

Warsaw, October 15, 2024

**1 postdoctoral research position
in the scientific project
“Infinity in reasoning about data and knowledge”
financed by the National Science Center
(grant agreement no UMO-2018/30/E/ST6/00042)
Principal Investigator: Filip Murlak**

The National Science Center project „Infinity in reasoning about data and knowledge”, led by dr hab. Filip Murlak, is offering a postdoctoral research position in the Institute of Informatics at the Faculty of Mathematics, Informatics and Mechanics of the University of Warsaw.

Terms of employment

Selected candidate will be employed as full-time researcher (*pol.* adiunkt). The duration of employment is for fourteen months. The starting date can be set between **December 1, 2024** and **February 1, 2025**, as agreed upon by the candidate and the principal investigator. The offered salary is around 8 200 PLN per month pre-tax. The position comes with no teaching obligations and travel budget. Selected candidate will work on problems in the intersection of the fields of database theory as well as knowledge representation and inference.

Description of the project

The project aims to bring together the paradigms of databases on one hand and knowledge representation and reasoning on the other hand, mainly in the area of query processing and reasoning. The fundamental difference between these two paradigms concerns the assumption that the represented models are finite, which is present in databases and absent in knowledge bases. A similar opposition can be seen between low-level parallel data processing (circuits, FPGA, SIMD) and processing streamed data, although this time it concerns not finiteness but boundedness of the input. The research in the project focuses on the following directions:

- processing streamed structured data, especially with the use of low-level parallelism;
- problems of evaluation, static analysis, and optimization, especially in the context of designing new formalisms for graph databases;
- reasoning in knowledge bases in the regime of finite, infinite and mixed models.

Requirements

We expect that candidates at the moment of employment hold a PhD degree in computer science and have an excellent background in this discipline, in particular in one or more of the following fields:

- database theory
- knowledge representation and reasoning
- logic in computer science.

Research experience in any of the following areas will be an advantage:

- description logics, modal logics
- ontology-mediated query answering, reasoning in knowledge bases
- data stream processing

- computational complexity
- automata theory, finite model theory
- low-level programming.

At the moment of employment, the successful candidate will be expected to hold a PhD degree in a discipline related to mathematical logic. The degree must be obtained no earlier than 7 years before the year of employment in the project. A PhD degree is not required at the time of application.

The competition may be entered by candidates who meet the conditions set out in art. 113 of the Law on Higher Education and Science of July 20, 2018 (Journal of Laws of 2023, item 742, as amended).

Applications

An application should include **Curriculum Vitae** that:

- presents an overview of the background and scientific achievements of the candidate
- lists all the candidate's research works (including not yet published manuscripts)
- gives a list of three experienced researchers that may serve as references for the candidate.

In addition, there should be a **signed cover letter** addressed to the Dean of the Faculty of Mathematics, Informatics and Mechanics, University of Warsaw together with the **personal data clause** (attached).

No research statements are required.

Applications, as well as further questions on both the scientific topic of the project and formal details of the call procedure should be directed to dr hab. Filip Murlak:

f.murlak@uw.edu.pl

In order to apply for the position, candidates should send an e-mail and submit the documents as attached .pdf files.

Application deadline: November 16, 2024

Applications which do not satisfy the above requirements or are submitted after the deadline will not be considered for the position.

The applications will be evaluated by a selection committee appointed by the Dean of the Faculty of Mathematics, Informatics and Mechanics, University of Warsaw. The committee or the principal investigator may invite the candidate to a meeting, which will be conducted remotely. The results of the competition will be sent to candidates electronically on **November 30, 2024** at the latest. The competition is the first stage of the recruitment process as described in the Statute of the University of Warsaw, the recommendation by the selection committee being a basis for its subsequent stages.

Information on the Internal Reporting Procedure at the University of Warsaw based on the Act of 14 June 2024 on the Protection of Whistleblowers

The University of Warsaw has implemented a procedure for whistleblowers to report legal violations and for subsequent follow-up actions—the Internal Reporting Procedure, which is an annex to the Rector's Order No. 94 of 17 September 2024 on the procedure for reporting legal violations by whistleblowers and taking follow-up actions at the University of Warsaw. This procedure has been published and is available in the University Monitor, entry 266.

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given and family name

Information on personal data processing

Controller

Controller of your personal data processed in connection with the recruitment process is the University of Warsaw, ul. Krakowskie Przedmieście 26/28, 00-927 Warszawa, as the Employer.

Contact with the controller:

- by traditional mail at: University of Warsaw, ul. Krakowskie Przedmieście 26/28, 00-927 Warszawa (name the organizational unit to which your letter is addressed);
- by phone: 22 55 20 355.

Data Protection Officer (DPO)

Controller has designated Data Protection Officer whom you may contact via email at iod@adm.uw.edu.pl. You may contact the DPO in all matters relating to your personal data processing by the University of Warsaw and the exercise of rights in relation to the processing of personal data.

The DPO, however, does not proceed other matters, like handling recruitment procedures, collecting recruitment documents, providing information on current recruitment process.

Purpose and legal grounds of data processing

Personal data of candidates for employment shall be processed for recruitment purposes only.

Your personal data shall be processed in the scope as indicated by employment law¹ (*given name (names) and family name, date of birth, contact information as provided, education, professional qualifications, previous employment*) for the purposes of this recruitment process², whereas other data³ shall be processed based on your consent which may take the following wording:

I agree to the processing of personal data provided in CV and other submitted documents by the University of Warsaw for realising my recruitment process.

If your documents include data as mentioned in Art. 9 section 1 of the GDPR (special categories of personal data), processing shall be possible upon your consent to processing such data⁴ which may take the following wording:

I agree to the processing of special categories of personal data, as mentioned in Art. 9 section 1 of the GDPR, provided in CV and other submitted documents) by the University of Warsaw for realising my recruitment process.

The University of Warsaw shall be also processing your personal data in future recruitment processes upon your consent⁵ which may take the following wording:

¹ Art. 22¹ of the law of June 26, 1974 Labour Code (i.e. Journal of Laws 2019 item 1040 with subsequent changes);

² Art. 6 section 1 letter b of the Regulation of the European Parliament and the Council (EU) 2016/679 of April 27, 2016 on protection of individual persons with regard to the personal data processing and on the free flow of such data, and also repealing Directive 95/46/EC (general regulation on data protection) (Official Journal EU L 119 of 04.05.2016, page 1, with subsequent changes) (hereinafter as the GDPR);

³ Art. 6 section 1 letter a of the GDPR;

⁴ Art. 9 section 2 letter a GDPR;

⁵ Art. 6 section 1 letter a GDPR;

I consent to processing of my personal data for the purposes of any future recruitment processes at the University of Warsaw for the period of the next nine months.

You may revoke all such consents at any time by, for example, sending an email at konkursy@mimuw.edu.pl.

Be advised that the revocation of your consent does not affect legal compliance of processing which had been completed upon consent before its revocation.⁶

Data retention period

Your personal data collected in this recruitment process shall be stored over the period of three months from the date the recruitment process is completed.

In case you agree to process your data in future recruitments, your data shall be used over the period of nine months.

Data recipients

Officers authorized by the Controller shall have access to your personal data, the processing of which is in the scope of their duties.

~~Recipients of personal data may be other subjects obligated by the Controller to provide specific services involving data processing, like~~

.....
(name all recipients of data)

Data transfer outside the European Economic Area (EEA)

Your personal data shall be disclosed to subjects authorized by law. Signing-in is through Google Forms. Your personal data may be also processed by our provider of G-Suit for education by Google Company in their data processing centres.⁷ Your data shall be protected under the standards of the Privacy Shield, accepted by the European Commission.⁸ This shall guarantee an adequate level of data security.

Rights of the data subject

Under the GDPR data subjects have the following rights:

- to access data and to receive copies of the actual data;
- to correct (rectify) your personal data;
- to restrict processing of personal data;
- to erase personal data, subject to provisions of Art. 17 section 3 of the GDPR;
- to file a claim with the President of the Personal Data Protection Office, if you believe data processing violates law.

Information on the requirement to provide data

Providing your personal data in the scope resulting from law is necessary to participate in the recruitment process. Providing other personal data is voluntary.

.....
place and date

.....
applicant's signature

⁶ Art. 7 section 3 GDPR;

⁷ <https://www.google.com/about/datacenters/inside/locations/index.html>

⁸ <https://www.privacyshield.gov>