Faculty of Science

Full-time academic vacancy in the field of “Gravitational Wave Data Analysis”

Start date: 01/09/2022
Vacancy reference: FS-220126-01

Context
The University of Liege and the STAR Institute are launching a call for applications for a full-time academic position in gravitational wave data analysis starting on 1 September 2022.

The Space Sciences and Technologies for Astrophysics Research (STAR) is the main astrophysics research unit in French-speaking Belgium. It includes approximately 100 researchers and is closely linked to the Centre Spatial de Liège. It also organises, together with the Department of Astrophysics, Geophysics and Oceanography (AGO), the Master in Space Sciences (37 students).

The University of Liège is already involved in the development of instrumentation and geophysical studies for the Einstein telescope via the E-Test project and is part of the Virgo collaboration. This position aims to further develop the field of gravitational waves within the Faculty of Science.

The new colleague will be based at the STAR research unit and at the Department of Astrophysics, Geophysics and Oceanography of the University of Liege. The employment conditions are excellent and include bonuses in June and December, as well as good travel opportunities, as Liege is close to many other groups involved in gravitational wave science.

Description of the course load
A full-time, indivisible position in the field of Data Analysis of Gravitational Waves in the Department of Astrophysics, Geophysics and Oceanography. This post includes teaching, research and services to the community.

Teaching activities
Four courses (in English) are planned to be integrated in the Master in Space Science (Faculty of Science), and two of them (3, 4) also in the Master in Data Science (Faculty of Applied Sciences):
1. Theory of gravitational waves (20+10 h);
2. Analysis methods in gravitational-wave astronomy (20+10 h);
3. Machine learning in space sciences (30+15 h);
4. Machine learning for gravitational-wave astronomy (10+20 h).
Supervision of Master’s theses in both fields is also planned.

Research Activities
The successful candidate will play an active role in existing gravitational wave analyses and is expected to be or soon to become a member of the Einstein Telescope Observational Division (ET OSB). They will develop new algorithms and methods for gravitational wave analysis, with a strong emphasis on machine learning. The successful candidate will be expected to develop synergies with the Master in Data science and the Artificial Intelligence and Machine Learning group of the Montefiore Institute of the University of Liège.
Services to the Community
The successful candidate will lead the STAR Institute’s activities in the scientific development of the study of gravitational waves and moving towards the scientific exploitation of the next generation of gravitational wave observatories, including the Einstein Telescope. They will actively participate in the Einstein Telescope collaboration. They will also participate in the dissemination of information on gravitational waves within the University and towards the general public.

Qualifications required / profile
Candidates must hold a PhD in science (in the field of physics) or a closely related field.

Selection procedure
The selection procedure will be in accordance with the regulations applied within the University of Liège.

Our institutional policy is based on diversity and equal opportunities. We select candidates on the basis of their qualities regardless of age, sexual orientation, origin, beliefs, disability or nationality.

Applications
Applicants are requested to submit their applications electronically, to the following address: Postesacademiques@uliege.be with a copy to Ms Ninfa GRECO – N.Greco@uliege.be by 18/03/2022 at the latest.

Documents required:
- Applications should be submitted (with a cover letter), accompanied by a complete curriculum vitae (see the procedures on the website of the Faculty of Sciences at https://www.sciences.uliege.be/emploi-sciences), indicating your responsibilities within any partnerships;
- A research proposal and teaching plan;
- A list of publications indicating your contribution in collaborative articles, as well as an electronic copy of publications that are not available in Open Access;
- Email addresses of three referees who are willing to send a letter of recommendation on your behalf.

Recruitment conditions
The post-holder will be appointed either for a fixed term of four years, or definitively.

If the post is granted for a fixed term, an evaluation will take place during the third year.

- If this evaluation is negative, the appointment will end after the four-year period.
- If the assessment is positive, the person concerned shall be appointed on a permanent basis.

Information
Any further information can be obtained from Prof. Denis Grodent – D.Grodent@uliege.be and from Ms Ninfa GRECO – tel.: +32 4 366 59 34 – N.Greco@uliege.be

Remuneration:
Salary scales and how they are applied are available from the human resources department of the University: Ms Ludivine Depas – tel.: +32 4 366 52 04 – Ludivine.Depas@uliege.be