

PhD position in Computational Models of Emergent Communication University of Warsaw, Poland

A PhD position available in the ongoing research project NCN OPUS 2018/29/B/HS1/00884 “Developmentally informed agent-based modeling of symbolic constraints in interaction” within the Interdisciplinary Doctoral School.

Principal investigator: prof. Joanna Rączaszek-Leonardi

Discipline: Psychology (additional discipline: Mathematics/Computer Science/Philosophy), 2 open positions

Project description:

The project concerns the fundamental processes of emergence of symbolic communication in interactive agents. We will study these processes using computer simulations informed by both theoretical (psychology, semiotics, philosophy, anthropology) and empirical research (developmental psychology, experimental semiotics, psycholinguistics). Short description of the project:

http://hill.psych.uw.edu.pl/downloads/opus_agent_based_symbols_abstract.pdf

Doctoral advisors:

Prof. Joanna Rączaszek-Leonardi, Faculty of Psychology, and a co-advisor from the above disciplines.

Successful candidate should have:

- Master’s degree (or equivalent, possible exceptions¹) in cognitive science, computer science, mathematics, philosophy, psychology, linguistics or similar discipline.
- Good knowledge of written and spoken English.
- Interest in modeling cognitive processes and social phenomena.

Nice to have:

- Interests in basic research and philosophy, especially philosophy of mind and language.
- Familiarity with statistical data analysis techniques.
- Creativity and independent problem solving skills.
- Motivation to become involved in the project on all levels (theory and implementation).
- Programming skills (Python) and ability to use existing platforms to build computational models (for example, neural networks, Bayesian networks).

Recruitment:

- Registration in the IRK recruitment system of the University of Warsaw: **5/05-28/06/2020**
- Recruitment information (procedures, required documents) and schedule: <https://szkolydoktorskie.uw.edu.pl/en/msd-2/>
- If you are interested **please contact us by June 10th** at raczasze@psych.uw.edu.pl and j.zubek@uw.edu.pl. Please attach your CV and brief cover letter.

¹ <https://szkolydoktorskie.uw.edu.pl/en/msd-2/> or contact the School recruitment office

Education program:

Program realized in the Interdisciplinary Doctoral School and the realization of individual project, including the following responsibilities:

- Reading and analysing scientific literature on traditional and alternative ways of capturing language emergence and use.
- Engagement in formalizing existing theories on language evolution and acquisition.
- Contributing to designing models targeting key research questions for the project.
- Developing computational models.
- Analysing and reporting the results of computer simulations.
- Writing technical reports, scientific manuscripts, preparing conference talks and posters.
- Help in organizing lab meetings. Co-organizing scientific conferences and symposia.
- Supervision of interns and programmers responsible for subtasks within the project.
- Help in making code and data publicly accessible according to open science standards.

The education lasts 4 years. It includes obligatory classes (no more than 240 hours in total during the whole period of education) and the implementation of an individual research program, carried out under the supervision of a supervisor. Doctoral thesis under the program may not last longer than 4 years.

Doctoral School scholarship:

During the four years of study, each PhD student receives a scholarship in the amount of PLN 2371.70 for the first two years of studies (before the mid-term evaluation) and PLN 3653.70 in the next two years after the mid-term evaluation. Supplement for people with disabilities: PLN 711.51.

From this amount mandatory medical insurance contribution is subtracted (around 11%).

The scholarship amount is regulated by the Ministry of Science and Higher Education and may be subject to change.

NCN project scholarship:

Selected candidates are eligible for additional project related scholarship which amounts to PLN 4000 monthly for 24 months. This part of scholarship is free from taxes or additional contributions.