Position title: Cryo-EM method development

A PhD position is available in cryo-EM method development at the ERC-3 in the field of structural biology of the Forschungszentrum Jülich.

The research will be mainly carried out at the Forschungszentrum Jülich, which is one of the largest research centers in Germany, with excellent scientific equipment and leading European computational resources, located on a green campus, and near the cultural centers Köln, Düsseldorf, and Aachen.

The successful candidate should have a master degree in bioinformatics, biophysics or related field. The candidate will be using and developing cryo-EM image processing methods to determine the 3D structures of biological macromolecules. We expect to use novel imaging approaches and apply computational methods of pattern recognition, artificial intelligence and deep learning to improve 3D reconstruction and density map interpretation methods. Familiarity with the Unix operating system is required and prior knowledge in programming will be a plus.

The Ernst Ruska Centre (ER-C) at the Forschungszentrum Jülich is one of the world-leading electron microscopy centres with a total of 13 electron microscopes including the PICO FEI Titan with a point resolution of 0.5 Å. The facility has been extended with state-of-the-art cryo-microscopes FEI Talos Arctica and FEI Talos 120. The Structural Biology division of the ER-C investigates the structural and molecular mechanism of autophagy and pushes the development of cryo-EM related methodology. The Jülich Supercomputing Centre operates a series of supercomputers including CPU and GPU architectures of highest performance. The Jülich campus hosts a vibrant biophysics and structural biology community.

The candidate will be working in a creative and international environment embedded in an interdisciplinary team with colleagues ranging from electron microscopists, computer scientists, biochemists as well as cellular biologists. The 3-year PhD position is immediately available. Payment of the PhD fellow will be based on salary grade EG 13 (50%) Collective Agreement for the Civil Service (TVöD).

Contact:
Complete applications should include a CV and the name and emails of two references, along with a motivation letter, and have to be submitted to Dr. Carsten Sachse (c.sachse@fz-juelich.de). More detailed information on the scientific interests of the Sachse group can be found on http://www.fz-juelich.de/er-c/er-c-3. The received documents will be screened by an evaluating committee and, based on the expertise and the records of the scientific career; the shortlisted candidates will be invited for an interview, by teleconference if necessary.