Max-Planck-Institut für Molekulare Zellbiologie und Genetik (MPI-CBG)

The Max Planck Institute of Molecular Cell Biology and Genetics (MPI-CBG) is an international research institute of the Max Planck Society. Around 500 employees from over 50 nations work in a highly collaborative and curiosity-driven environment. The official language of the institute is English. MPI-CBG has twice been awarded “Best Place to Work” (Academia and Postdocs) by The Scientist.

Ph.D. student (f/m/d) in high-speed nanoscale imaging

City: Dresden; Starting date (earliest): At the earliest possible; Duration: 4 years; Remuneration: • Salary and social benefits in accordance with the German public service agreement (TVöD Bund, 65% E13); Reference number: 2026-Predoc-Bioimaging-2430; Closing date: 31/03/26

Tasks

Optical microscopy is essential for studying dynamic processes in living cells due to its unique live cell imaging capabilities. This PhD project focuses on developing next generation optical microscopy methods that push both spatial and temporal resolution, enabling nanoscale, real time observation of cellular dynamics currently beyond the reach of state of the art approaches. Working at the interface of physics, biology, chemistry, and engineering, you will design and build innovative imaging instrumentation and analysis pipelines, and apply them to address fundamental questions in cell biology. The position offers broad opportunities to learn, integrate, and apply concepts across disciplines while advancing the frontiers of live cell imaging.

The Nanoscale Optical Bioimaging group aims at developing innovative optical microscopy techniques to create new tools for studying biology processes in real time at nanoscale resolution. Our lab is rooted in the belief that any scientific challenge can be overcome by combining ideas and approaches from different disciplines and therefore multidisciplinary research encompassing biology, chemistry, physics and engineering is at the core of our work. We work together with partners on the broader Dresden campus (Bruns group). Candidates can express interest in a PhD in these groups in their application documents and may undergo joint assessment.

Requirements

Your Profile:
You are a highly motivated and curious graduate who is excited about developing technology and applying it to biological discovery. You should have:

- A Master of Science (M.Sc.) degree in physics, biology, chemistry, engineering, or a related field
- Strong interest in microscopy development and interdisciplinary research
- Willingness to learn skills beyond your original training

- High level of analytical and critical thinking
- Solid written and spoken English

Experience in programming, optical design, instrumentation, or quantitative data analysis is advantageous but not strictly required.

What we offer

Our offer:

- A full-time PhD position in a stimulating, international research environment
- A four-year appointment following successful evaluation by the International Max Planck Research School for Cell, Developmental, and Systems Biology (IMPRS-CellDevoSys). The selected candidate will be integrated into our structured doctoral program.
- Salary and social benefits in accordance with the German public service agreement (TVöD Bund, 65% E13)
- Flexible working hours and family-friendly conditions
- Access to extensive training and career development opportunities through the Max Planck Society

The position is available immediately.

Application

Application:
Your application should include the following materials:

- cover letter indicating motivation to apply for this position
- CV
- names of 2-3 potential references
- short statement of previous research accomplishments (

More information at https://stellenticket.de/202175/TUBS/
Offer visible until 31/03/26