



Open Position Announcement - Nr 01/2019 - P6

Within the frame of the **VirtualWorkshop for Digitization in Sciences** funded by the Carl Zeiss Foundation, the Friedrich Schiller University through the Michael Stifel Center Jena offers the following position with Jena as job location and a preferred starting date of April 1st, 2019:

Doctoral Researcher (m/f)

Topic: Deep learning for gravitational wave data analysis

PROJECT DESCRIPTION

Finding gravitational wave signals in the data stream produced by the detectors is a task in signal analysis for time-series data. Given analytical and numerical templates of gravitational waves, as they are for example computed within the Jena collaboration, the task is to perform matched filtering on detector data. The methods of deep learning have recently been introduced as a powerful and efficient alternative to standard methods of matched filtering for gravitational wave data analysis. The goal of the project is to implement and evaluate different methods, to determine optimal hyperparameters for specific applications, and to finally produce a state-of-the-art data analysis pipeline. Since this research area is largely unexplored, the embedding into the framework of the Virtual Workshop, which involves both physicists and computer scientists, plays an important role.

DESIRED QUALIFICATIONS

- Master in physics, computer science or neighboring fields.
- Skills in data analysis, computer programming, and/or machine learning are desirable, but not strictly required.
- Candidates should have a strong background in at least one of the above topics, and be strongly motivated to learn the others.

Funding of the position is limited to 3 years. Salary will be based on 75% of TV-L 13. Severely handicapped people are given preference for equal qualifications, aptitude and professional qualifications. Friedrich Schiller University Jena is committed to increase the percentage of female scientists and therefore especially encourages them to apply. Applications should consist of a single .pdf file including: (i) a letter of interest and (ii) a brief CV. Please submit your application per email with the registration number in the subject until **February 15th, 2019** to the contact person given below. Interviews are likely to be held in February 2019. For any queries please contact: Yanira Guanche Garcia, yanira.guanche.garcia@uni-jena.de