.ch), and for PhD3 contact [james.henderson@idiap.ch](mailto:james.henderson@idiap.ch).