

## INFORMATION ON THE COMPETITION

Krakow, 2nd October, 2019

**DEAN**  
**OF THE FACULTY OF PHYSICS, ASTRONOMY**  
**AND APPLIED COMPUTER SCIENCE**

Address: 11, Łojasiewicza street  
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**RECTOR**  
**of the Jagiellonian University**  
announces competition for the post of  
**ASSISTANT RESEARCHER**  
in the Institute of Physics  
at the Faculty of Physics, Astronomy  
and Applied Computer Science

**within the scope of Polish National Agency for Academic Exchange (NAWA) Polish Returns project no. PPN/PPO/2018/1/00011/U/00001, *Principles of information decoding in developmental systems.***

For the post of assistant researcher may apply persons who fulfil requirements stated in Article 113, 116 (2) (4) of the Act of 20<sup>th</sup> July 2018 Law on higher education and science.

Development of multicellular organisms is a remarkably reproducible process. During development cells are exposed to chemical cues that determine cell fate with positional precision of a few cell diameters. How this reproducibility is achieved is a fundamental question in biology that is still poorly understood. The proposed project addresses this question by applying methods of theoretical physics to model specific biological systems. As a result, factors affecting information decoding in developmental systems will be identified. Identification of these factors can have substantial impact in studies in a broad range of tissues and stem cell systems.

### Requirements:

- 1) MSc in physics, mathematics, computer science or similar.
- 2) Interest in the interdisciplinary aspect of the project.
- 3) Experience with numerical solvers (C++, Python, or Mathematica).
- 4) Good communication skills.
- 5) Experience in complex systems or biological networks will be an asset.

### Research tasks:

- Proposing and analyzing models of developing tissue in the framework of theoretical physics.
- Making model predictions that can be verified experimentally in selected biological systems.
- Participation in overall scientific activity of the research group.

### We offer:

- Interdisciplinary research at the interface of physics and biology. More at <http://zagorskigroup.com/>
- Research projects jointly with experimental labs (Austria, UK).
- Opportunities of research visits in foreign institutions and participation in international conferences.

Terms of employment: Full time employment for initial 24 months with possible extension

Starting date: December 2019

Salary: 5 000 PLN before-tax per month

Applications (scientific CV, list of publications, one recommendation letter) should be submitted to Dr Marcin Zagórski via e-mail: [marcin.zagorski@uj.edu.pl](mailto:marcin.zagorski@uj.edu.pl) with annotation "research assistant" by **5th November 2019**.

**Competition starting date:** 5th November 2019  
**Submission deadline:** 18th November 2019  
Competition results will be announced by: 25th November 2019

Jagiellonian University does not provide housing.

**Statement forms can be downloaded on the website:**

<http://www.dso.uj.edu.pl/druki-do-pobrania/dokumenty-dla-kandydatow-pracownikow>

On the basis of authorization  
of the Rector of Jagiellonian University  
Dean of the Faculty of Physics, Astronomy  
And Applied Computer Science