

## Externe Stellenausschreibung Reg.-Nr. 5-11580/24-D

Modern, interconnected, conscious of tradition: Martin Luther University Halle-Wittenberg (MLU) is the oldest and largest university in the State of Saxony-Anhalt with a history dating back more than 500 years. Today more than 20,000 students are enrolled at the university. MLU's core research areas are in the nanosciences and biosciences, the Enlightenment, as well as in social and cultural research. The university is also home to a range of small disciplines, some of which can be found nowhere else in Germany. The university has excellent national and international ties, and works closely together with leading research institutes, industry, and more than 250 universities around the world.

The Martin-Luther-University Halle-Wittenberg, Faculty of Natural Sciences II, Institute of Physics, invites applications for a

### PhD position (m-f-d)

within the project AGRIPOLY II.

The position is funded from the earliest possible opportunity till December 31<sup>st</sup> 2027 in part-time (50%). Salaries will be according to Entgeltgruppe 13 TV-L, depending on the assigned tasks and individual qualifications.

#### Tasks:

Within the graduate school AGRIPOLY II (subproject: "Mesoscale computer simulation of structure and dynamics in transient networks of associating polymers"), modern aspects of sustainable polymer systems are linked with the fundamental novel design of macromolecular systems. The following work is planned as part of a PhD thesis in the field of conducting computer simulations of mesoscopic models of dynamic networks in systems of associating polymers:

- Selection of the method for constructing a coarse-grained (CG) model, development of the model in cooperation with experimental groups within the graduate school
- Verification of the model
- Productive simulation runs, analysis of the simulation data
- Comparison of the simulation results with experimental data; explanation of the experimentally observed effects and uncovering the underlying molecular mechanisms of the observed phenomena
- Literature research and writing of scientific papers

The opportunity to obtain your own academic qualification as part of a doctorate is given.

#### Requirements:

- scientific university degree (MSc/Diploma) in physics, mathematics, computer science, chemistry, or another comparable natural science discipline completed with at least good results
- Strong interest in modeling and conducting computer simulations
- Experience and knowledge in analyzing simulation data and statistical analysis
- Excellent English language skills (written and spoken)
- Programming experience is desirable
- Ability to work independently, purposefully, and reliably
- Motivation to collaborate with PhD students from other subprojects within the graduate school and participation in the activities of the graduate school



The Martin Luther University Halle-Wittenberg gives priority to applications from severely disabled candidates with equivalent qualification. Women are particularly encouraged to apply. Applicants with a foreign qualification have to show the statement of comparability for foreign higher education qualifications issued by Central Office for Foreign Education Zentralstelle für ausländisches Bildungswesen (<https://www.kmk.org/zab/central-of-ficefor-foreign-education>).

In case of queries concerning the application process or project-related questions please contact: Mr. Priv.-Doz. Dr. Viktor Ivanov, Tel.: 0049-345-55-25441, E-Mail: [viktor.ivanov@physik.uni-halle.de](mailto:viktor.ivanov@physik.uni-halle.de).

Please submit your application quoting the registration number Reg.-Nr. 5-11580/24-D with the usual documents (Signed cover letter explaining your interest in the field of conducting computer simulations within the field of polymers, Curriculum vitae, including a list of publications, if applicable, Certificates & transcript of grades) till the 22.11.2024 preferably via E-Mail within one PDF-file to: Martin-Luther-Universität Halle-Wittenberg, Naturwissenschaftliche Fakultät II, Institut für Physik, Herr Priv.-Doz. Dr. Viktor Ivanov, 06099 Halle (Saale), E-Mail: [viktor.ivanov@physik.uni-halle.de](mailto:viktor.ivanov@physik.uni-halle.de).

Please send your application including all documents in one PDF file to [viktor.ivanov@physik.uni-halle.de](mailto:viktor.ivanov@physik.uni-halle.de).

This call for applications is subject to possible budgetary restrictions.

Application costs will not be reimbursed by Martin-Luther- University Halle-Wittenberg. An electronic application with all documents in one PDF-file is desired.