

JOB OFFER

Position in the project:	Postdoc
Scientific discipline:	Computer science
Job type (employment contract/stipend):	Full-time employment contract
Number of job offers:	1
Remuneration/stipend amount/month ("X0 000 PLN of full remuneration cost, i.e. expected net salary at X 000 PLN"):	Gross pay: 11 500 – 12 500 PLN (ca. 2500 – 2800 EUR) / month
Position starts on:	1 October 2022
Maximum period of contract/stipend agreement:	3 months (with possibility of extension, subject to available funds)
Institution:	<p>Institute of Computing Science, Poznan University of Technology, Poland</p> <p>Institute of Computing Science at Poznan University of Technology has grown to become one of Poland's leading research and teaching institutions in the area of computer science, automatics and robotics (ranked class A). Our research and teaching covers a wide area of topics, including distributed systems, networks, databases, data mining, programming languages, operations research, artificial intelligence, machine learning, and bioinformatics.</p>
Project leader:	dr hab. Inż. Paweł T. Wojciechowski, prof. nadzw.
Project title:	<p><i>Scalable in-memory data store systems based on mixed-consistency data types and replication algorithms for efficient and anomaly-free data management in the emerging NVM-based computer architectures</i></p> <p>Project is carried out within the TEAM programme of the Foundation for Polish Science co-financed by the European Union under the European Regional Development Fund.</p>
Project description:	<p>The amount of data stored in data centers and processed by cloud services is growing constantly and rapidly. Therefore a new generation of data store systems is required, which will offer high efficiency, availability, and robustness for a large number of concurrent users. The main goal of the project is to propose cutting-edge solutions that can be used to build robust data store systems which scale, i.e., the system throughput grows with an increasing number of nodes or processors. The solutions include novel replication methods and algorithms with support for transactions (taking advantage of multi-core CPUs), replicated data structures that support both strong and eventual consistency, and novel recovery algorithms, which envisage the use of persistent (non-volatile) memory in the future computer systems. The results of our work will be evaluated formally and experimentally.</p>

	<p>We welcome applications from highly motivated and enthusiastic candidates to join our research project. The successful candidate will be expected to make an outstanding contribution to the theoretical and/or practical investigations in this regard. The project will be supervised by Dr. Paweł T. Wojciechowski, in collaboration with Prof. Fernando Pedone (University of Lugano), a world-leading researcher in the field of distributed systems.</p>
<p>Key responsibilities include:</p>	<ol style="list-style-type: none"> 1. Design, implementation and evaluation of novel NVM-enabled methods and algorithms for distributed synchronization and/or service replication 2. Design, implementation and evaluation of novel NVM-enabled recovery methods and algorithms 3. Optimization and evaluation of selected methods and algorithms 4. Preparation of research manuscripts 5. Supervising M.Sc. students who carry out M.Sc. theses related to the project
<p>Profile of candidates/requirements:</p>	<p>Qualifications:</p> <ol style="list-style-type: none"> 1. We will accept applications from candidates who either hold a Ph.D. degree in computer science or are expected to receive the degree soon. 2. A candidate can be employed in the project as a postdoc if she/he has a status of young doctor, i.e., a person who holds a PhD degree not longer than 5 years. <p>Knowledge & Experience (Essential):</p> <ol style="list-style-type: none"> 1. Expertise in distributed systems, proven by publications at top conferences or journals that publish research in these fields. 2. Knowledge of distributed consensus algorithms, in particular Paxos. 3. Working knowledge of persistent memory technology. 4. Excellent programming and scripting skills in Java and C/C++. 5. Expertise in using computer clusters and any operating system from the Unix-family. 6. Experience in research manuscript drafting.

Personal skills:

1. Ability to independently pursue her/his work.
2. Ability to collaborate with others.
3. Ability to analyze and work with complex issues.
4. Good command of English, both orally and in writing.

Please attach the following documents with your application:

Required documents:

1. CV including your education history, achievements, relevant professional experience, and knowledge.
2. Application letter with a brief description of why you want to pursue research studies, about what your academic interests are and how they relate to the project (max. 2 pages long).
3. Scan of the degree certificates and transcripts of the records from your previously attended university-level institution. Attach translations into English or Polish if the original documents are not issued in one of these languages.
4. PDF file of PhD thesis (if the thesis is already defended) and 3 journal or conference publications.
5. Names and e-mail addresses of two references who can provide the letters of recommendation.
6. A scan of a signed statement: "*I hereby authorize Poznań University of Technology, Pl. M. Skłodowskiej-Curie 5, 60-965 Poznań, Poland, to process my personal data for the purposes of job recruitment. Furthermore, I declare that I am aware of the voluntary submission of data and I am informed about the right to access the data and the right to correct it, pursuant to the Article. 6 par. 1 lit. a), and art. 7 par. 1 of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46 / EC (Regulation GDPR - RODO in Poland).*"

We offer:

1. Work in a dynamic research environment.
2. Possibility to attend international scientific conferences and present research results.

	3. A workplace with access to state-of-the-art computing facilities in the Institute of Computing Science and at the Poznan Supercomputing and Networking Center (90th in the world's TOP500 in June 2016).
Please submit the following documents to:	Applications for the advertised job or requests for further information about the research project can be sent to: mailto:Pawel.T.Wojciechowski@cs.put.edu.pl .
Application deadline:	The application deadline is the 4th of September 2022. We are going to conduct interviews by phone or videoconference. We expect the selected candidate to start working from October 1, 2022.
For more details about the position please visit (website/webpage address):	http://www.cs.put.poznan.pl/persistentdatastore
Euraxess job/stipend offer (in case of PhD and postdoc positions):	https://euraxess.ec.europa.eu/jobs/807620

Due to the entry into force of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016, the institution that carries out the recruitment process, i.e. Poznan University of Technology, Pl. M. Skłodowskiej-Curie 5, 60-965 Poznań, Poland, requires the consent to the processing of candidate's personal data for the purposes of carrying out the recruitment procedure, choosing the employee, and, if applicable, entering into an employment contract with Poznan University of Technology. Therefore a job application must include a signed statement mentioned in the list of required documents.