

PhD scholarship in computational cognitive modeling

If you are an inquisitive and independent early-stage researcher, interested in language and communication as approached by cognitive sciences and artificial intelligence, we invite you to join an ambitious new research project as a PhD student. The project titled “Developmentally informed agent-based modeling of symbolic constrains in interaction” (NCN OPUS) concerns the fundamental processes of emergence of symbolic communication in interactive agents. We will study these processes using computer simulations informed by both theoretical (semiotics, philosophy, anthropology) and empirical research (developmental psychology, psycholinguistics). Short description of the project:

<https://www.ncn.gov.pl/sites/default/files/listy-rankingowe/2018-03-15/streszczenia/410344-en.pdf>

We offer PhD scholarship and an opportunity to work in a small interdisciplinary group based at the Faculty of Psychology of the University of Warsaw (Warsaw, Poland). Principal investigator: prof. Joanna Rączaszek-Leonardi.

Requirements:

- Master’s degree (or equivalent) in cognitive science, computer science, mathematics or similar discipline
- Strong programming skills in Python
- Ability to use ready-made scripts and platforms to build computational models (for example, neural networks)
- Familiarity with advanced statistical data analysis techniques
- Interest in modeling cognitive processes and social phenomena
- Creativity and independent problem solving skills
- Motivation to become involved in the project on all levels (theory and implementation)
- Good knowledge of written and spoken English

We will welcome especially candidates who:

- Have experience in agent-based modeling, neural networks, machine learning techniques
- Worked previously in scientific projects
- Are interested in philosophy, especially philosophy of mind and language
- Would like to contribute to the project their own ideas and interests

Responsibilities:

- Developing computer simulations to model processes of language evolution and language acquisition
- Reading and analysing scientific literature
- Analysing and reporting 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

We offer opportunities for building a scientific career:

- Work in a supportive team of scientists recognizable internationally and publishing in international scientific journals.
- PhD students are full-fledged members of the team, and are encouraged to pursue their own ideas emerging from their involvement in the project.
- The team has numerous international contacts (e.g., University of California, Berkeley, University of Manchester, Aarhus University). We are collaborating with researchers from a variety of fields, philosophers, cognitive scientists, and robotics.
- Advertised position provides opportunity to be involved in all research activities within the project and participate in international scientific conferences.

Type of contract

PhD scholarship, 4000 PLN a month. Candidate is expected to enroll in a PhD programme at the University of Warsaw.

Additional information

More comprehensive description of project's goals, theoretical foundations, and example models, can be found in:

- J. Rączaszek-Leonardi, I. Nomikou, K. Rohlfing, T. Deacon, "Language development from an ecological perspective: ecologically valid ways to abstract symbols" *Ecol. Ps.*, vol. 30, pp. 39-73, 2018.
- A. Cangelosi, "Evolution of communication and language using signals, symbols, and words", *IEEE Trans.Evol. Comp.*, vol. 5, pp. 93-101, 2001.

How to apply

Required documents:

1. Application with cover letter concerning the project
2. Scientific CV with short description of research interests and scientific publications (optional)
3. Copy of diploma
4. Letter of recommendation from an academic source
5. Foreign language certificates (optional)

You may apply by e-mail (preferred form): raczasze@psych.uw.edu.pl, mail subject: "OPUS 15 00884 offer".

Alternatively, an offer may be delivered in a sealed envelope to the Faculty of Psychology of the University of Warsaw, ul. Stawki 5/7, rm. 77, 00-183 Warsaw, Poland. Envelope should have an indication "OPUS 15 00884 (Joanna Rączaszek-Leonardi)".

Deadline for the applications: 24.02.2019, 00:00 (GMT/UTC +1)

Recruitment terms and conditions

1. Contract for PhD scholarship will be signed with the chosen candidate.
2. We reserve the right to organize additional interviews with the most promising candidates.
3. We reserve the right to not choose any candidate.