Postdoctoral position in "Data Intensive Astroparticle Physics"

Université de Paris Cité

Astroparticule et Cosmologie (APC)

Data Intelligence Institute of Paris (diiP)

Call

The University of Paris Cité calls for applications for a postdoctoral position in Data Intensive Astroparticle Physics to support the activities of the research group of Prof. Yvonne Becherini through the funding of the "IdEx Chair of Excellence". The appointment intends to boost several topics in Very High Energy gamma-ray and neutrino astrophysics through the application of Machine learning methods, and in particular Deep Learning. The candidate will benefit both from the "Astroparticle and Cosmology" laboratory (APC) and from the "Data Intelligence Institute of Paris" (diiP) environments.

The diiP is a multidisciplinary research environment associated with many data-driven research groups working on all topics at the University of Paris Cité (Medicine, Earth Sciences, Physics, Chemistry, Mathematics, Biology, Social Sciences, Digital Humanities, etc). In diiP, the candidate will also have a role in communicating and interacting with other research disciplines, with the goal of knowledge exchange around data analysis techniques.

The position is open to candidates with either a PhD in Physics/Astronomy, or a PhD in Computer Science (no prior experience with astrophysics is required) and can start as soon as the candidate has been selected.

Subject field of the position: Data Intensive Astroparticle Physics
Placement: University of Paris Cité, Astroparticle et Cosmology laboratory (APC) and Data Intelligence Institute of Paris (diiP)
Extent: 100%
Duration of appointment: 2 years
Research project title: Data Intensive Astroparticle Physics
Research focus: Machine Learning, Deep Learning, Data Analytics
Related projects and data access: HESS, CTA, KM3NeT, ALTO/CoMET, Fermi public data
Research group: astrogamma.eu
Apply through: astrogamma.eu/jobs/

Training and skills required

- PhD in Physics/Astronomy/Astrophysics, or PhD in Computer Science (focus on Machine Learning/Deep Learning)
- Python/C++ programming
- Strong experience in Machine Learning/Deep Learning
- Excellent command of English
- Excellent communication skills and writing skills
- Ability to travel to international meetings and conferences
- Strong ability to work in a team

Assessment criteria

The selection of candidates is made with regard to the applicant's ability to successfully complete and benefit from the research projects. The assessment takes into account academic skills documented in scientific works, especially focused on the quality of the essays at the graduate level, any advanced work and other scientific or scholarly works. The assessment also takes into account breadth and composition of the graduate degree and postdoc appointments.

The successful candidate has excellent analytical and problem-solving skills, and is a committed

researcher with a drive for excellence. Prior research experience in Machine Learning and Deep Learning is a significant advantage. Excellent written and oral communication skills in English are essential to publish and present results at international conferences and in international journals. Advanced skills in computing are a key requirement, as all activities are carried out in Linux/Unix environments and using the Python programming language. Interpersonal skills and flexibility are of key importance since the work will be carried out in a research group.

Required documents

Upload at the address https://astrogamma.eu/jobs/ a cover letter, a CV, links to the PhD thesis and previous publications, and contact information of at least two referees in only one file.
Any questions should be addressed to yvonne.becherini@apc.in2p3.fr.
The selected candidates will be invited for an interview, where they will present their background and their previous projects and publications.