

JOB OFFER

Position in the project:	Student at the International Research Agenda AstroCeNT: Particle Astrophysics Science and Technology Centre
Scientific discipline:	Computer Science: machine learning, deep learning, signal processing, distributed computing
Job type (employment contract/stipend):	stipend
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”):	2 500,00 PLN
Position starts on:	1 November 2022
Maximum period of contract/stipend agreement:	4 months
Institution:	AstroCeNT Department of the Nicolaus Copernicus Astronomical Centre of the Polish Academy of Sciences
Project leader:	Leszek Roszkowski (leader)
Project title:	AstroCeNT: Particle Astrophysics Science and Technology Centre <i>(The project is carried out within the International Research Agendas Programme of the Foundation for Polish Science)</i>
Project description:	<p>Applications are invited for one student in the field of machine learning and signal processing at AstroCeNT, a new international Centre of Excellence in Particle Astrophysics in Warsaw, Poland (see below for more information).</p> <p>Successful applicants will be expected to join the “Scientific Computing & Information Technology Group” led by Prof. Piotr Gawron, and to engage in research on: - the gravitational waves signals classification using neuromorphic computers.</p> <p>The primary responsibility of person on this position is to conduct theoretical research and to develop the signal processing software based either on traditional signal processing techniques or on the machine learning models.</p> <p>The positions will be based at AstroCeNT in Warsaw, Poland.</p> <p>We are seeking applicant that is a student of computer science, physics or mathematics or related fields. In particular, we are looking for an applicant with experience in machine learning, data analysis, signal processing and neuromorphic computing. We require that candidates have some experience in software development. The position is available immediately. The initial term is for 4 months with an option of renewal if mutually agreed.</p> <p>Astrocent (https://astrocent.camk.edu.pl) — Particle Astrophysics Science and Technology Centre — was established on 1 July 2018 following an award of nearly 38 million PLN (nearly 9M Euro, over 10M USD) within the framework of the International Research Agendas Programme of the Foundation for Polish Science, see:</p>

<https://www.fnp.org.pl/en/projekt-astrocent-zdobytl-finansowanie-w-programie-mab>.

At AstroCeNT, research is focused primarily on the areas of the detection of gravitational waves and dark matter using advanced technological instruments, whose development has been among the prime areas of activity of the Centre. However, it is planned to engage in other areas of theoretical and experimental research in particle astrophysics, beyond gravitational waves and dark matter.

AstroCeNT has developed close collaborative links with several institutions in Europe and outside, in particular with our strategic partners APC (Astroparticle and Cosmology Laboratory) in Paris and the McDonald Institute in Canada. More collaborations are being established.

Currently AstroCeNT comprises six international research groups of physicists and engineers:

1. SiPM Systems for Astroparticle Physics and Medical Physics (leader: Dr Marcin Kuźniak);
2. Seismic Sensors (leader: Professor Tomasz Bulik);
3. Electronics and Data Acquisition and Processing (leader: Dr Mariusz Suchenek);
4. Ultrapure SiPMs and Associated Readout Electronics (leader: Dr Masayuki Wada);
5. Scientific Computing & Information Technology (leader: Professor Piotr Gawron);
6. Particle Astrophysics (leader: Professor Leszek Roszkowski).

Expansion to other activities in the field will be considered in the future.

AstroCeNT is formally a new administrative division of Nicolaus Copernicus Astronomical Center of the Polish Academy of Sciences (<http://www.camk.edu.pl>) – an internationally leading institute in astronomy and astrophysics. AstroCeNT is led by Professor Leszek Roszkowski.

AstroCeNT is conveniently located in the city centre, with easy access from rail stations and airports. The center occupies a suite of spacious and modern labs and offices on the top floor of a modern building (<https://www.cziitt.pw.edu.pl/?lang=en>) of Warsaw University of Technology (<https://www.pw.edu.pl/engpw>) in order to foster communication and cooperation with local engineers and physicists, and to enhance scientific and academic environment. The site is also well connected with Physics Department of the University of Warsaw and the main site of the Nicolaus Copernicus Astronomical Centre and other research institutes in Warsaw.

AstroCeNT strongly values the diversity of candidates and is very committed to the equality of opportunity.

Key responsibilities include:

1. Writing technical reports or papers;
2. Active co-operation with different research teams at AstroCeNT.
3. Performing research in dark matter, gravitational wave

	detection or machine learning under supervision of a more senior scientist.
Profile of candidates/requirements:	<ul style="list-style-type: none"> • Enrolment as a 1st and 2nd grade student in physics, electronics, mathematics, computer science or related fields at a higher education institution; • Willingness to work in the area of machine learning for gravitational waves or dark matter detection, preferably: the existing research experience in one of the above areas; • Good English language skills; • Willingness to perform scientific research under supervision.
Required documents:	<ol style="list-style-type: none"> 1. Curriculum Vitae including the candidate's education and employment record and his/her involvement in scientific activities, 2. Cover letter (in English) including a short description of the candidate's scientific interests and justification of his/her intention to do internship at AstroCeNT; 3. scan of signed GDPD form (available from https://www.camk.edu.pl/en/about/ochrona-danych-osobowych/#rodcent).
We offer:	<ol style="list-style-type: none"> 1. Opportunity to make an impact in a hot area of research; 2. Close collaboration with other AstroCeNT researchers; 3. Stimulating, international research environment in a new centre of excellence; 4. Offices located at the centre of Warsaw.
Please submit the following documents to:	All the material should be sent by email to: recruitment@astrocent.pl
Application deadline:	23 October 2022
For more details about the position please visit (website/webpage address):	More information can be obtained from Prof. Piotr Gawron (gawron@camk.edu.pl)
Euraxess job/stipend offer (in case of PhD, postdoc, leader and young leader positions):	N/A