

**1 postdoctoral research position
in the scientific project
“Tensor rank and its applications to signature tensors of paths”
financed by the National Science Center
(grant agreement no UMO-2023/51/D/ST1/02363)
Principal Investigator: Francesco Galuppi**

The National Science Center project “Tensor rank and its applications to signature tensors of paths”, led by dr Francesco Galuppi, is offering one postdoctoral research position at the Institute of Mathematics at the Faculty of Mathematics, Informatics and Mechanics of the University of Warsaw.

Terms of employment

The selected candidate will be employed as full-time researcher (*adiunkt*, in Polish). The duration of employment is two years. The starting date is planned between 1st May and 1st December 2025 – to be agreed with the selected candidate. The monthly salary is around 8200 PLN pre-tax (approximately 1900 €). The position comes with no teaching duties and with travel and equipment budget.

Description of the project

The project revolves around the study of tensors from the viewpoint of algebraic geometry. There are two main directions:

- The study of secant varieties and tensor rank, including symmetric rank, border rank, VSP, eigenvectors and eigenvalues of tensors.
- The study of signature tensors of paths. This is a family of tensors with a wide range of applications, from stochastics to physics, from data analysis to statistics. However, the algebraic and geometric properties of signature tensors haven't been systematically studied yet. This part of the project aims to employ algebraic geometric tools to study signature tensors and fill this gap.

The successful candidate will have the chance to interact with the mathematical community at the University of Warsaw and at the other scientific institutions present in Warsaw, such as the Institute of Mathematics of the Polish Academy of Sciences (IMPAN).

Requirements

- A PhD in mathematics or equivalent, obtained before the start of employment (the PhD can be obtained after the deadline of applications).
- Good communication skills in English.
- A solid background in algebraic geometry or commutative algebra. Alternatively, a solid background in an area of math related to the project, and the willingness to gain a working knowledge of algebraic geometry.

Research experience in one of the topics related to the project (for instance secant varieties, tensor rank, signatures of paths, etc.) will be an advantage. Ability to work on topics outside of one's scientific comfort zone is also considered valuable.

Application

The application 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 dr Francesco Galuppi at the email address f.galuppi@uw.edu.pl. Insert the subject line "Postdoc Call 2025 - YourName".

The application should include:

- Curriculum vitae, including a list of publications and preprints.
- A brief research plan (one or two pages), connected to the topics of the project.
- Scan of signed acknowledgment of recruitment procedures (See attached example)

Moreover, you may arrange for up to two reference letters to be sent to the same email address with subject line "Postdoc Call 2025 - Reference letter for YourName" before the closing date of the call. Selected candidates may be invited for an online interview.

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.

Selected candidates may be invited for an online interview.

Application deadline: March 1st, 2025

The competition may be entered by persons 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 2022, item 574, as amended).

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 results of the competition will be sent to candidates **on March 26th, 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.

.....
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 s.lasota@uw.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 signatur

⁶ Art. 7 section 3 GDPR;
⁷ <https://www.google.com/about/datacenters/inside/locations/index.html>
⁸ <https://www.privacyshield.gov>

.....

given and family name

Statement of acknowledgment of recruitment procedures

Dean of the Faculty of Mathematics,
Informatics and Mechanics,
University of Warsaw

I hereby declare that I accept the rules of hiring researchers at the University of Warsaw, specified in Ordinance no. 106 of the Rector of the University of Warsaw from September 27, 2019.⁹

.....

place and date

.....

applicant's signature

⁹ Available on <https://monitor.uw.edu.pl/Lists/Uchway/Attachments/5034/EN.M.2019.282.Zarz.106.pdf>

