Competition for a student scholarship as part of the NCN OPUS 22 project

Project title: Development of muon trigger algorithms for the
Compact Muon Solenoid detector for the high luminosity phase of the Large Hadron Collider

Project leader: dr hab. Artur Kalinowski

Unit name: University of Warsaw, Faculty of Physics,

Number of positions: 1

Duration: 45 months

Starting date: October, 1, 2022

Salary: 5000 PLN gros gros (about 4200 PLN gros and about 3700 PLN net) monthly

The scholarship is awarded in accordance with the rules contained in the Regulations on granting scientific scholarships in research projects financed by the National Science Center, introduced by the resolution of the Council of the National Science Center No. 25/2019 on March 14, 2019.

Project description: The Warsaw group of the CMS experiment seeks a person for a Ph.D. position at the University of Warsaw, Faculty of Physics to join the group's activities on Level-1 (L1) muon trigger. The CMS experiment analyses data from proton-proton collisions from the Large Hadron Collider (LHC) at CERN, Geneva. The Warsaw CMS group built, commissioned and operates one of three subsystems of the L1 muon trigger of the CMS experiment. The L1 trigger uses algorithms implemented in (programmable) electronics to select interesting events from proton-proton collisions at the LHC. The CMS detector is being upgraded to cope with increased intensity of collisions at the LHC. The Warsaw group has responsibility for upgrading parts of the L1 muon trigger. The CMS detector upgrade is planned to finish in 2028.

The successful applicant is expected to make a significant contribution to the development of the new L1 algorithms exploiting Machine Learning. Also the applicant will be responsible for preparations for operation and tests of the upgraded L1 trigger system.

The successful applicant will be enrolled at the University of Warsaw [Doctoral School of Exact and Natural Sciences](), and will be obliged to follow its [programme]() of studies, and will have teaching duties of 180 teaching hours over a period of four years.

Main tasks:

- design of new, Machine Learning based, algorithms for the L1 trigger
- implementation of new algorithms in C++
- testing of hardware implementation of new algorithms
- operation of the existing, and new L1 trigger systems, including shift during the CMS detector operation

Requirements:

- the candidate should have the status of a Ph. D. student before the project starts. The successful candidate can be admitted to the Doctoral School of Exact and Natural Sciences beyond standard limits and schedule
- education background allowing to follow courses of the Doctoral School of Exact and Natural Sciences
- M.Sc. or equivalent in high energy physics or related field
- programming skills in C++ (additional Python experience would be a bonus)
- experience in work with electronics would be a bonus
- experience of work in a big experimental collaboration and experience in data analysis in high energy physics would be bonuses

Required documents:

1. a scan of signed cover letter with information on the processing of personal data - information and consent clauses, available in the attachment and under URL: https://bsp.adm.uw.edu.pl/wp-content/uploads/sites/18/2021/01/Klauzula-informacyjna-przy-rekrutacji-do-pracy_11_2019_EN.docx
2. CV with information on the research activity, achievements and awards as well as scientific interests
3. a list of conference presentations and publications including internal experiment notes where candidate had important contributions
4. at least one recommendation letter to be send by the Author directly to a.kalinowski2@uw.edu.pl,

5. master diploma scan. In case of positive application outcome a sworn translation of diplomas issued in languages other than Polish or English would be required. Candidates holding diplomas issued by countries outside EU, EFTA and states signing Convention on the Recognition of Qualifications concerning Higher Education in the European Region should provide a certification of their diploma in Poland. More details can be found here:

    https://nawa.gov.pl/en/recognition/recognition-for-academic-purposes/applying-for-admission-to-doctoral-studies

We offer:

- work in an experienced team
- stable, four year, financing, during the whole period of doctoral studies. the missing three months will be covered by the Rector of the University of Warsaw at the level of standard stipend of the Doctoral School
- position based in Warsaw with frequent trips to CERN, Geneva

Deadline for submitting documents: June 28, 2022

Application submission form: via e-mail to a.kalinowski2@uw.edu.pl,

Selected candidates will be asked for a remote interview. The recruitment procedure will be finished before July, 16, 2022. In the event of the resignation of the selected candidate, the right to indicate the next candidate from the ranking list is reserved.

For further information, please contact Artur Kalinowski: a.kalinowski2@uw.edu.pl.

Information on personal data processing

Controller

Controller of your personal data processed in connection with the recruitment process is the University of Warsaw, ul. Krakowskie Przedmieście 26/28, 00-927 Warszawa, as the Employer.

Contact with the controller:
- by traditional mail at: University of Warsaw, ul. Krakowskie Przedmieście 26/28, 00-927 Warszawa (name the organizational unit to which your letter is addressed);
- by phone: 22 55 20 355.

Data Protection Officer (DPO)

Controller has designated Data Protection Officer whom you may contact via email at iod@adm.uw.edu.pl. You may contact the DPO in all matters relating to your personal data processing by the University of Warsaw and the exercise of rights in relation to the processing of personal data.

The DPO, however, does not proceed other matters, like handling recruitment procedures, collecting recruitment documents, providing information on current recruitment process.

Purpose and legal grounds of data processing

Personal data of candidates for employment shall be processed for recruitment purposes only.

Your personal data shall be processed in the scope as indicated by employment law[1] *(given name (names) and family name, date of birth, contact information as provided, education, professional qualifications, previous employment)* for the purposes of this recruitment process[2], whereas other data[3] shall be processed based on your consent which may take the following wording:

I agree to the processing of personal data provided in …. (e.g. CV, cover letter, and other submitted documents) by the University of Warsaw for realising my recruitment process.

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[1]   Art. 22^1 of the law of June 26, 1974 Labour Code (i.e. Journal of Laws 2019 item 1040 with subsequent changes);

[2]   Art. 6 section 1 letter b of the Regulation of the European Parliament and the Council (EU) 2016/679 of April 27, 2016 on protection of individual persons with regard to the personal data processing and on the free flow of such data, and also repealing Directive 95/46/EC (general regulation on data protection) (Official Journal EU L 119 of 04.05.2016, page 1, with subsequent changes) (hereinafter as the GDPR);

[3]   Art. 6 section 1 letter a of the GDPR;

If your documents include data as mentioned in Art. 9 section 1 of the GDPR (special categories of personal data), processing shall be possible upon your consent to processing such data[4] which may take the following wording:

I agree to the processing of special categories of personal data, as mentioned in Art. 9 section 1 of the GDPR, provided in .... (e.g. CV, cover letter, and other submitted documents) by the University of Warsaw for realising my recruitment process.

The University of Warsaw shall be also processing your personal data in future recruitment processes upon your consent[5] which may take the following wording:

I consent to processing of my personal data for the purposes of any future recruitment processes at the University of Warsaw for the period of the next nine months.

You may revoke all such consents at any time by, for example, sending an email at a.kalinowski2@uw.edu.pl

Be advised that the revocation of your consent does not affect legal compliance of processing which had been completed upon consent before its revocation.[6]

Data retention period

Your personal data collected in this recruitment process shall be stored over the period of three months from the date the recruitment process is completed.

In case you agree to process your data in future recruitments, your data shall be used over the period of nine months.

Data recipients

Officers authorized by the Controller shall have access to your personal data, the processing of which is in the scope of their duties.

Recipients of personal data may be other subjects obligated by the Controller to provide specific services involving data processing, like members of the selection committee.

Data transfer outside the European Economic Area (EEA)

Your personal data shall be disclosed to subjects authorized by law. Signing-in is through Google Forms. Your personal data may be also processed by our provider of G-Suit for education by Google Company in their data processing centres.[7] Your data shall be protected under the standards of the Privacy Shield, accepted by the European Commission.[8] This shall guarantee an adequate level of data security.

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[4]   Art. 9 section 2 letter a GDPR;

[5]   Art. 6 section 1 letter a GDPR;

[6]   Art. 7 section 3 GDPR;

[7]   https://www.google.com/about/datacenters/inside/locations/index.html

[8]   https://www.privacyshield.gov

Rights of the data subject

Under the GDPR data subjects have the following rights:
- to access data and to receive copies of the actual data;
- to correct (rectify) your personal data;
- to restrict processing of personal data;
- to erase personal data, subject to provisions of Art. 17 section 3 of the GDPR;
- to file a claim with the President of the Personal Data Protection Office, if you believe data processing violates law.

Information on the requirement to provide data

Providing your personal data in the scope resulting from law is necessary to participate in the recruitment process. Providing other personal data is voluntary.

………………………………….   …..…………………………….
       place and date   applicant's signature