



In the physics department of the Technical University of Darmstadt, as part of the LOEWE-Schwerpunkt "Nuclear Photonics", funded by the HMWK, the group of Prof. Dr. Markus Roth at the Institute for nuclear physics offers a position for a

Scientist/Research Assistance – 50%

starting at the 01.04.2019. The position initially runs for three years.

The Institute of Nuclear Physics currently comprises 15 working groups with about 280 people working in the fields of theoretical and experimental nuclear structure physics, nuclear astrophysics as well as laser and plasma physics. It is thus one of the largest of its kind in the world and enjoys a high international reputation.

Nuclear photonics is a novel field of research that uses modern high-power lasers to generate particle beams with unprecedented properties. These include polarized gamma rays and laser-controlled neutron beams, which provide a better insight into the structure of matter and promise great potential for technical and industrial applications. The "International Center for Nuclear Photonics" at the TU Darmstadt combines advanced laser technology with methods developed in the field of nuclear physics and will be a central contact point for researchers, students, international partner institutions and industrial partners.

The holder of the position shall first develop a concept for the development of a laser neutron source as well as the diagnosis necessary for the investigation of the physical parameters of the source. Subsequently, the position holder shall plan and implement experiments on laser systems in order to verify the design of the source with regard to its technical and physical feasibility. In addition, experiments in basic physics research will be carried out to combine hard X-rays with neutrons as an analytical method.

A university degree in physics, preferably in the experimental field, completed with the M.Sc. is expected, as well as initial experience and knowledge in the fields of plasma and/or neutron physics, particle acceleration and interaction of neutrons with matter. In addition, knowledge in the field of modelling physical processes in at least one of the mentioned fields is expected. The activity requires a high ability to work in a team and social competence as well as the willingness to take on teaching tasks for one's own scientific qualification.

Opportunity for further qualification (doctoral dissertation) is given. The fulfillment of the duties likewise enables the scientific qualifications of the candidate.

The Technische Universität Darmstadt intends to increase the number of female employees and encourages female candidates to apply. In case of equal qualifications applicants with a degree of disability of at least 50 or equal will be given preference. Wages and salaries are according to the collective agreements on salary scales, which apply to the Technische Universität Darmstadt (TV-TU Darmstadt).

Applications should be sent to the Managing Director of the Institute for Nuclear Physics, Professor Dr. Dr. h. c. N. Pietralla, together with the usual documents and the identification number, Schlossgartenstraße 9, 64289 Darmstadt.

Code No. 54

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