

Ph.D. position at the interface of experiment and simulation:

A full time PhD position in coarse-grained molecular modelling is open in the electron paramagnetic resonance (EPR) group at ETH Zurich. The primary objective for the candidate is to design, implement, and use a coarse-grained representation for intrinsically disordered proteins (IDPs). In particular, the resultant model will incorporate artificial and experimental EPR restraints and be used to run EPR-constrained molecular dynamics calculations to determine experimentally guided, conformational ensembles for IDPs of biological interest.

The four-year project is funded by ETH Zurich and will be supervised by Dr. Maxim Yulikov (ETH, Jeschke group) in cooperation with Dr. Andreas Vitalis (UZH, Caflisch group) and will benefit from the experimental input from several ongoing structural biology projects in the Jeschke group at ETH. It will be highly advantageous for candidates to have prior practical experience in setting up classical, molecular simulations and to possess excellent skills in physical chemistry and its mathematical foundations. Prior programming experience and good communication skills are a definite plus.

To make the project successful, independent work will need to be efficiently combined with regular meetings and discussions, as well as practical cooperation with EPR, simulation, and molecular biology experts. To apply, please send your CV and cover letter to Dr. Maxim Yulikov: myulikov@ethz.ch. In the evaluation process, two support letters from previous research project or university course supervisors will be requested. The starting date for this project cannot be later than 01.08.2025. We encourage interested candidates to apply as soon as possible: the position will be closed as soon as an appropriate candidate is found.