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**UNIVERSITÄT
BERN**

Philosophisch-
naturwissenschaftliche Fakultät

Astronomisches Institut

Astronomisches Institut, Sidlerstrasse 5, CH - 3012 Bern

Bern, December 20, 2024

The **Space Weather group of the Astronomical Institute of the University of Bern (AIUB)** is inviting applications for a

Postdoc

to work on

code optimization for CPU and GPU calculations on HPC systems

The University of Bern hosts many domains of astronomy. The successful candidate will work in the space weather group, which focuses on understanding the physics of the Sun with machine learning and building astronomical instrumentation.

Efficient algorithms are critical considering our large data volume (Terabytes). Our applications range from machine learning, image reconstruction, to codes that simulate the physical conditions in the solar atmosphere. The goal of this position is to research code optimizations, both for CPU (MPI) and GPU calculations. The successful candidate will collaborate with the space weather group members to optimize various codes on the university's HPC system Ubelix and improve their stability and speed. Depending on the candidate's research focus, this may also include the optimization of the local server setup and the computing environment and collaboration on CSCS proposals.

Requirements:
- PhD in computer science or similar
- Expert in code optimization and HPC. Expert on MPI
- Familiarity with programming languages, such as C (and its variants) and Python
- Strong verbal and written communication skills in English.
- Strong analytical abilities and problem solving/troubleshooting skills.
- Teamplayer who likes to work with other group members and students.

Appointment: Starting in spring 2025, open until filled. Currently funded for 1 year.

Application: deadline: **January 20, 2024**, via email to L. Kleint, containing (**as one pdf file**):
- CV
- motivation letter **for this specific position**
- a copy of BSc and MSc transcripts of courses and grades (scans of official transcripts are sufficient) and a copy of the PhD diploma
- Names of 2 references that can be contacted

Incomplete applications or applications written by ChatGPT cannot be considered.

Salary: Based on the regulations of the University of Bern, starting at 87 kCHF/year

Contact: Prof. Dr. Lucia Kleint (email lucia.kleint@unibe.ch)

An equal opportunity environment is important to us, and we welcome applicants from groups that are traditionally underrepresented in physics and astronomy. We will be particularly pleased to receive applications from women for the advertised position.

Prof. Dr. Lucia Kleint
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