

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



500 Menschen aus 50 Ländern arbeiten am Max-Planck-Institut für Molekulare Zellbiologie und Genetik (MPI-CBG) und lassen sich von ihrem Forscherdrang antreiben, um die Frage zu klären: Wie organisieren sich Zellen zu Geweben? Das Institut bringt Menschen aus den verschiedensten Disziplinen zusammen, was neue Einsichten und Erkenntnisse eröffnet.

Scientist/Engineer (m/f/d) in Automated Biology

City: Dresden; Starting date (earliest): At the earliest possible; Remuneration: Salary and benefits in accordance with the German public-sector collective agreement (TVöD Bund), up to EG13.; Reference number: 2026-Postdoc-Automation-1132; Closing date: 20/11/26

Tasks

The newly established Automated Biology Facility develops automated experimental workflows for the institute's research groups and core facilities. Combining experimental biology with laboratory robotics, software development, and data acquisition, we transform biological protocols into robust, reproducible systems. Our projects range from routine liquid handling to complex experimental pipelines, integrating existing laboratory instruments and developing custom devices for tasks such as sample preparation, dissection, and quantitative imaging. We aim to generate well-characterised quantitative datasets and link automated experiments with physical models, enabling closed-loop workflows in which measurements inform models and model predictions guide subsequent experiments.

Your Role:

Within this framework, you will translate biological protocols into reliable, reproducible automated workflows for research groups across MPI-CBG. Combining hands-on laboratory work, robotics, and software development, you will take projects from initial feasibility assessment to validated systems ready for routine use. Your tasks will include:

- Working with research groups to define scientific goals, biological constraints, technical requirements, and criteria for success.
- Independently planning and managing projects, assessing feasibility, setting milestones, and communicating progress and resource needs.
- Developing and refining automated experimental methods, from sample preparation and liquid handling to experimental execution and data acquisition.
- Integrating laboratory instruments and robotic systems for reliable operation across experimental procedures.
- Developing, testing, and maintaining software for instrument control, experimental processes, and data processing, using version control and well-documented code.
- Validating and benchmarking new methods with biological controls, assessing sample quality, reproducibility, throughput, and robustness.

- Maintaining and improving established systems through troubleshooting, calibration, cleaning, servicing, and recovery after interruptions.
- Documenting protocols, equipment configurations, and experimental data, including metadata and execution logs, and training colleagues to use validated methods.
- Contributing to the presentation and publication of developed methods and results.

Requirements

Your Profile:

- Preferably PhD degree in biology, biotechnology, bioengineering, automation engineering, robotics, or a related field. Candidates with a Master's degree (MSc/MEng), or Diplom-Ingenieur qualification are also welcome to apply.
- Strong practical understanding of biological experiments and experience developing, adapting, or validating laboratory protocols.
- Strong programming skills, preferably in Python, with the ability to develop reliable and maintainable scientific software.
- Experience planning and implementing scientific or technical development projects, including systematic testing and troubleshooting.
- Excellent English communication skills and the ability to collaborate across disciplines.
- Experience with liquid-handling platforms, laboratory robotics, instrument integration, or automated experimental workflows is advantageous.
- Familiarity with experimental data and metadata systems, or an interest in physical modelling, AI-assisted experimental design, and closed-loop experimentation, would be a plus.

What we offer

Our offer:

- An opportunity to help establish a new scientific facility at the interface of experimental biology, robotics, and software engineering.
- A full-time position, with an initial 2-year contract and the possibility of an extension for up to three additional years.
- Salary and benefits in accordance with the German public-sector collective agreement (TVöD Bund), up to EG13.
- Public-sector benefits including 31 days of annual leave, full social coverage, and supplementary pension (VBL).
- A discounted public-transport job ticket (VVO) and excellent transport connections.
- Support for work-life balance, including assistance with family and childcare matters.
- A broad network for career development and training through the Max Planck Society.

Application

Your Application:

Please apply through our online system at careers.mpi-cbg.de by 20 November 2026, stating code 2026-Postdoc-Automation-1132

Please include:

- A CV, including relevant publications and/or examples of technical or software projects.
- A brief cover letter describing your motivation and experience in experimental method development, laboratory automation, or scientific software.
- Contact details for at least two referees.

Scientific inquiries may be addressed to Lars Hubatsch (hubatsch@mpi-cbg.de), Automated Biology Facility. For questions about the contract, compensation, or benefits, please contact Human Resources (hr@mpi-cbg.de).

More information at <https://stellenticket.de/208398/TUD/>
Offer visible until 20/11/26

