



UNIVERSITY
OF WARSAW

Faculty of Mathematics, Informatics and Mechanics
Institute of Informatics

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Post-doc Position in Computational Oncology and Machine Learning

Position: We invite applications for a postdoc position in a Polish National Science Centre-funded project called TUMORMAP (Sonata Bis grant).

Requirements: The candidate is expected to have

- A doctoral degree in computer science, mathematics, bioinformatics, or physics.
- Publications out of PhD.
- Excellent mathematical and computational background.
- A solid background in probabilistic graphical models, Bayesian statistics or machine learning, including deep learning.
- 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.

Project outline:

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 1) H&E 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, or deep learning, with current focus on generative models, in particular generative variational autoencoders.

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

Application deadline: 29 April 2021, 00:00

How to apply: Please send your applications per email to szczurek@mimuw.edu.pl, including

- CV.
- Recommendation letter and recommendation contact (we are likely to contact your Referee).
- Short motivation letter, explaining: 1) Why are you interested in this position, 2) What is your relevant research experience.
- Selected candidates will be invited for an interview.
- During the interview, the selected candidates will be asked to give a 10 min presentation of their recent research project.

Engagement conditions:

Project duration: negotiable, minimum 1 year, maximum 3 years

Type of position: employment contract

Position: Post-doc

Start of position: negotiable, available immediately

Location: Institute of Informatics, Faculty of Mathematics, Informatics and Mechanics at the University of Warsaw

Salary: c.a. 8 000 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/>

This post is a full-time post, for a person who has obtained their PhD degree within 7 years before joining the project. This period may be extended by a time of long-term (in excess of 90 days) documented sick leaves or rehabilitation leaves granted on account of being unfit to work. In addition, the period may be extended by the number of months of a child care leave granted pursuant to the Labour Code and in the case of women, by 18 months for every child born or adopted, whichever manner of accounting for career breaks is preferable.