

3 postdoctoral research positions
in the scientific project Maestro: *Beyond classical hydrodynamics - new mathematical description of physical phenomena*
financed by National Science Centre (project no 2023/50/A/ST1/00447)
Principal Investigator: Agnieszka Świerczewska-Gwiazda

The NCN Maestro project *Beyond classical hydrodynamics - new mathematical description of physical phenomena*, led by prof. dr hab. Agnieszka Świerczewska-Gwiazda, is offering 3 postdoctoral research positions in the Institute of Applied Mathematics and Mechanics at the Faculty of Mathematics, Informatics and Mechanics of the University of Warsaw.

Terms of employment

Selected candidates will be employed as full-time researcher (*pol.* adiunkt). The duration of employment is for one year, with possible extension for another 12 months. The expected starting date is around 1st September 2025, up to an agreement between the candidates and the principal investigator. The offered salary is around PLN 8 850 gross/month. The positions come with no teaching obligations and generous travel budget as well as computer equipment. Selected candidates will work on mathematical analysis of partial differential equation models in fluid mechanics and biological processes.

Description of the project

The project investigates the mathematical foundations of fluid mechanics, focusing on the limitations of classical models, such as the Euler and Navier-Stokes equations, in real-world applications. Recent discoveries, such as the existence of infinitely many low-regularity solutions, reveal pathological behaviors that undermine the predictive reliability of these models. Therefore, the research considers complex factors, such as electric fields, capillary effects, vortices, and phase transitions, going beyond traditional theoretical frameworks. One of the key objectives is to establish rigorous connections between different models describing the same phenomena at various scales. This approach aims to address challenges related to nonlinear systems and deepen the theoretical understanding of fluid dynamics. The research findings will also provide insights into related areas, such as biological systems, which conceptually resemble fluid mechanics.

Requirements

We expect that candidates at the moment of employment hold a PhD degree in mathematics - the degree can be obtained no earlier than 7 years before the year of employment in project - and have an excellent background in one or more of the following fields: partial differential equations, functional analysis, measure theory.

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 provide references for the candidate.

In addition to the above, 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 on formal details of the call procedure should be directed to prof. dr hab. Agnieszka Świerczewska-Gwiazda:

aswierz@mimuw.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: 14th March 2025

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 may invite candidate to a meeting, which will be conducted remotely. The results of the competition will be sent to candidates electronically on 15th April 2025 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:

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;

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:

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

⁵ Art. 6 section 1 letter a GDPR;

⁶ Art. 7 section 3 GDPR;

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

⁸ <https://www.privacyshield.gov>

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.

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place and date

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applicant's signature