Professorship for Simulation and Modeling of Processing Surfaces with beam-based Tools supported by Artificial Intelligence Methods (W2 with tenure track to W3 or W3)

Leibniz-Institut für Oberflächenmodifizierung e.V.

Vacancy from 17/04/2025 · Job ID: SMTH-348

The Leibniz Institute for Surface Engineering (IOM) and the Faculty of Mathematics and Computer Science at Leipzig University are seeking to fill the above position as of January 1, 2026 in a joint appointment procedure combined with the position as **Head of the cross-sectional unit "Modeling and Simulation" at the IOM**.

Scientific environment

Founded in 1409, Leipzig University is one of the largest universities in Germany with a strong research focus. With around 30,000 students and more than 5,000 employees in 14 faculties, it offers an excellent environment for the above-mentioned field of research. In particular, the Faculty of Mathematics and Computer Science and the Center of Scalable Data Analytics and Artificial Intelligence (ScaDS.AI in Leipzig) offer attractive research infrastructures and opportunities for cooperation.

The Leibniz Institute for Surface Engineering (IOM) is a member of the Leibniz Association with around 140 employees. The IOM focuses on application-oriented research in the field of the production and modification of materials and their surfaces using beam-based processes with ions, electrons, plasmas and photons. The close combination of physical, chemical and engineering expertise is a special feature of the institute. The IOM conducts research and development at the highest level using an interdisciplinary methodological approach with the aim of not only gaining knowledge but also promoting the transfer of results to industry. The institute works closely with universities, non-university research institutions and industry on all research topics. The IOM's annual budget is € 15 million, of which around 30 % is third-party funding.

The IOM is aiming to significantly expand its cross-sectional unit "Modeling and Simulation" on the basis of a strategic expansion. This includes the creation of six budget positions and the provision of extensive funds for high performance computing. The cross-sectional unit is to be managed by the professorship.

Tasks

The professorship is responsible for the content-strategic, structural and personnel organization and management of the cross-sectional unit. The cross-sectional unit complements the thematic spectrum of the institute with modeling and simulation techniques. The research area of the professorship is intended to complement the existing competencies of the IOM. The professorship will also establish a link between the IOM and the Center of Scalable Data Analytics and Artificial Intelligence (ScaDS.AI in Leipzig). It is possible to apply for co-optation of the professorship by the Faculty of Chemistry and Mineralogy if suitable. The professorship will involve teaching duties of up to four teaching hours per week (LVS).

Requirements

The call is aimed at established researchers who have a proven track record in at least one of the IOM's research areas, apply existing methods and resources at the highest level and advance the IOM's strategic goals. Experience in the field of artificial intelligence (machine learning etc.) is advantageous, a focus on artificial intelligence methods in the field of material design or multi-scale simulation of non-equilibrium processes is desirable. A thematic focus on questions of the experimentally working groups at the IOM is expected. An overview of the research areas and objectives of the IOM can be found on the website **www.iom-leipzig.de**. If you have any questions about the IOM, you may also contact the IOM Executive Board directly.

A significant proportion of the IOM's budget is covered by third-party funding, therefore experience in the successful acquisition and management of national and international third-party funded projects is required. In addition, we would expect you to have

- Ability to lead and motivate employees, good communication skills as well as gender and social skills
- Negotiation and decision-making skills
- Knowledge and experience in administrative processes, ideally acquired in a non-university research institution
- Good written and spoken German language skills
- Commitment to the interests of the Leibniz Association.
- Teaching experience in computer science
- Participation in existing and new research networks in the "Mathematical and Computational Sciences" profile line at Leipzig University

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Our offer

Depending on experience, the professorship is to be filled at W2 with tenure track W3 or W3. The successful application for a W3 professorship requires great success in acquiring third-party funding, international embedding in the research environment and extensive interdisciplinary cooperation as well as comprehensive teaching experience in computer science.

In the case of appointment as a tenure-track professorship, this is initially limited to 6 years. At the latest in the fifth year after taking up the post, a tenure evaluation will be carried out in accordance with the regulations on the design, course and evaluation of tenure-track professorships at Leipzig University (Tenure Track Regulations - TTO). The evaluation procedure is based on an evaluation agreement concluded by mutual agreement at the start of employment, in which the development goals and expectations of the professor's individual performance in the categories of research, teaching, knowledge transfer as well as academic and extramural commitment are laid down in a binding manner. After a successful tenure evaluation, the appointment is made to a permanent W3 professorship in accordance with Section 60 (2.3) of the Saxon Higher Education Act (SächsHSG) without a new job advertisement.

The rights and obligations of the holder of the position are based on the SächsHSG and the Higher Education Service Ordinance (HSDAVO). Applicants must fulfill the appointment requirements according to § 59 SächsHSG.

The IOM and Leipzig University attach great importance to the professional equality of women and men. We strive to increase the proportion of female professors and expressly encourage women to apply. Severely disabled applicants and applicants of equal status will be given priority if they have the same qualifications.

Please apply by **16th May 2025** exclusively via the **Leipzig University appointment portal.** Please note that the application documents will be made available to the responsible committees of the IOM.

Prof. Dr. Bernd Kirchheim, Dean, Faculty of Mathematics and Computer Science
Prof. Dr. Benjamin Dietzek-Ivanšić, Scientific Director and Member of the Executive Board of IOM

Closing date: 16.05.2025

Privacy information

If you choose to apply and send us your documents, you do so voluntarily. Any personal data contained within your application documents, or obtained during an interview, will be processed by Leipzig University – as the advertiser of the position – exclusively for the purposes of the selection process for the position advertised. It will not be passed on to third parties without your consent in the individual case. The legal basis for such data processing is Sect. 11(1) of the Saxon Data Protection Implementation Act (SächsDSDG) in conjunction with the EU General Data Protection Regulation (GDPR). The controller for the application process within the meaning of the GDPR is the addressee of the application, specified in the advertisement.

Your personal data will be stored for six months after the end of the recruitment process and then erased or destroyed in accordance with data protection regulations. You may refuse or withdraw your consent with effect for the future without giving reasons. In these cases, Leipzig University will not or no longer be able to process and consider your application. Under the GDPR, subject to the relevant statutory requirements you have the following rights vis-à-vis the addressee of the application with regard to your personal data: right of access (Art. 15 GDPR); right to rectification of inaccurate personal data (Art. 16 GDPR); right to erasure (Art. 17 GDPR); right to restriction of processing (Art. 18 GDPR); and right to object to processing (Art. 21 GDPR). If you have any questions, please contact the Data Protection Officer at Leipzig University (office: Augustusplatz 10, 04109 Leipzig). You also have the right to lodge a complaint with the Saxon Commissioner for Data Protection.