The new professorship to be established is intended to increase the competence of research, teaching and innovation in the field of digitalization of processes in the Division I Biology, Chemistry and Process Engineering at the KIT Department of Chemical and Process Engineering significantly and to form a basis for the development of new methods for the comprehensive system behavior. The digitalization includes the development of parametric methods and statistical methods of modeling along a process chain as well as the development of innovative model-free methods, such as machine learning. The focus is on research on the system behavior of processes in energy engineering, circular economy, particle technology or in other innovative research fields of process engineering for the production of sustainable products. By creating digital twins to map entire process chains, it is possible to exert a model-based influence on the process to ensure high product qualities with optimal utilization of resources and a high degree of automation. The data obtained through simulation and an intelligent sensor and actuator technology are the prerequisites for flexibilization and self-optimization of processes at the process control level.

The professorship is funded by the Ministry of Science, Research and Arts of the State of Baden-Württemberg as part of EuCor - The European Campus - and is a cooperative professorship with the Université de Haute-Alsace (UHA). An intensive cooperation between the described area of research and the IRIMAS Institute (Research Institute for Computer Science, Mathematics, Automation and Signal Technology) at the UHA is intended in order to combine the process engineering oriented developments at KIT with the control and automation engineering competences at UHA. The link to the Université de Haute-Alsace is planned within the framework of a part-time appointment.

Teaching obligations will include German and English courses for the bachelor’s and master’s programs of the KIT Department of Chemical and Process Engineering. Candidates are expected to give the compulsory lecture on "Automation and Control Engineering, System Dynamics" in the bachelor’ programs Chemical Engineering and Bio Engineering in combination with a profile subject offer to be developed. In the master's program, a compulsory elective course consisting of "Digitalization in Process Engineering" and a specialization subject should be established. In cooperation with UHA, a joint teaching offer is planned, which has to be integrated into the advanced stage of the bachelor's and/or master's program.

The professorship will be associated with membership in the collegial management board of KIT’s Institute of Mechanical Process Engineering and Mechanics (MVM).
Qualification: Applicants are expected to have vast experience in the areas mentioned and to have made excellent scientific achievements of high international visibility or an excellent record of corresponding activities in industry. In addition, leadership experience, the ability to work in a team, and the qualification for teaching in the areas mentioned is expected. Interdisciplinary collaboration with other KIT institutions and the UHA will be required and the candidate is expected to actively acquire public and private third-party funds.

Employment conditions as outlined in Article 47, LHG (Landeshochschulgesetz, Act of Baden-Württemberg on Universities and Colleges) in conjunction with Article 20 KITG (KIT-Gesetz) shall apply.


Contract duration: Permanent

Starting date: Earliest possible date

Application up to: 07.05.2021

Application: Applications, including CV, research and teaching concept, lists of publications and acquired projects funded by third parties, should be sent to Professor Dr. Andrea Robitzki, Head of Division I – Biology, Chemistry, and Process Engineering, Karlsruhe Institute of Technology (KIT), c/o Dean’s Office of the KIT Department of Chemical and Process Engineering, Kaiserstraße 12, D-76131 Karlsruhe, Germany, e-mail: ciw@kit.edu. If you have scientific questions, contact Professor Dr.-Ing. Hermann Nirschl, phone: +49 721 608-42404, e-mail: hermann.nirschl@kit.edu.

KIT is an equal opportunity employer. Women are especially encouraged to apply. Handicapped applicants having the same qualification will be preferred.

KIT is certified as a family-friendly university and offers part-time employment, leave for family reasons, a dual career service, and accompanying coaching to enhance the compatibility of job and family.

Processing of your personal data by Karlsruhe Institute of Technology (KIT) will be subject to this Privacy Policy.