

# Job Advertisement

The Leibniz Institute of Photonics Technology ([Leibniz-IPHT](http://www.leibniz-ipht.de)) 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 one year starting **1<sup>st</sup> December 2021**. Afterwards, there is the possibility to extend the contract to two years and later join the spin-off company **DeepEn Systems 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 scholarship from 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 complex 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, optical engineering, or a related field.
- Proven experience in development of scientific instruments and integration of hardware and software components.
- Proven experience in prototype-based instrument development.
- Good/very good knowledge in optoelectronics & instrument automatization.

### Desired Skills and Abilities:

- Ability to work independently
- Clear and open communication

- Previous industrial experience would be beneficial
- 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)
- Strong personal initiative and creative thinking
- 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

**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](mailto:Patrick.Westermann@leibniz-ipht.de)).

**Applications must include:**

- Cover letter outlining the candidate's suitability for the position, including a reflection on possible contributions to the success of the project
- Curriculum Vitae written in English and 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 electronically in PDF format **until 31<sup>th</sup> October 2021** to:

**Leibniz Institute of Photonic Technology Jena**  
**Human Resources**  
**Albert-Einstein-Straße 9, 07745 Jena, Germany**  
**e-mail: [Personal\\_Abt@leibniz-ipht.de](mailto:Personal_Abt@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.