

PhD student or Postdoctoral fellow in data analysis for medical sensors (f/m/d)

The Chair of Biological Imaging (CBI) at the Technical University of Munich (TUM) and the Institute of Biological and Medical Imaging (IBMI) at **Helmholtz Munich** are an integrated, multi-disciplinary research structure and form the cornerstone of a rapidly expanding bioengineering ecosystem in Munich, Germany; including the Research Center TranslaTUM and the Helmholtz Pioneer Campus, which integrate bioengineering with oncology and metabolic disorders, respectively. CBI scientists develop next-generation imaging and sensing methods to measure previously inaccessible properties of living systems, hence, catalyzing breakthroughs in biology, medicine and the environment. Comprising 11 inter-disciplinary laboratories and scientists from more than 25 countries, CBI offers state-of-the-art infrastructure for innovative research and a perfect environment to accelerate your career.

Join our team and be part of our rich and dynamic research culture of enquiry and innovation. CBI researchers come from the top ranks of physics, chemistry, engineering, and biomedicine and attract significant investment from national and international sources. Our scientists serve in international societies and conferences and are recipients of a multitude of top international and German awards, including the prestigious Gottfried Wilhelm Leibniz prize and 11 ERC awards. In addition to scientific excellence, CBI promotes entrepreneurship, company spin-off activities, and collaborations with other top academic institutions and leading corporations in the photonics, pharmaceuticals and healthcare sectors.

We now seek a highly qualified and motivated PhD student or post-doctoral researcher (f/m/d) to drive the development of data analysis methods for novel medical sensing systems.

The Mission:

Our research is driving innovation at the interface of bioengineering and medicine, innovating imaging and sensing technologies based on optical and acoustic contrast with a tremendous potential to revolutionize early diagnostics, guided intervention, and management of disease. Optoacoustic imaging and sensing generates structural and functional information about healthy and diseased tissue at unprecedented depths inside organisms. Building upon our extensive expertise in developing methods and systems, we have developed a new class of compact and low-cost medical sensors that, in combination with the implementation of novel data analysis methods, promise a breakthrough in large-scale disease detection and monitoring.

Therefore, if you have expertise in data analysis (deterministic, machine learning and AI) and have potentially even worked with sensors in general before, join our team and help us gain as many biomedical relevant insights as possible. Our goal is to optimize existing data analytic methods to improve the performance of our medical sensors even further. This is your opportunity to contribute to a medical sensing revolution!

Your profile:

The successful applicant must have the following:

- Master degree (and Ph.D. for postdocs) in Computer Science, Mathematics, Physics, Electrical Engineering or related discipline.
- Excellent track record of research achievements and publications in top-ranked journals.
- Strong motivation, scientific curiosity and commitment to scientific excellence.
- Experience in data analytics (machine learning, AI, deterministic).
- Experience with sensing data is a plus.
- Programming skills in MATLAB / Python.
- Team player skills and enthusiasm to work in a multi-disciplinary, collaborative environment.
- Excellent command of the English language.

Our offer:

We offer you the unique chance to make a difference in future healthcare. At CBI, we strongly believe in scientific excellence and innovation. This is your opportunity to be part of and to advance your career in a world-leading research institute, where bioengineering principles meet today's challenges in biology, medicine and environmental health to develop the solutions of tomorrow. CBI provides a highly international, multi-disciplinary environment with excellent opportunities for professional growth. You will be part of a dynamic, professional and highly motivated team within a stimulating environment and gain international exposure through our partners and collaborators across Europe and the world. We support career development, continued education and life-long learning. For potential PhD students, TUM offers a wide variety of inspiring and challenging PhD programs, which will supplement your research training.

Situated on the foothills of the Alps, Munich is consistently ranked as one of the most vibrant and enjoyable cities in the world, with an exceptionally quality of life. Greater Munich is also home to several world-class universities and research institutes, creating a truly inspiring intellectual atmosphere.

The successful applicant will initially have a 2-year contract, with the possibility of extension (3 years for PhD positions). Salary will commensurate with work experience and seniority (TV –L E13 for postdocs; E13-75% for PhD positions). As an equal opportunity and affirmative action employer, TUM explicitly encourages applications from women as well as from all others who would bring additional diversity dimensions to the university's research and teaching strategies. Qualified applicants with physical disabilities will be given preference.

Your application:

We are looking forward to receiving your comprehensive application including your letter of motivation, CV and academic transcripts of records preferably in English and in a single PDF file, via email to cbi.recruitment@tum.de. Please indicate “PhD in data analysis for medical sensors” or “Postdoc in data analysis for medical sensors” in the subject line.

For any question, please contact:

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