Scientific Position (f/m) in
“X-Ray Imaging: Instrumentation and Application”

Job description:
The Laboratory for Application of Synchrotron Radiation (LAS) at the Physics Faculty of KIT develops and applies most advanced X-ray techniques for materials research and life sciences. Therefore, it develops novel instrumentation at conventional lab sources, at the KIT synchrotron facility and at other European facilities. The portfolio of X-ray imaging methods focuses on in situ, operando, and in vivo investigations for materials and life sciences, with continuously extended instrumentation covering e.g. ultra-fast imaging, 3D tomography and laminography and X-ray microscopy techniques based on various contrast mechanisms. At the insertion device beamline IMAGE, two more experimental stations are in the final phase of construction and commissioning. With the brand-new unique MiQA station, one the world’s most flexible instruments for X-ray microscopy and optics characterization is available. A dedicated station for in situ laminography/tomography will be newly installed. The instruments are fully dedicated to in-house research in method development and scientific application, thus offering the unique opportunity for systematic studies and long-term research projects with synchrotron radiation.

As member of the imaging group, you will participate in the methodical and instrumental developments on the broad field of X-ray imaging, in particular at the IMAGE beamline and other experimental stations at the KIT synchrotron, but also in our collaborations with other European synchrotron radiation facilities. Furthermore, you will be involved in the planning and realization of experiments as well as in the data analysis for various application cases, extending the activities of the group also with your own research interests and collaboration network.

Qualification:
As a successful candidate, you are required to hold a PhD in physics or materials science (or equivalent) and to have prior research experience in imaging instrumentation and its application (radiography, tomography, etc.), preferably at synchrotrons or other large scale facilities. You should show strong interest in X-ray physics, X-ray optics, image analysis, and you should be open minded for the various fields of applications. Knowledge in programming (Python, C/C++, CUDA/OpenCL, or equivalent), the analysis of large data sets, statistics, simulations, signal processing or optimization will be considered assets. You will be expected to demonstrate an independent working attitude, develop your own research agenda and publish your excellent results in internationally renowned journals. The working language in our group is English, which you should speak and write confidently.
We offer you:

- the possibility to work on the hot topics in the field of X-ray imaging
- an opportunity to test and apply your ideas in vital fields of materials science
- excited research in an international environment including participation in experiments at European large scale facilities
- the possibility to publish your results in scientific journals and at international conferences
- the possibility to participate in education and training of students and young scientists

Salary: The remuneration occurs on the basis of the wage agreement of the civil service in TV-L.

Institute: Laboratory for Applications of Synchrotron Radiation (LAS) KIT

Contract duration: 3 years

Starting date: as soon as possible

Application up to: 08.07.2018

Contact person in line-management: Informal enquiries are also welcomed, and should be addressed to Prof. Dr. Tilo Baumbach (tilo.baumbach@kit.edu).

Application: Students nearing the completion of their degree are also encouraged to apply. Applications (CV, cover letter, certificates, reference letters) are to be send by email to: esra.aran@kit.edu.

KIT is an equal opportunity employer. Women are especially encouraged to apply. Applicants with disabilities will be preferentially considered if equally qualified.

Karlsruhe Institute of Technology
Personalservice

KIT is certified as a family-friendly university (familienfreundliche Hochschule) and offers part-time employment, leaves for family-related reasons, dual career options, and individual coaching for family-work balance.