With the founding of the **Else Kröner Fresenius Center for Digital Health (EKFZ)** at the **Faculty of Medicine Carl Gustav Carus, Technische Universität Dresden (TUD)** as one of Germany's universities of excellence, we develop a strategic focus at the interface of high tech and medicine. As part of the establishment of the center we announce the opening of the

Chair (W3) of Medical Software Engineering

to be filled at the **next possible date**.

This new chair will support the area of medical software engineering at the university and play a central role in the EKFZ, linking the Faculties of Medicine and Computer Science in research, education and transfer. Research at EKFZ aims at breakthroughs in improving collaboration between humans, patients and machines in smart hospitals in virtual, sensor-based and remote environments, or real environments equipped with care robotics. In particular, the professorship will contribute to deepening the link between medicine and informatics in the university. Potential fields of research include the model-driven analysis, design, test, maintenance and operation of safety-critical medical software systems in care and hospital, in particular sensor-based, robotic, or cyber-physical systems; the software frameworks to operate these systems and their reuse; the behavior modeling for analysis and verification of these systems.

Emphasis is placed on new methodological developments that are inspired by specific applications and have a practical impact on them, such as service and care robotics, immersive and collaborative systems for diagnosis, treatment, or smart hospital infrastructures.

In particular, we expect own contributions to one or more of the following topics:

- Software architectures for safety-critical medical systems, in particular exploiting new technologies in sensor-based environments,
- Software testing, in particular in safety-critical environments,
- Software engineering for cyber-physical systems, including embedded systems and SoCs,
- Software language engineering for domain-specific languages in cyber-physical systems.

The position offers an excellent environment within the EKFZ. This includes the possibility of interdisciplinary cooperation with computer scientists, physicians, care staff, cognitive neuroscientists, psychologists, soft robotic and microelectronic engineers, in particular, for sensor-based systems, as well as access to state-of-the-art technologies and big-data computing infrastructures. Further information can be found at https://digitalhealth.tu-dresden.de/. The position will offer the opportunity to work in two living labs in planning on Care Robotics and Smart Hospital Ward, in which future technologies for the care in hospitals and home will be developed.

You will comprehensively represent the field of medical software engineering in research and teaching. Close cooperation within the Faculty of Computer Science and in the School of Engineering Sciences is desired. In addition, the cooperation with the Center for Scalable Data Analytics and Artificial Intelligence (ScaDS.AI), the DFG Cluster of Excellence “Centre for Tactile Internet with Human-in-the-Loop” (CeTI), and the Center for Systems Biology Dresden (CSBD) are intended. We expect your active participation in teaching in German and English, in particular in the new study program “Medical Computer Science”. Your responsibilities also include participation in self-administration and in the academic committees of Technische Universität Dresden.

We are looking for an internationally recognized person in the abovementioned research fields with experience in one or more application areas relevant to the EKFZ. Special emphasis will be placed on excellent international publications as well as on the acquisition and management of research projects in the above-mentioned sub-fields. Excellent teaching capabilities are assumed, as well as a habilitation or habilitation-equivalent accomplishments. The applicant should have experience in the supervision of PhD students. Applicants must fulfil the employment qualification requirements of § 58 of the Act on the Autonomy of Institutions of Higher Education in the Free State of Saxony (SächsHSFG).

TU Dresden is committed to increasing the percentage of female scientists and encourages female applicants to apply. Applications from candidates with disabilities or those requiring additional support are very welcome. If you have any questions, please contact the head of the appointment committee, Prof. Jochen Hampe (Jochen.hampe@uniklinikum-dresden.de), the equal opportunities officer of the Faculty of Medicine, Dr. Valtink (0351 458-6124), or the representative of employees with disabilities, Ms. Vogelbusch (0351 458-3327). Technische Universität Dresden recognizes diversity as implicit and matter of course for a university of excellence. Hence, we welcome all applicants that dedicate themselves with their proficiency and personality for the benefit of all. Technische Universität Dresden is a family-friendly university and offers a dual career service. The Faculty of Medicine also provides active support for childcare options as well as help in finding adequate jobs in the region for the candidate's partner. The quality of life in Dresden is unique in Europe.

Please submit your application **by July 15th 2021** to the Dean of the Faculty of Medicine Carl Gustav Carus, Technische Universität Dresden, Prof. Dr. Heinz Reichmann, Fetscherstr. 74, 01307 Dresden. Further details on the documents to be submitted can be found on the homepage of the Faculty of Medicine at https://tu-dresden.de/med/mf/die-fakultaet/stellenangebote/hinweise?set_language=en

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?set_language=en