

## JOB OFFER

Position in the project: Junior Postdoc

Scientific discipline: Computational neuroscience

Job type (employment contract/stipend): employment contract

Number of job offers: 1

Remuneration: ≈ 8 000 PLN monthly (gross income)

Position starts on: 1 May 2020

Maximum period of contract/stipend agreement: 3 years

Institution: Jagiellonian University, Cracow, Poland

Project leader: Daniel Wójcik

Project title: **Bio-inspired artificial neural networks**  
***The project is carried out within the TEAM-NET programme of the Foundation for Polish Science***

Project description: The postdoc will work in one of two projects. The goal of the first is to develop point process models of neuronal spiking activity that could effectively describe adaptive processes including learning but also different types of modulation (e.g. brain-stem modulatory effects on visual information processing, etc.). The postdoc will develop abstract models, estimation methods, implement them in software, and use developed software and methods to analyze data from experimental partners after testing them on simulated data.

The goal of the second project is building reinforcement learning models of behavior and development of estimation methods and tools. The focus is on rodent behavior in intelligent cages, such as IntelliCage or Eco-HAB, and taking into account individual and group learning aspects. The postdoc will develop abstract models, estimation methods, implement them in software, and

	<p>use developed software and methods to analyze data from experimental partners after testing them on simulated data.</p> <p>The position is open within the group led by prof. Daniel Wójcik. The position is based in Cracow within the <a href="#">bioNN project</a> but the researcher will also be a member of the distributed Warsaw-Cracow <a href="#">Neuroinflab</a>, and will be expected to participate regularly in meetings in Warsaw every few weeks.</p>
Key responsibilities include:	<p>The responsibility of the potential contractor shall be:</p> <ol style="list-style-type: none"> <li>1. theoretical research, development of new algorithms and estimation methods, modelling, implementation, in the respective area of the project</li> <li>2. interaction with partners in the project bioNN to support development of novel bio-inspired computational architectures</li> <li>3. interaction with experimental partners</li> </ol>
Profile of candidates/requirements:	<p>We are looking for candidates with good quantitative and computational skills and a strong interest in biological and computational sides of brain functioning. Previous experience with programming is a must. Python is preferred. Strong analytical skills are required. Prior experience with neuroscience is not required but a strong interest in biology is a must.</p> <ol style="list-style-type: none"> <li>1. PhD degree obtained during 5 years before the starting date of employment in this project</li> <li>2. strong mathematical and computational skills</li> <li>3. good command of English,</li> <li>4. prior experience with computational modelling of the nervous system is an advantage</li> <li>5. Familiarity with reinforcement learning or other learning paradigms is an advantage</li> </ol>
Required documents:	<ol style="list-style-type: none"> <li>1. filled in recruitment form (available at the project website)</li> <li>2. curriculum vitae</li> <li>3. list of publications and ongoing research projects</li> <li>4. declaration of acceptance of intellectual property regulations within Jagiellonian University (available at the project website)</li> <li>5. documents confirming possession of a PhD degree</li> <li>6. consent for processing of personal data for the purpose of recruitment (available at the project website)</li> </ol>
We offer:	<ol style="list-style-type: none"> <li>1. full time employment for 36 months subject to periodic evaluation</li> <li>2. cooperation with the best computational neuroscience and machine learning groups in Poland</li> <li>3. competitive salary (about PLN 8,000 gross)</li> <li>4. raising qualifications</li> <li>5. access to computing infrastructure.</li> </ol>
Please submit the documents to:	<a href="mailto:bionn@matinf.uj.edu.pl">bionn@matinf.uj.edu.pl</a>
Application deadline:	20 March 2020 (11 PM CEST)
General rules of the requirement process	<ol style="list-style-type: none"> <li>1. Candidates may apply simultaneously to multiple positions offered by the project. This must be declared in the application form.</li> <li>2. Selection decision will be taken by the Recruitment</li> </ol>

	<p>Committee (RC) by 25<sup>th</sup> March 2020.</p> <p>3. Selected candidates will be invited to an interview between 30 March – 2 April 2020. The confirmation will be sent to the invited candidates by 26<sup>th</sup> of March. The interview may be conducted through a teleconference.</p> <p>4. RC's decision will be announced by April 3<sup>rd</sup>. The final decision must be approved by the Foundation for Polish Science.</p> <p>5. RC reserves the right to close the competition without selecting a candidate.</p> <p>6. In case of resignation of a recommended candidate or failure to receive the Foundation for Polish Science's approval, RC may invite further candidates or may announce a new call for the position.</p> <p>7. The results of the recruitment procedure may be appealed by the candidates within the period of one week after obtaining information about the decision of the RC.</p>
<p>For more details about the position please visit</p>	<p><a href="http://bionn.matinf.uj.edu.pl">bionn.matinf.uj.edu.pl</a></p>
<p>Euraxess job/stipend offer (in case of PhD and postdoc positions):</p>	<p>Junior Postdoc (EURAXESS Job Offer id: <a href="#">496088</a>)</p>

Due to the entry into force of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016, we also require that by applying, a candidate expresses his/her consent to the processing of his/her personal data needed for the recruitment process by the Jagiellonian University.