

**CTU****CZECH TECHNICAL  
UNIVERSITY  
IN PRAGUE****1/3**

# OPEN POSITION

Czech Technical University in Prague

Institute of Experimental and Applied Physics, Department of Electronics and Software

Jugoslávských partyzánů 1580/3, 16000, Prague, Czech Republic

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Application deadline:

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Position Announcement:

## POSTDOC IN EXPERIMENTAL PHYSICS/INSTRUMENTATION

Main research field:

Researcher profile(s):

Type of contract:

Job status:

Hours per week:

Job starting date:

Physics

First Stage Researcher (R1)

Recognised Researcher (R2)

Temporary

Full-time

40

01/11/2025

Position funded by the EU Programme: **No**

### Offer Description

Topic name: **Particle identification in high-energy physics experiments and space with advanced detection systems**

Reference no: **11-5**

Timepix3 is a cutting-edge hybrid pixel detector with 256 x 256 pixels each of area 55 x 55  $\mu\text{m}^2$ . The pixelated sensor is coupled to the readout ASIC, which provides the information of the time-of-arrival (particle interaction time, precision  $\sim 2$  ns) and the time-over-threshold (energy) in each pixel. Ionizing radiation interacting in the sensor is then seen as imprints in the pixel matrix with characteristic shapes depending on the particle of interest. With the two-layer approach, we further facilitate the separation of charged and neutral particles and improve impact angle determination. IEAP CTU uses pixel detectors in many fundamental and applied research areas, e.g., detection of cosmic rays on satellites or high altitude observatories, detection of magnetic monopole or X-ray imaging. In IEAP CTU specialized software Track Lab dedicated to different tasks connected with pixel detectors (control of hardware, readout of data, data processing) is under development.

The HR Excellence in Research award reflects the continuous commitment and improvement of the Czech Technical University in Prague in aligning their human resource policies with the principles set forth in the European Charter for Researchers and Code of Conduct for the Recruitment of Researchers for the promotion of an open, transparent and merit-based recruitment for researchers.



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**Responsibilities:**

- you will be responsible for the analysis of data taken with Timepix detectors from the abovementioned experiments and from MC simulations;
- you will develop improved analysis methodology and include it into TrackLab;
- you will be responsible for the preparation of publications and conference contributions;
- you are encouraged to be involved in the preparation of the grant applications.

The position will help you to significantly improve your research profile by increasing leadership and mentoring skills. You will work in an international and interdisciplinary team with coworkers at different stages of the career.

You will work in the department of "Electronics and Software" of IEAP CTU, which is a leading group in the development of pixel detector readout systems, related detector control software and novel analysis methodology. The latest activities are [here](#) or in a compact form [here](#).

**Benefits**

- Flexible working hours
- Competitive salary
- 6 weeks of vacation
- Budget for travel to conferences and workshops
- [Multisport card](#) providing free access facilities for recreational activities
- Friendly international team

Website for the city and the university/faculty or institution: <https://www.cvut.cz/en>

**Work Location**

Husova 240/5, 11000 Praha 1

Number of positions available: 1

**Qualifications**

Main research field:

**Physics**

Required research experience:

**1 - 4 years**

Required education level:

**PhD or equivalent**

Main discipline:

**Physics**

Required language(s):

**English, Excellent**

**Skills**

- Interest in data analysis and not scared of large data sets
- Good knowledge of English in speaking, understanding and writing,
- Programming in C++ or Python
- Knowledge of ROOT or the capability of simulation in Geant4 and experience with leading a small team is not needed but an advantage.

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## Eligibility criteria

- Ph.D. in physics, engineering or in a related field
- No more than 7 years since obtaining the first Ph.D. degree
- Ph.D. studies at a university outside the Czech Republic or at least a one-year working research stay outside the Czech Republic
- Author (co-author) of at least three publications in a journal with IF or CORE A\*/A conference paper

## Selection Process

To apply for the CTU Global Postdoc Fellowship you need the following documents in English:

- Application form (link below)
- CV, including list of publications (max. 4 pages). At least three Impact Factor journal publications are expected or CORE A\*/A conference paper. Papers accepted for publication yet waiting to be printed do count if a proof of acceptance is provided.
- Motivation letter (max. 2 pages).
- Ph.D. certificate (copy).
- A cover letter (See Application for CTU Global Postdoc Fellowship form)
- You may attach other documents supporting your application such as recommendation letters etc.

## Links:

- [Application form \(hand signature\)](#)
- [Application form \(electronic signature\)](#)

The application and listed mandatory documents can be sent till **31 August, 2025** to the email address [alice.mariasova@cvut.cz](mailto:alice.mariasova@cvut.cz) with a copy to [benedikt.bergmann@utef.cvut.cz](mailto:benedikt.bergmann@utef.cvut.cz) (Mentor and head of department).

## Additional Comments

Workplace: CTU in Prague, Institute of Experimental and Applied Physics

Work period: 2 years

Employment type: Full-time

Expected starting date for the position: 1st of November 2025

Salary based on conditions of the call (~65 000 CZK/month).