

PhD degree scholarship – experimental neutrino physics

Competition opened on: 20 June 2018

Application submission deadline: 30 August 2018

NCBJ is inviting students of physics to apply for 4 year-duration doctoral studies in Warsaw Neutrino Group in the T2K neutrino experiment. Partially scholarship will be covered by founding from OPUS-2016/21/B/ST2/01092 project financed by National Science Center (NCN). The student is expected to complete his/her PhD degree thesis in elementary particle experimental physics during that time.

Only persons who meet the requirements specified by NCN in the *Regulations of issuing study grants for young scientists* (in Polish), see <https://www.ncn.gov.pl/sites/default/files/pliki/regulamin-przyznawania-stypendiow.pdf> are eligible to apply.

The project is currently under accomplishment by Warsaw Neutrino Group (<http://neutrino.ncbj.gov.pl>) in cooperation with a group of theoreticians from the Wrocław University. Project will be realized within the T2K experiment (<http://t2k-experiment.org/t2k/>). T2K is an experimnt searching for neutrino oscillations and measuring cross-sections of neutrino interactions. This project will be focused on investigations of interactions with correlated nucleon pairs, which are still not well known. It is expected that candidate will work on analysis on neutrino or anti-neutrino data collected by the near detector of the T2K experiment and will contribute to work dedicated to upgrade of that detector (software and for volunteer hardware as well). The upgrade of the near detector is planned to be finalized in 2021. Currently the activity is concentrated on understanding new designed scintillator detector and test of its prototype. Student is expected to contribute to understanding of detection of low momentum particles in new designed detector. Candidate will work with international team of physicists; will present his/her status of work as well during local meeting in Poland as during collaboration meetings in Japan. It is possible to stay for training perion in Japan during the doctoral studies.

Requirements:

- Master degree in elementary particle physics, nuclear physics, astrophysics or computer physics (or related discipline);
- Understanding of neutrino physics and involvment in scientific work;
- International team work skills;
- Good command of spoken and written English which analble contributions to preparation of scientific publications, internal documents and collaboration in international project;
- Knowledge of Unix/Linux operating system, C++ programming language. Additionall strength will be knowlage of ROOT and Geant4 software packages;
- Good communication skills, autonomous responsibility.

Documents:

- CV with description of scientific background – list of publications, information about attendance at summer schools/projects, attened conferences (please insert consent for processing your personal data for the recruitment purposes: „Wyrażam zgodę na przetwarzanie moich danych osobowych dla potrzeb niezbędnych dla realizacji procesu rekrutacji (zgodnie z ustawą o ochronie danych osobowych z dnia 29.08.1997 r. Dz. U. Nr 133, Poz. 883”) ;
- Motivation letter with description of scientific interests;

- Exam records transcript;
- Master degree diploma copy;
- 2 recommendation letters (contact information to people preparing recommendation letters, their e-mail address, phone number and name of home institution);
- All other documents possibly relevant for candidate evaluation.

Scholarship:

The scholarship in the amount of 3000 PLN monthly will be paid for 12 months with expected extension to next 36 months (4 years of doctoral study in National Centre for Nuclear Research)

Contact person:

Candidates willing to apply are asked to send application to:

dr Joanna Zalipska

Narodowe Centrum Badań Jądrowych

ul. Hoża 69, 00-681 Warszawa

email: joanna.zalipska@ncbj.gov.pl

Send your application before 30 August 2018:

- by e-mail to: joanna.zalipska@ncbj.gov.pl
- or by surface mail to the address:
Joanna Zalipska
Narodowe Centrum Badań Jądrowych, BP3
ul. Hoża 69
00-681 Warszaw
- by person: in secretariat of High Energy Physics Division, BP3.

Selected applicants will be invited for interview by e-mail. Selected candidate is expected to apply for Doctoral Studies in National Centre for Nuclear Research and pass the entrance exam.

The competition will be concluded around October 1, 2018.