The Universität zu Lübeck stands for exceptional research and teaching. We are a modern foundation university with a focus on several core topics. As a life science university, we offer a range of courses from medicine, health sciences and psychology to mathematics, computer science, natural sciences and technology. Our motto is: “Focus on Life”.

The Institute of Medical Informatics (Director: Prof. Dr. H. Handels, Research group: Prof. Dr. M. Heinrich) has an exciting opening to be filled as soon as possible for

**Post-Doctoral Researchers (m/f/d)**

in the research field of Medical Deep Learning with a fixed-term full-time employment (38.7 h/week). The position is initially fixed-term for 15 months; an extension for a further 12 months is possible within another DFG project that has already been approved. An opportunity for further scientific qualification (habilitation) is given and supported. The project is funded by the BMBF project OncoReg (project partner: University Clinic Schleswig-Holstein, Lübeck) and supported with Nvidia hardware.

The successful candidates will be part of the research group of Prof. Mattias Heinrich, which has pioneered new methodological developments in the field of medical image analysis and machine learning as evident from multiple best paper awards at MICCAI, MIDL and BVM. The group is internationally renowned for its research in medical deep learning, which has been proved by numerous publications at top conferences (MICCAI, MIDL) and in prestigious journals (TMI, MedAI). Moreover, it has co-organized the challenge Learn2Reg motivating the advancement of image registration using both, deep learning-based and traditional methods.

The OncoReg project offers the opportunity to develop novel methods for privacy-preserving image registration and to evaluate the state of the art in the context of a MICCAI Challenge Workshop (Learn2Reg 2023). The preparation of imaging data and annotations will be carried out by the project partners in radiology and radiotherapy, building on already successful joint projects. An implementation of open-source solutions in public platforms is desirable.

Other ongoing research projects (including the DFG project LABELS with Fraunhofer, Philips and 6 other ongoing BMBF projects) offer an excellent exchange with other researchers, which could also significantly support a candidates' cumulative habilitation.

We offer the opportunity to conduct cutting-edge research and advance the state of the art, thereby contributing to improved medical diagnosis, treatment and healthcare. In addition, successful candidates will assist in the establishment of new research directions and have the opportunity to communicate these at international conferences and in scientific journals. We offer an inspiring working and research environment in a dynamic and growing research group with clinical, industrial and academic cooperation partners in a city with a high quality of life (close to the Baltic Sea).

**Scope of activities:**

- Active contribution to the BMBF project OncoReg incl. communication with project partners
- Presentation and publication of results at international conferences and in high-ranking journals in the field of Medical Deep Learning
- Co-organisation and evaluation of a MICCAI Challenge (Vancouver 2023)
- Support in the supervision of student theses (BSc, MSc, PhD)
Requirements:

- A PhD degree in computer science, mathematics, engineering or related
- Prior experience in either medical imaging, computer vision or machine learning, as evident e.g. from at least one publication in either TMI, MedIA, MICCAI, MIDL, CVPR, etc.
- Proficiency in python programming for deep learning (pytorch) or willingness to learn quickly
- Willingness to perform cutting-edge research and advance state-of-the-art methods in medical diagnosis, treatment and healthcare

What we offer:

- Operational pension scheme
- Flexible working hours
- Mobile working
- Compatibility of family and work
- NAH-SH public transport ticket, access to university sports facilities, discounts at the canteen on campus and many other perks
- Health management programme “Healthy University”
- Training opportunities

Pay in accordance with the current tariff if the tariff requirements are met, up to pay grade 13 TV-L. Subject to a final job evaluation.

The Universität zu Lübeck is a modern and cosmopolitan employer. We welcome your application regardless of your age, gender, cultural and social background, religion, worldview, disability or sexual identity. We promote gender equality. In case of equal suitability, qualifications and professional performance, female applicants will be given preference. If you are an applicant with a severe disability, your application will be given preference in case of equal suitability.

Prof. Mattias Heinrich (heinrich@imi.uni-luebeck.de, +49-451-3101-5602) will be happy to answer any further questions you may have on the post and research subject (see also www.mpheinrich.de and www.imi.uni-luebeck.de/forschung/ag-medical-deep-learning.html).

Applications with all relevant materials (coverletter with research interest, curriculum vitae, certificates, list of publications and the contact details of at least one reference (e.g. PhD supervisor), must be received no later than 15.12.2022 as a single PDF file to bewerbung@uni-luebeck.de, quoting the reference number 1098/22 by (date of receipt):

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