

# Postdoctoral Fellowship

## Institute of Nuclear Physics PAN

Development of innovative Positron Emission Tomography for range monitoring in proton beam therapy



[www.ifj.edu.pl](http://www.ifj.edu.pl)

IFJ PAN Krakow proton beam therapy centre



Institute of Nuclear Physics PAN is a leading physics research institute in Poland. Cyclotron Center Bronowice (CCB) IFJ PAN is the first proton beam therapy centre in Poland and is currently in clinical operation. A prestigious A+ grade was assigned to IFJ PAN in the recent national ranking of institutions. IFJ PAN is leading cutting-edge cancer research projects in the field of proton beam therapy.

IFJ PAN offers a Postdoctoral position (1 year, PLN 10000/month brutto) aiming at development of a new **proton beam therapy range monitoring** method based on plastic scintillator positron emission tomography (J-PET technology). The fellow will conduct **GATE Monte Carlo** simulations of beta+ isotopes produced with proton beams for different J-PET setup configurations, phantoms and patient data as well as PET **image reconstruction** using **CASTOR/QETIR** software. The fellow will be also involved in the analysis of results obtained in experiments and simulations with **J-PET**.

The project will be conducted in collaboration with Pawel Moskal research group at Jagiellonian University (<http://koza.ifj.uj.edu.pl/pet/>). <https://www.ifj.edu.pl/en/index.php>

### Your profile:

- Radiation therapy/proton therapy/medical physics
- GATE/Geant4 Monte Carlo simulations (or similar)
- CASTOR/QETIR for PET image reconstruction (or similar)
- A solid background in data analysis, computer programming (C++ and/or Python)
- Dealing with computational clusters
- PhD in Physics, Natural Sciences, Computer Sciences, Engineering or related
- Fluency in english

### For more details contact:

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Please send your application including **CV, cover letter** and **two recommendation letters** to: [jobs@ifj.edu.pl](mailto:jobs@ifj.edu.pl).  
**Application deadline: 28.02.2020.**

Please, include a statement on personal data protection:

Wyrażam zgodę na przetwarzanie moich danych osobowych przez IFJ PAN zawartych w życiorysie oraz załączonych do niego dokumentach.