Ph.D. position in optoacoustic microscopy and imaging in the context of microfluidics (f/m/d)

The Chair of Biological Imaging (CBI) at the Technical University of Munich (TUM) in Munich, Germany, and the Institute of Biological and Medical Imaging (IBMI) at the Helmholtz Zentrum München (HMGU) are an integrated, multi-disciplinary research structure and form the cornerstone of a rapidly expanding bioengineering ecosystem in Munich; 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 and medicine. 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 several 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.

As part of an innovative project funded by the German Research Association (DFG), we are now seeking a highly qualified and motivated Ph.D. student (f/m/d) for (optoacoustic) microscopy/imaging to drive cutting-edge technology development in the context of microfluidics.

**The mission:**

The candidate will be pivotal in developing a next-generation optoacoustic microfluidics based cytometry setup. The setup shall combine Optoacoustic single cell detection with microfluidics based high throughput cell analysis and sorting, thus, allowing to monitor cellular characteristics in high-throughput. The initial application of such a system will be the identification of novel label compounds for optoacoustics. Beyond that such a system can be developed in the direction of clinical application, i.e. assessing blood rheological parameters in cells. Regarding the applications the candidate will work in tight collaboration with a biology oriented member of the team.

**Your profile:**

The successful applicant must have the following:

- High motivation, curiosity, and commitment to scientific excellence
- Master degree in Physics or optical engineering
- Background in optics or optoacoustics
- Experience in setup building / strong vocation to build a new setup “from scratch”
- Programming capabilities, including Matlab, C/C++ and Labview especially regarding hardware control
- Understanding of basic hardware design principles
- Interest in microfluidics and cytometry
- Team player skills and enthusiasm to work in a multi-disciplinary, collaborative environment with the focus on the boundary between hardware engineering and biological application
- Excellent command of the English language
Our offer:

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 and medicine to develop the solutions of tomorrow. CBI provides a highly international, multi-disciplinary environment offering excellent opportunities for professional growth and everything you need to achieve outstanding research findings leading to high-impact publications. We support career development, continuing education and teaching and training opportunities.

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

The successful applicant will initially have a 3-year contract, with the possibility of extension. Salary will be commensurate with work experience and seniority (TV-L E13-65%). 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. Preference will be given to disabled candidates with essentially the same qualifications.

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 “Ph.D. position in optoacoustic microscopy and imaging in the context of microfluidics (f/m/d)” in the subject line.

For any question please contact:

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