JOB OFFER

Position in the project:	Student stipend in International Research Agenda AstroCeNT: Particle Astrophysics Science and Technology Centre
Scientific discipline:	Computer Science: quantum computation, machine learning, signal processing
Job type (employment contract/stipend):	stipend
Number of job offers:	up to 2
Remuneration/stipend amount/month *("X0 000 PLN of full remuneration cost, i.e. expected net salary at X 000 PLN"):*	Monthly stipend of 2500 PLN/month (net).
Position starts on:	01.07.2023
Maximum period of contract/stipend agreement:	Up to 6 months
Institution:	AstroCeNT Department of the Nicolaus Copernicus Astronomical Center of the Polish Academy of Science
Project leader:	Prof. Leszek Roszkowski
Project title:	**AstroCeNT*:* Particle Astrophysics Science and Technology Centre** *(The project is carried out within the International Research Agendas Programme of the Foundation for Polish Science)*
Project description:	Applications are invited for two student positions in the field of computer science at AstroCeNT, an international Centre of Excellence in Particle Astrophysics in Warsaw, Poland. Successful applicants will be invited to join the **"Scientific Computing & Information Technology Group" led by Professor Piotr Gawron**, and to engage in research on development of quantum and classical machine learning methods in variety of topics such as: quantum-classical energy based models, quantum-classical neural networks, and large scale quantum computation. The scope of applications covers data analysis obtained from Earth observations imagery, direct dark matter detection experiments and gravitational waves measurements. The position will be based at AstroCeNT in Warsaw, Poland. We are seeking applicants who are currently enrolled as students of computer science (quantum computation, machine learning, signal processing), applied mathematics, physics (quantum information and computation, condensed matter theory, statistical physics) or similar. In particular, we look for applicants with experience in data analysis, numerical programming and scientific computation. Complete applications received before June 18, 2023, will receive full consideration; however, applications received after that date will be also considered until the positions are filled. AstroCeNT — 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 Foundation of Polish Science.

	At AstroCeNT, research is focused primarily on the areas of the detection of gravitational waves and dark matter using advanced technological instruments, whose development is among the prime areas of activity of the Center. 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: Prof. Marcin Kuźniak); 2. Seismic Sensors (leader: Prof. 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: Prof. Piotr Gawron);** 6. Particle Astrophysics (leader: Prof. Leszek Roszkowski). The Center is led by Professor Leszek Roszkowski. AstroCeNT is formally an 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 conveniently located in the city center, 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. To be open to co-operation with the other research teams at AstroCeNT. 2. To perform research in quantum computation, machine learning, signal processing. 3. To be prepared to apply for grants.
Profile of candidates/requirements:	1. Time series analysis, causality detection methods for time series in applications to gravitational waves detectors environmental signals.

	2. Good knowledge of time series analysis, theory of stochastic processes, statistical tests of stochastic processes stationarity. 3. Good knowledge of python in applications to time series analysis.
Required documents:	1. curriculum vitae, 2. cover letter, 3. certificate of student status from the university, 4. scan of signed GDPD form (available from https://www.camk.edu.pl/en/about/ochrona-danych-osobowych/#rodocent).
We offer:	1. Stimulating, international, English speaking research environment in a center of excellence; 2. Possibility to develop frontline research in quantum computation and machine learning applications; 3. Funding for research, travel and basic equipment; 4. Scientific, organizational and technical support, including standard research facilities.
Please submit the following documents to:	All the material should be sent by email to: office@astrocent.pl.
Application deadline:	18 June 2023
For more details about the position please visit (website/webpage address):	More information can be obtained from Prof. Piotr Gawron (gawron@camk.edu.pl) or Dr Marta Borowiec (mborowiec@camk.edu.pl)
Euraxess job/stipend offer (in case of PhD, postdoc, leader and young leader positions):	https://euraxess.ec.europa.eu/jobs/113592