The newly established Lab Dresden Center for Intelligent Materials (DCIM) offers in the field of Materials Informatics – data-driven approaches for materials research a position as

**Research Associate**

(starting at the next possible date and limited until December 31, 2022. The period of employment is governed by the Fixed Term Research Contracts Act (Wissenschaftszeitvertragsgesetz - WissZeitVG). An extension of the contract and further scientific qualification is planned, subject to results and availability of funding. The position offers the chance to obtain further academic qualification.

The Lab Dresden Center for Intelligent Materials (GCL DCIM) focuses on novel materials which are fundamental components of intelligent systems. Such systems autonomously feel, think and act through integrated sensor and actuator functionalities. The Lab consists of two research groups - Materials Informatics and Hierarchical Topologies - who closely cooperate.

The research group **Materials Informatics** is concerned with data-driven approaches for the description and integration of novel tailor-made active materials. Modern materials research requires an integrative and multidisciplinary approach, which increasingly relies on methods from mathematics and computer science in addition to traditional approaches from chemistry, physics, and engineering. Machine Learning and the evaluation of big data are essential for tomorrow's materials research and related engineering sciences. The development of strategies for materials discovery and development are therefore the focus of Materials Informatics. Additionally, Materials Informatics also includes the application of active materials as a means of information processing.

You will be part of a team of enthusiastic scientists who creatively pursue their individual research agenda in a startup-like open atmosphere, supported by the Dresden Center of Intelligent Materials and the School of Engineering Sciences at TU Dresden. Your research environment will include access to state-of-the-art and tomorrow's research infrastructure, the promotion of gender equality and a family-friendly working environment. Through your work, you will be empowered to contribute to scientific progress through open science and communication.

**Tasks:** In our team, you will be integrated into the activities of the **Materials Informatics** research group and you will interact with scientists in the field of computational materials research and machine learning. Your tasks include:

- Data mining and (augmented reality-)visualization in the field of active (intelligent/smart) materials.
- Calibration and adaptation of deep learning models.
- Communication of research outcomes (i) inside the scientific community through high impact journal papers and conference presentations, (ii) to students through individual support of research projects and (iii) to the non-expert public through social media and science communication.

**Requirements:** a top-notch proactive young person, who wants to excel in an international environment and wants to contribute to scientific progress as well as communicate this progress to the public.

- An excellent university degree is required, preferably in computer science, physics, mechanical engineering, materials science, or interdisciplinary courses of study in this field.
• Academic or industrial experience in the fields of materials simulations, with a special focus on data-based and data-intensive approaches and materials genomics is considered advantageous.

• The willingness to work with, and first experiences with productive Augmented Reality systems is beneficial.

• Personal initiative to solve complex problems is expected, the ability to work independently and in an interdisciplinary research team.

• Excellent communication and English language skills, as well as programming skills are required.

For questions regarding the position, please refer to https://tud.link/1pj3 or contact the Group Leader Material Informatics, Dr.-Ing. Adrian Ehrenhofer (adrian.ehrenhofer@tu-dresden.de).

Applications from women are particularly welcome. The same applies to people with disabilities. Please submit your comprehensive application including a letter of motivation, CV, and a letter of reference as one single pdf-file until March 11, 2021 (stamped arrival date of the university central mail service applies) preferably via the TU Dresden SecureMail Portal https://securemail.tu-dresden.de by sending it as a single pdf document to dcim@tu-dresden.de with the subject in the header: "Application PhD DCIM Materials Informatics, your_surname" or by mail to TU Dresden, Fakultät Maschinenwesen, Institut für Werkstoffwissenschaft, Professur für Materialwissenschaft und Nanotechnik, Herrn Prof. Dr. Gianaurelio Cuniberti, Helmholtzstr. 10, 01069 Dresden. Please submit copies only, as your application will not be returned to you. Expenses incurred in attending interviews cannot be reimbursed.

Reference to data protection: Your data protection rights, the purpose for which your data will be processed, as well as further information about data protection is available to you on the website: https://tu-dresden.de/karriere/datenschutzhinweis