W3 Professorship for Exascale Algorithm Engineering

Job description: The research area of the professorship are algorithms for high-performance computers. Special emphasis is put on algorithms that scale so efficiently that they work well even on the largest future machines with millions or billions of parallel activities or more than 10¹⁸ floating point operations per second (1 ExaFLOP). Your specific area of work is otherwise flexible. For example, you may work on numerical or non-numerical methods, basic algorithms and data structures, fault tolerance, simulation, optimization, data analysis, or machine learning. It is particularly desirable that you can build a bridge between theory, method research and practice (algorithm engineering), especially also in natural science and engineering applications (e.g. climate research, material sciences, etc.).

As a group leader at SCC, the professorship is integrated into the Helmholtz program "Engineering Digital Futures".

The professorship participates in teaching for the study programs of the KIT Department of Informatics via its additional membership in the Institute for Theoretical Informatics (ITI). The teaching load is two hours per week.

Qualification: Necessary prerequisites for employment are outstanding, internationally visible scientific achievements, for example in the context of an excellent doctorate and in subsequent scientific activities, as well as a didactic aptitude. In all other respects, the hiring requirements are based on § 47 LHG (Act of Baden-Württemberg on Universities and Colleges) in conjunction with § 20 KITG (KIT-Act) in the version applicable until the legal validity of the 2. KIT-Weiterentwicklungsgesetz (2nd KIT Further Development Act).

Institute: Steinbuch Centre for Computing (SCC) / KIT Department of Informatics / Division 2

Contract duration: Unlimited

The appointment is made in the leave of absence model in accordance with §15 (2) KITG (KIT-Act) in the version applicable until the legal validity of the 2. KIT-Weiterentwicklungsgesetz (2nd KIT Further Development Act).

Starting date: As soon as possible.

Application up to: 10.02.2022

Application: Applications with the required documents (curriculum vitae, degree certificates as well as a list of publications) and a perspective paper (maximum of three pages) on the planned research and teaching
activities and possible cooperation at KIT should be sent by e-mail, collated in a single PDF document, to dekanat@informatik.kit.edu by 10.02.2022. Information, including on the application requirements for the professorship, can be obtained from Prof. Bernhard Beckert, email: beckert@kit.edu.

KIT is an equal opportunity employer. Women are especially encouraged to apply. Recognized severely disabled persons will be preferred if they are equally qualified.

The processing of personal data by the Karlsruhe Institute of Technology (KIT) is carried out according to the Privacy Policy.

The KIT is certified as a family-friendly university and offers part-time employment, leaves of absence, a Dual Career Service and coaching to actively promote work-life-balance.