INSTITUTE OF MATHEMATICS
POLISH ACADEMY OF SCIENCES

NATIONAL SCIENCE CENTRE
POLAND

Postdoc position for the National Science Centre project "Hybrid models of natural reasoning" implemented at the Institute of Mathematics PAS

This research project is located in the intersection of cognitive science, computer science, and computational linguistics. It aims to develop and study hybrid models of natural reasoning that combine methods of logic and deep learning. In hybrid models, reasoning is ultimately based on rules of logic, but neural networks are involved in tasks such as the process of premise selection or construction of reasoning steps. We are interested in analyzing and interpreting interactions between the logical and the neural components, with emphasis on problems such as explainability for neural networks, compositionality in the context of reasoning, reasoning with background knowledge, etc.

We offer a genuinely interdisciplinary scientific environment, and oversight of the postdoc's research activities by two advisers – one specializing in logic (prof. Maciej Malicki, Institute of Mathematics of the Polish Academy of Sciences), and another one specializing in cognitive science/computational linguistics (prof. Jakub Szymanik, University of Trento). During the implementation of the project, we will cooperate with researchers from Poland, Italy and USA.

To learn more about the project, write to mmalicki@impan.pl.

Your Profile
We expect:
- PhD (defended before Oct 1st) in a field related to the project: cognitive science, computational linguistics, computer science, philosophy, etc.,
- substantial research experience in methods of logic and/or machine learning,
- passion for interdisciplinary research at the intersection of cognitive science, logic and computer science,
- ability to work in a team, and assist in supervising a PhD student,
- good command of English (oral and written).

Start of work
March – October 2023 (depending on the candidate's preferences).

Remuneration
A salary of appr. 6500 PLN (appr. 8400 PLN gross) will be paid for 12 months.

Application Procedure
For full consideration, send your application to mmalicki@impan.pl by Feb 15, 2023. It should include a statement, a detailed description of your research interests, experience, and achievements, including a list of publications, as well the names, addresses, and e-mail addresses of at least two references. Selected candidates will be interviewed on-line.