INTERNSHIP OFFER

Karlsruhe, Germany, Germany

ON-SITE

INTERNSHIP HOST

Name of Company
Karlsruhe Institute of Technology Karlsruhe School of Elementary and Astoparticle Physics (KSETA)

Website
www.kseta.kit.edu

Address of Company
Karlsruhe
Germany

Number of Employees
9000

Business or Product
Higher Education and Research

STUDENT REQUIRED

General Discipline
Physics and Physical Sciences

Field of Study
General;Astrophysics;Experimental Physics/Applied Physics

Completed Years of Study
3

Language Required
English Excellent (C1, C2)

Required Qualifications and Skills
Computer ProgrammingBachelor degree in physics or a neighbouring discipline.

Student Status Requirements

Other Requirements/Information

INTERNSHIP OFFER

8 - 13 weeks

Latest Possible Start Date
01-Jul-2026

Within Months
May-2026 - Aug-2026

Company Closed WIthin
-

992 EUR per Month

Deductions Expected

Payment Method

EUR per Month

Arranged by

Estimated Cost of Living including Lodging
EUR / Month

Working Environment: Research and development

Working Hours / Week: 40.0

Software development for a Dark-Matter detector

Liquid xenon detectors have been leading the searches on dark matter particle candidates thanks to their excellent sensitivity, low background and energy resolution. The XLZD Observatory, a future 60-tonne of LXe TPC for astroparticle and rare event searches, has a baseline design for its TPC of 3 m wide and 3 m tall. At KIT, we work on developing the necessary technologies that are required to power the with a high voltage the electrodes in the detector, and the construction of the electrodes themselves.
The student will be involved in the the simulation of particles interaction in the MOTION detector, a 70 kg liquid xenon time projection chamber, utilising the CERN-developed Geant4 software. The student will be in charged of improving the C++ based program, conducting Monte Carlo simulations of radiactive background materials, either from the laboratory walls or the detector components, or muons traversing the liquid xenon volume.

ADDITIONAL INFORMATION

Deadline for Nomination -