

Job announcement for Scientists and Engineers

The Medical Laser Center Lübeck (MLL) is a non-profit research and development company for optical technologies, biophotonics and laser medicine on the Hanse Innovation Campus Lübeck, with the mission of transferring new methods and technologies into the clinic and the economy. The spectrum of work ranges from application-oriented research and development to clinical proof-of-concept of new laser and biomedical procedures in metrology, clinical diagnostics and therapy. MLL cooperates very closely with the Institute of Biomedical Optics at the University of Lübeck, the University Medical Center Schleswig-Holstein (UKSH) and medical technology companies.

For our new three-year collaborative project "Endoscopic OCT Laser Diagnostics of Microbial Inflammation in the Middle Ear (OLE)", funded by the German Federal Ministry of Education and Research (BMBF), we are looking for a scientist or engineer to start as soon as possible.

The aim of the project is the research and development of a new optical diagnostics and minimally invasive treatment of cholesteatoma (chronic purulent otitis media). For this purpose, an endoscopic procedure with access to the middle ear is to be developed. Among other things, a high-resolution microscopic variant of optical coherence tomography (OCT) will be used for diagnostics. During treatment, the inflamed tissue will be ablated by laser radiation and the surgical site will be post-irradiated by UV.

The project is being carried out as part of a research network together with the Department of Otorhinolaryngology at the University Medical Center Schleswig-Holstein, Lübeck Campus and several industrial partners.

Further information on the project:

<https://www.photonikforschung.de/projekte/lebenswissenschaften/projekt/ole.html>

Aims and focus of work:

- Participation in the development of endoscopic probes
- Construction of an OCT system for testing the method in the clinic
- Development and creation of algorithms for the analysis of OCT data
- Development of adaptive models
- Creation of experimental setups for the irradiation of phantoms and tissue
- Planning, execution and evaluation of measurement series for tissue ablation
- Collaboration in the testing of the procedure within the framework of a clinical study

Your profile:

- Above average scientific university degree (Master) in the field of physics, biomedical engineering, medical engineering, computer science or related fields of study.
- Knowledge and experience in optics, microsystems engineering, optical imaging and programming is desired
- Knowledge of biomedical optics is advantageous

We offer:

- Diverse, interesting work with a high degree of personal responsibility in interdisciplinary project teams consisting of physicists, engineers, computer scientists, and physicians

- A collegial, university-like working environment
- Research and development in close cooperation with the University of Lübeck, the University Medical Center and the industry
- Participation in international workshops and conferences
- If interested, there is the possibility of to obtain a PhD with active supervision at the Institute of Biomedical Optics at the University of Lübeck
- Remuneration according to the collective agreement for public service (TvÖD). The position is initially limited to 3 years, an extension is sought

Contact:

Dr. Ralf Brinkmann (brinkmann@mll.uni-luebeck.de) will be pleased to answer further questions. Please send your complete application documents by e-mail in a single pdf file to the above address by March 6th, 2022.