

KSETA Doctoral Fellow

The „**Karlsruhe School of Elementary Particle and Astroparticle Physics: Science and Technology (KSETA)**“ is the Doctoral School of the *KIT Center Elementary Particle and Astroparticle Physics* (KCETA) at KIT (Germany). KSETA is now accepting applications for Doctoral researcher positions starting in **July 2025** or later. Our PhD program leads to a doctoral degree in physics, informatics, electrical engineering or chemical process engineering.

With more than 300 scientists, KCETA combines the research activities of Karlsruhe Institute of Technology (KIT) in theoretical and experimental elementary particle and astroparticle physics and is one of Europe's leading institutions in these fields. KSETA offers an inspiring interdisciplinary research environment involving the fields of cosmic ray physics, neutrino astronomy, dark matter, quantum field theory, experimental and theoretical collider physics, experimental and theoretical flavour physics, neutrino physics computational physics and accelerator research as well as the development of sophisticated analysis techniques and modern technologies such as superconducting quantum sensors for applications in particle and astroparticle physics, superconducting electronics for ultra-low noise detector readout, semiconductor analogue and digital electronics, modern detector technologies, gravitational waves technology, optical transmission technology and parallel signal processing on GPUs. We contribute to large-scale research projects such as Pierre Auger Observatory, Belle II, CMS, LHCb, FCC-ee, LUXE, Mu3e, ECHO, XENONnT, DELight, IceCube Neutrino Observatory, KATRIN and DARWIN, as well as the German Tier-1 grid computing center GridKa (see also www.kseta.kit.edu).

The doctoral school provides an attractive research environment, with subjects for doctoral theses at the intersections of experimental and theoretical particle and astroparticle physics as well as engineering, in particular in the areas of electronics, detector instrumentation, sensor technology, computer science, data management and data analysis. The school complements this with an individually tailored course program for both physicists and engineers.

A Master's degree in physics, electronic engineering, computer science or other related discipline qualifying for research at KSETA is required for the application. In addition, applicants should not have a PhD yet and are in their first four years after their Master's degree. Please register prior to application at <http://www.kseta.kit.edu/application.php>.

Further information about the application procedure, available research topics, subjects for doctoral dissertations and the KSETA principal investigators can be found at <http://www.kseta.kit.edu>.

The PhD positions at KSETA are awarded once per year. The next closing date for applications is **February 9, 2025**. Documents received after the deadline will only be considered in the following application period.

Funding will be provided through employment contracts.

KIT – The research university in the Helmholtz Association.

Karlsruhe Institute of Technology (KIT) is a public corporation pursuing the tasks of a State University of Baden-Wuerttemberg and of a national research center of the Helmholtz Association. The KIT mission combines the three strategic lines of activity of research, higher education, and innovation. With about 9,400 employees and 24,500 students, KIT is one of the big institutions of research and higher education in natural sciences and engineering in Europe.