

## JOB OFFER

Position in the project:	Group leader
Scientific discipline:	Computer science
Job type (employment contract/stipend):	employment contract
Number of job offers:	1
Remuneration:	16 700 PLN monthly (gross income)
Position starts on:	1 October 2019
Maximum period of contract/stipend agreement:	3 years
Institution:	Jagiellonian University, Cracow
Project leader:	Jacek Tabor
Project title:	<b>Bio-inspired artificial neural networks</b> <b><i>Project is carried out within the TEAM-NET programme of the Foundation for Polish Science</i></b>
Project description:	<p>Artificial neural network model was created basing on analogies to biological counterparts, such as a simplified model of the neuron or a system of retinal neurons. Due to the increasing complexity of tasks and problems with the development of effective methods for learning deep neural networks, solutions based on algebraic structures dominate Today, advanced approaches in machine learning such as deep learning show a number of undesirable features, such as forgetfulness, susceptibility to adversarial examples, the requirement for a large training set, and slow learning. Most of these features do not occur in biological systems, thus it would be beneficial to take an inspiration from them to help training artificial systems. The aim of the project is to analyze high-level behaviors of biological neural systems and to build innovative artificial models by proposing new paradigms of learning and new architectures of computational models.</p> <p>The Jagiellonian University will run six research groups: Cognitive group (leader Tadeusz Marek), Physics-group (leader Maciej A. Nowak), Machine-learning group, Neuro-</p>

group, BioDataScience-group, InfoTech-group.

**We seek for a leader of the Machine Learning group**

The broad aim of the group would be to provide expertise in machine learning, in particular in classical neural networks, deep learning and such unsupervised methods of learning as clusterization and Independent Component Analysis ICA. The group is expected to contribute in a crucial way to the the development of new architectures of the neural networks as well as new paradigms of machine learning, inspired by biological systems, in close collaboration with Physics, Cognitive and Neuro-groups of the project.

The applicant is welcome to add other goals, provided they fit into the broad topic of the group, and general aims of the project.

Key responsibilities include:

1. Planning, execution, and management of a research program.
2. Coordination of the work of the group with other groups of the project.
3. Mentoring of PhD students and post-doctoral scientists;
4. Research leadership involving expansion to new fields of extracting neural information and active role in setting up of international research networks.
5. Active procurement of new research grants form external sources (Flagship, ERC, National Science Centre, etc.).
6. Bearing the responsibility for professional integrity of the group.

Profile of candidates/requirements:

A candidate for a Leader of Research Group should be a scientist of global recognition in his/her field, with scientific achievements, publications at leading machine learning conferences (ICLR, NeurIPS, ICML), and an experience in management of a research group. We are looking for a motivated candidate with at least PhD in computer science, with a proven track record, solid knowledge and working experience in machine learning, knowledge of ML programming environments (Pytorch, TensorFlow). He/she should have ability to run independently research projects and supervise graduate students. An experience in cooperation with industrial partners or in patenting would be highly welcome.

Required documents:

1. filled in recruitment form (basic formal information);
2. curriculum vitae;
3. research record with a list of publications, and list of research projects (especially those in which the candidate was the principal investigator);
4. PDF files of up to five most important papers of the candidates and or implementation achievements of the last 10 years, which are
  - a. full publication texts (in original language) or
  - b. full text of patents (achievements cannot be patent applications) ordescriptions of implementations.
- c. a list of talks at conferences and workshops, and a list of academic prizes and awards;
5. a letter of motivation (including description of immediate and long-term research plans, innovation potential and possible prospects to establish industrial connection, all discussed in relation with the research aims of the project) - up to four pages;
6. documents confirming the scientific degrees (copies of Master, PhD, habilitation diplomas and professorial

	<p>nominations);</p> <p>7. statement of knowledge and acceptance of intellectual property rules and legal protection.</p> <p>8. information about processing of personal data.</p>
We offer:	<ol style="list-style-type: none"> <li>1. Full time employment from 1 October 2019 till 30 September 2022 (36 months), subject to periodical evaluations;</li> <li>2. Chance and challenge to create your own team;</li> <li>3. Funds guaranteed to set up a team including: <ol style="list-style-type: none"> <li>a. a junior post-doctoral researcher (monthly gross salary of 8000 PLN) ,</li> <li>b. a junior post-doctoral researcher (monthly gross salary of 10000 PLN),</li> <li>c. three PhD students positions (each with a monthly scholarship of 7600 PLN).</li> </ol> </li> <li>4. Scientific and organizational support;</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:	23 August 2019 (12 PM CEST)
General rules of the requirement process	<ol style="list-style-type: none"> <li>1. Candidates may run simultaneously for all position offered by the project. This must be declared in the application form.</li> <li>2. Decision will be made by the Scientific and Economic Committee (SEC) within three weeks from the date of closing the call.</li> <li>3. An interview is expected. SEC reserves the right to invite for the interview only pre-selected candidates. We expect that the interview will be held on during first two week of September 2019. The confirmation will be sent to the prospect candidates shortly after the 23<sup>rd</sup> of August.</li> <li>4. SEC's decision is subject to appear within seven days from its announcement. The final decision must be approved by Foundation for Polish Science.</li> <li>5. SEC reserves the right to close the competition without selecting the candidate.</li> <li>6. In the case of the resignation of a candidate recommended for the position of a Leader of Research Group, or failure to receive the Foundation for Polish Science's approval, SEC is re-assembled to re-evaluate the candidates earlier short listed for the interview, or may ask to publish a new call for the position.</li> <li>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 SEC.</li> </ol>
For more details about the position please visit	<a href="http://bionn.matinf.uj.edu.pl">bionn.matinf.uj.edu.pl</a>
Euraxess job/stipend offer (in case of PhD and postdoc positions):	<a href="#">Group leader</a> (EURAXESS Job Offer id: 426464)

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.

