Helmholtz-Zentrum Dresden-Rossendorf e.V.

With cutting-edge research in the fields of ENERGY, HEALTH and MATTER, around 1,500 employees from more than 70 nations at Helmholtz-Zentrum Dresden-Rossendorf (HZDR) are committed to mastering the great challenges facing society today. The Institute of Radiation Physics conducts research for states of matter under extreme conditions and in very small dimensions. The Department of Laser Particle Acceleration is looking for a

Laser Engineer (m/f/d) – Burst-Mode Development and High-Power Laser PEnELOPE

City: Dresden; Starting date (earliest): At the earliest possible; Remuneration: TVöD-Bund; Reference number: 2026/66; Closing date: 18/06/26

Tasks

- The position is embedded in the expansion and further development of the high-power laser system PEnELOPE at HZDR and focuses in particular on the implementation and optimization of burst-mode operation schemes for laser-driven applications.
- You will support the development, integration, and commissioning of corresponding frontend and amplifier concepts for generating controlled pulse trains in the microsecond range.
- This includes the experimental implementation and characterization of burst schemes, analysis of pulse parameters (energy, duration, spectral properties), and investigation of stability and reproducibility under varying operating conditions.
- Additional responsibilities include contributing to the integration of new components (e.g., amplifier modules), supporting experimental campaigns, and collaborating closely with internal teams and external partners. The position offers the opportunity to work at the interface between laser development and innovative applications such as laser-driven particle and neutron generation.

Requirements

- Completed degree in physics, engineering, or a related field
- Basic knowledge of laser physics, ideally in ultrafast or high-intensity laser systems
- Initial hands-on experience with optical setups, alignment, and diagnostic methods is an advantage
- Interest in experimental work and in developing new laser concepts (e.g., burst-mode operation)
- Ability to work in interdisciplinary teams
- Good command of English

What we offer

- A vibrant research community in an open, diverse and international work environment
- Scientific excellence and extensive professional networking opportunities
- Salary and social benefits in accordance with the collective agreement for the public sector (TVöD-Bund) including 30 days of paid holiday leave, company pension scheme (VBL)
- We support a good work-life balance with the possibility of part-time employment, mobile working and flexible working hours
- Numerous company health management offerings
- Employee discounts with well-known providers via the platform Corporate Benefits
- An employer subsidy for the "Deutschland-Ticket Jobticket"

Application

We look forward to receiving your application documents (including cover letter, CV, diplomas/transcripts, etc.), which you can submit via our online-application-system: https://www.hzdr.de/db/Cms?pNid=490&pLang=en&pOid=77720

More information at https://stellenticket.de/204387/TUBS/
Offer visible until 18/06/26