Leibniz-Institut of Photonic Technology
Albert-Einstein-Straße 9 • 07745 Jena • Germany
www.leibniz-ipht.de

Job Advertisement

The Leibniz Institute of Photonics Technology (Leibniz-IPHT) offers a position in the ***Department of Fiber Research and Technology, Working group holographic endoscopy***, related to the transfer of research **project DeepEn**, at the rank of:

Product Development Engineer
in Transfer of Research Start-up (m/f/d)

The post is offered in **full-time** (100%) for the duration of two years starting earliest on **1st December 2021.** Afterwards, there is the possibility to join the spin-off company **DeepEn GmbH** after it will be officially founded 2023. The successful candidate will join a small and highly dynamic **start-up team** working at the commercialization of hair-thin, unique holographic endoscope systems for the purposes of in-vivo neuroscience and medical diagnostics.

The Leibniz-IPHT is an independent research institute with close connection to the Friedrich-Schiller-University Jena and a member of the Leibniz association.

Topic and job description:
The DeepEn team is working on the commercialisation of hair-thin, holographic endoscopes researched at Leibniz-IPHT and its international partner institutions. In neuroscience, these will be used to capture images with the sharpness of modern microscopes (sub-cellular image resolution) from unprecedented depth inside the living brain. This procedure is minimally invasive as the endoscope consists only of a single optical fibre, as thin as a human hair (~0.1mm). Target customers will be institutes conducting research of the brain functions (e.g., learning, memory formation, neurodegenerative diseases). Our long-term vision is, however, the application of the hair-thin endoscope in medicine, enabling minimally invasive diagnosis or treatment using light (e.g., neurosurgery, optical biopsy, photoablation).
Our start-up recently received funding of €1m for the next two years (EXIST transfer of research program of the BMWi) to develop and test the first prototypes of the endoscope. The team consists of a photonics specialist, a medical doctor, and a business specialist, under mentoring of Prof. Dr. Tomáš Čižmár, the inventor of the technology.

DeepEn is hosted in the modern premises of Leibniz-IPHT in Jena (Germany), featuring spacious optics laboratories, in-house fibre-manufacturing facilities as well as a support by mechanical workshops.

The successful candidate will work together with our photonics specialist on the development and testing of the first product prototypes for use in neuroscientific research.

Main activities:
- Responsible collaboration on system solution development, such as miniaturization and stabilization of the existing laboratory set-ups, up to the transfer to a tested instrument prototype (from TRL-level 4 to TRL-level 7)
- Implementation of software for scientific equipment and integration with the electrical system components
- Conduct functional tests of the electronics and software for subsystems as well as the overall system
- Conduct customer tests to improve user friendliness (e.g., design of customer interface)
- Support planning for implementation and production of the finished system

Your qualification:
- Successful completion of higher education degree (Bachelor/Master/Diploma) in engineering, information technology, programming, electrical engineering, physics, or a related field
- Practical experience in integration of hardware and software components
- Practical experience in prototype-based instrument development
- Knowledge in optoelectronics & instrument automatization
- Knowledge in the development of computer control interfaces
- Good/very good knowledge of German and English language

Desired Skills and Abilities:

- High motivation to work on the formation of a start-up company
- Strong personal initiative and creative, entrepreneurial thinking
- Knowledge of Python and C programming languages
- Experience with security certification procedures for electric instruments in Germany
- Basic understanding of wave optics (e.g., phenomena such as diffraction, interference, polarization)
- Willingness to travel for several days, for example to tests prototypes in customer laboratories or for seminars/workshops
- High willingness to learn about new fields (e.g., neuroscience, medicine) and work in an interdisciplinary, international environment
- Previous industrial experience would be beneficial

Salary:

German tariffs for public employees (TV-L).

What we offer:

- Highly motivated, ambitious, and driven team
- Great opportunities for learning and working in a start-up environment
- Warm, welcoming culture and team spirit
- Interdisciplinary and international workplace
- A family-friendly atmosphere with work-life balance as a central concern

As an equal opportunity employer, the Leibniz-IPHT committed to increase the proportion of female employees and scientists and therefore especially encourages applications from them.

Informal enquires may be addressed to Patrick Westermann (email: Patrick.Westermann@leibniz-ipht.de).

Applications must include:

- Cover letter outlining the candidate's suitability for the position, including the motivation to join the start-up. What are you planning to contribute to the success of DeepEn?
- Curriculum Vitae written in English or German
- Certificates, degrees (for foreign applicants: certificates must be translated into English and notarized)
- Names and contact details of two references (Please indicate, whether we can contact them before the interview)

For more information on DeepEn and the work packages planned for the coming 2 years please follow this link or use the QR code below.

Please submit your application **until 15th November 2021** by sending it to the address below and referring the code of the job posting **2021_29**, preferably by email and in pdf-format.

Leibniz Institute of Photonic Technology Jena
Human Resources
Albert-Einstein-Straße 9, 07745 Jena, Germany
e-mail: Personal_Abtl@leibniz-ipht.de
Code: 2021_29

Note on Data protection:

By submitting your application and the accompanying documents, you consent to the processing of your personal data in connection with the application process. You may revoke this consent in writing or electronically at any time without giving reasons.
Please note, however, that a revocation of consent means that any application in progress can no longer be considered.