

PhD student in the CHANCE project

Position: PhD student in the CHANCE project

Compensation: ≈1000 Euro/month

Application deadline: 30.12.2017

Anticipated STARTING DATE: February 2018.

Time period: 3.5 years, including 18-months stay at the University of Bristol.

Project description

Safe interim storage and final disposal of radioactive waste requires effective characterization and quality control of the waste. The CHANCE project (Characterization of conditioned nuclear waste for its safe disposal in Europe, <http://www.chance-h2020.eu/en>), aims to address the specific and complex issue of the characterization of conditioned radioactive waste by means of non-destructive analytical techniques and methodologies.

One of the techniques being developed is Muon Tomography (<http://www.chance-h2020.eu/en/Workpackages/WP4>). The specific objective of this activity is to develop mobile muon tomography instrumentation to address the as-yet unsolved problem of the non-destructive assay of large volume nuclear waste packages, such as large spent fuel casks and large concrete waste packages with heterogeneous waste.

Within an international team, the Ph.D. student will participate in construction and commissioning of the muon detection system, and the data taking and data analysis.

Benefits

- Work in an international team of experts.
- 18-months internship at the University of Bristol.

Key responsibilities include:

- participation in development and construction of the muon detection instrumentation,
- development of data acquisition and visualization software,
- performing measurements and data analysis.

Profile of a candidate

- degree in physics: Master of Science or equivalent
- strong interest in applied nuclear physics
- practical knowledge of C/C++ or other programming languages

Following skills will be an added advantage:

- Knowledge of experimental methods used in nuclear physics, including particle identification,
- Experience in the experimental data analysis,
- Programming in ROOT (<https://root.cern.ch>)
- Practical knowledge of Geant4 or other software for Monte Carlo modeling of particle interaction with matter.

Required documents

CV in English,

List of scientific achievements (in English),

Letter of motivation

Selection process

Studentship is awarded on a competitive basis, based on the interview with the best candidates.

Other information: The contract includes an 18-month internship at the University of Bristol.

For additional information, please contact: Dr Daniel Kikola, Faculty of Physics, Warsaw University of Technology, daniel.kikola@pw.edu.pl