Leibniz-Institut für Astrophysik Potsdam

The Leibniz Institute for Astrophysics Potsdam (AIP) is dedicated to astrophysical questions ranging from the study of our Sun to the evolution of the cosmos. Research focuses on cosmic magnetic fields and extragalactic astrophysics as well as the development of research technologies in the fields of spectroscopy, robotic telescopes and e-science. The AIP carries out its research mandate within the framework of numerous national, European and international cooperations. The institute is the successor to the Berlin Observatory, founded in 1700, and the Astrophysical Observatory Potsdam, founded in 1874, which was the first institute in the world to be explicitly dedicated to astrophysics. The AIP has been a member of the Leibniz Association since 1992. AIP is located in the middle of a beautiful park landscape in Potsdam, not far from Berlin, and has about 200 employees.

To strengthen Astrophotonics (innoFSPEC), we are looking for a

PhD student (m/f/d)
Photonics

The student will undertake research and development of photonic instruments, such as spectrograph-on-a-chip, that can include designing, developing and characterizing arrayed waveguide gratings, fibre- and detector-chip coupling etc. The student will be affiliated to the University of Potsdam. The candidate is expected to interact with Leibniz Institute for Innovative Microelectronics (IHP) to develop techniques to couple photonic chips to scientific detectors (NIR/VIS), and fibre-to-chip. The position offers the unique opportunity to acquire specialized skills, experience in using advanced scientific equipment, knowledge in building astrophotonics instruments for astronomy and conduct on-sky tests at astronomical observatories (Calar Alto, Paranal, Mr. Wilson etc.)

Your tasks:

- Design, model, fabricate, and characterize photonic circuits, (AWGs, Photonic Echelle, etc.)
- Design and develop coupling optics and detector electronics for collecting and processing light from photonic chips
- Support the research activities of PhD students and contribute to peer-reviewed publications, patents, and conference papers.

What you bring to the table:

We are looking for exceptional and highly motivated students with a MS/MSc/ME/MTech or equivalent degree in Physics or Astronomy, with interest and experience in the abovementioned areas. Experience in programming in Python, Photonics CAD (eg. RSoft, Zemax, Quodoa, EPIPROP, etc.), lithography mask designs, InGaAS, HgCdTe or eAPD, detectors are desirable and will help the candidate to advance the TRL.

- Essential:
  - Excellent interpersonal and communication skill and ability to work as a member of a team.
  - Excellent proficiency in the English language. Basic German skills will be an advantage.

This is what we offer:

- AIP has world call Electronics, Mechanical and Scientific Detector expertise to support the student.
- a modern working environment; the office is spacious, very well equipped and located in the middle of the World Heritage Site,
- an open and collegial working atmosphere,
- flexible working hours,
- good opportunities for internal and external training,
- Salary and social benefits are calculated based on the German public service scale TV-L and depends on qualification/experience
- Social benefits of the collective agreement for the public service (TV-L) including the VBL company pension with reduced earning capacity and survivors' pensions as well as a subsidy for the job ticket

The appointment could start immediately after the recruitment process is completed and is for 4 years until 31.12.2028. To apply, please send the following documents (PDF) to

bewerbung-2024-08@aip.de

(1) A cover letter with a short summary of research interest and the preferred starting date
(2) Curriculum Vitae
(3) Copies of BSc and MSc diplomas or equivalent
(4) List of publications and talks, if any
(5) Contact information for two individuals willing to provide reference letters upon request. Note that we will request such letters only for a subset of applicants after an initial selection step.

Review of applications will begin immediately & continued until the position is filled.

Equal opportunities are an integral part of personnel and organizational development at AIP, which is why applications from men and women are equally welcome. Preference will be given to people with disabilities if they have the same professional aptitude and ability.

Your application documents will be kept for a period of at least three months after the completion of the filling process. As a rule, your documents will be made available to a selection committee as well as to the committees and functionaries to be involved.

Leibniz-Gemeinschaft

TOTAL E-QUALITY