

Engineer



Philipp Schlömer, engineer in the Fiber Architecture group at INM-1 of Forschungszentrum Jülich since 2013.

Tasks and responsibilities

- PLI-microscopy (hardware development; scanning)
- Blockface Imaging (setup and automation)
- Data handling (organizing data flow between PLI-microscopes, internal storage and supercomputer)
- Data processing (running image processing pipeline on supercomputer)
- Photogrammetry (3d-imaging and -surface reconstruction of brains)

A typical day at work

- Checking image data uploads to supercomputer that were started on the previous day
- Checking processed data from previous day on supercomputer
- View images to check general result quality and data consistency
- Prepare and precisely adjust Blockface Imaging setup (e.g. camera+focus, z-stage-positioning) for starting sectioning/cutting of new brain by lab staff
- Prepare and use PLI-microscope for daily measurement of brain sections
- Organize and take care of new metadata and imaging uploads to internal database and supercomputer
- Hardware development work doesn't fit into a description of a typical workday 😊

Skills required

- Solid technical understanding (mechanics, electronics)
- Basic knowledge in physics and deeper knowledge in optics
- Using CAD
- Programming with LabVIEW
- Being flexible and team-minded

Most enjoyable aspects of the job

- The interconnection between lab work requirements, technical development, scientific imaging results and HPC („High Performance Computing“)
- Diversified working life through changing variety of daily tasks
- Combination of development, technical tasks and practical work with computing/imaging technologies
- Monitoring and involving newest developments in the field of optics (e.g. cameras and lightsources)
- Developing new experimental setups
- Being involved in different kinds of scientific and development projects

A great place to work

“Forschungszentrum Jülich is a well-structured organization. The administration of INM in general and INM-1 specifically provide outstanding support for employees. Employees can use flexible working times.

The mixture of permanent personnel and students in our working group keeps this place of work always interesting and exciting, and the broad variety of research topics and different specific focusses is challenging and motivating. I also like the internationality of people in the institute.”

Balancing work and family life

“I make use of flexible working times and work from home if necessary. I also use special events like the „JuLab-activities“ and „Tag der Neugier“ to get my children/family closer involved in what I do and where I work.”