**Pursuant to the Law of Higher Education, the University of Warsaw invites the applications for: 1 postdoctoral research position *(PL: adiunkt)* in the scientific project "TUMORMAP: Mapping tumor subclones and their immune microenvironment inultra-high spatial and molecular resolution"**

**Computational Oncology and Machine Learning**

**Principal Investigator: dr Ewa Szczurek**

The National Science Center project "TUMORMAP: Mapping tumor subclones and their immune microenvironment inultra-high spatial and molecular resolution", led by dr Ewa Szczurek, is offering one post-doctoral 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 on employment contract. Project duration is negotiable, minimum 1 year, maximum 2 years (to be agreed with the selected candidate). The expected starting date is around the 1st of June 2024, up to an agreement between the candidate and the principal investigator. Location: Institute of Informatics, Faculty of Mathematics, Informatics and Mechanics at the University of Warsaw, Poland. Salary: c.a. 7 100 PLN monthly gross amount. Participation in conferences/scientific visits are a planned part of the project.

Work environment: lively, friendly and interdisciplinary research group, with wide international collaboration: https://www.mimuw.edu.pl/~szczurek/people.html, and a supportive PI: https://www.mimuw.edu.pl/~szczurek/

**Description of the project**

The problem that will be solved in this project is the development of advanced computational methods for quantitative and immunotherapy-informative analysis of tumor subclones and their microenvironment in ultra-high molecular and spatial resolution. The proposed approach is based on integrative machine learning and probabilistic modeling of data, such as 1) digital histopathology images, 2) spatial transcriptomics, 3) single cell RNA sequencing (scRNA-seq), and 4) DNA sequencing (DNA-seq) data.

Our methods are usually based on probabilistic graphical models, Bayesian Networks, Bayesian statistics, deep learning, with current focus on generative models.

Apart from his/her own research project, the Post-doc is expected to collaborate with Master and PhD students. The Post-doc will be required to actively aim at publishing the project results.

**Requirements**

The candidate is expected to have
- A doctoral degree in computer science, mathematics, machine learning, bioinformatics, or physics (or close to the respective defence – the employment will take place after the doctoral degree is awarded).

- Publications out of PhD.
- Documented experience in programming, with code available for review at public sites such as github.
- Interest in applications in healthcare/medicine, in particular oncology.
- Fluency in English.
- Good writing and presentation skills.

## Applications

Please send your applications per email to szczurek@mimuw.edu.pl, including
- CV
- Recommendation contact (we are likely to contact your Referee).
- Selected candidates will be invited for an interview.

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**Application deadline: 15th of March, 2024**

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

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

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

………….………………..
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 law[1] *(given name (names) and family name, date of birth, contact information as provided, education, professional qualifications, previous employment)* for the purposes of this recruitment process[2], whereas other data[3] 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 data[4] 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.*

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[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;

The University of Warsaw shall be also processing your personal data in future recruitment processes upon your consent[5] 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**

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                                                      applicant's signature

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[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