FACULTY OF NUCLEAR SCIENCES AND PHYSICAL ENGINEERING doc. Ing. Václav Čuba, Ph.D. DEAN



Page 1/2

Prague, October 23, 2025 Ref. No. 0019/10/2025/14932/Pav

Selection procedure of the Faculty of Nuclear and Physical Engineering, CTU in Prague for a doctoral student position in experimental hadron physics with expected start date 01 March 2026

Job description:

The position is established within a project 101220549 funded by the European Research Council (ERC) titled "Hunting three-body forces". The selected doctoral student will join the ALICE group at the CTU in Prague and will measure the femtoscopic correlation functions for three hadrons within the ALICE experiment at the LHC. The project aims at studying with high-precision the residual strong interaction of hyperons and nucleons in three-body systems. These measurements will impact our understanding of hyperonic matter with implications on the structure of neutron stars. The position will be based at CTU, Prague, with travels and possible short stays at CERN.

The main responsibilities of the student will be:

- * Involvement in the scientific research activities of research groups led by Dr. R.Del Grande;
- * Physics analysis of data from the ALICE experiment at the LHC, with a focus on measurements of three-body correlation functions with the femtoscopy technique;
- * Participation in the operation and support of the ALICE experiment infrastructure;
- * Fulfillment of scientific research and educational activity plans;
- * Publication of scientific research results;
- * Active participation in national and international conferences;
- * Participation in internships;
- * Transfer of the acquired knowledge to other staff members and students, in a form of e.g. workshops.

Required qualifications:

- * Completed M.Sc. degree program at a European university, or a foreign University recognized in Czech Republic by Act No. 111/1998 Coll., on Higher Education Institutions and on Amendments and Supplements to some other Acts (The Higher Education Act);
- * Experience in scientific research within a professional research team, preferably in the field of particle or nuclear physics;
- * Proficiency in English, both written and spoken;
- * Working knowledge of a modern programming language (e.g. C, C++, Python);
- * Creative approach to solving work tasks.

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Page 2/2

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Contract conditions and Salary:

- * 1.0 FTE fixed-term contract from March 2026 till December 2029;
- * Gross salary 45,000 CZK/month (approx. 1,850 EUR/month at current Exchange rate) plus PhD scholarship 13,000 CZK/month (approx. 530 EUR/month at current exchange rate);
- * Six weeks of vacation per year;
- * Travel funds to attend conferences and workshops.

Application:

To apply, please send an email to Dr. Raffaele Del Grande (raffaele.del.grande@fjfi.cvut.cz) with the following attachments:

- * Curriculum Vitae of the candidate;
- * Brief statement of research interests;
- * Copy of a M.Sc. degree diploma or certificates of studies, or its foreign equivalent with a translation; candidates must complete all M.Sc. degree requirements before starting their appointment;
- * Three letters of references;
- * Overview of published articles (if any) in impacted journals and other publications;
- * Overview of conference and workshop presentations (if any).

The application and all the listed above annexes must be signed by the applicant.

The deadline for sending the applications is November 25, 2025 at 24:00 CET.

The candidates will be interviewed on December 2 or December 3, 2025. For the interview, the candidate is asked to prepare a 15 minutes presentation to introduce his/her CV and research experience.

After the interview, the successful candidate will have to go through the official recruitment procedure to the Doctoral School at FNSPE CTU in Prague, in the field of study: Nuclear Engineering, specialisation Experimental Nuclear and Particle Physics. The Doctoral School program starts on March 1, 2026 with the application deadline on December 16, 2025: https://www.fjfi.cvut.cz/en/education/doctoral-study/admission-procedure

For more information, please contact Dr. Raffaele Del Grande <u>raffaele.del.grande@fjfi.cvut.cz</u>).

doc. Ing. Václav Čuba, Ph.D. Dean of the FNSPE - CTU in Prague

BŘEHOVÁ 7 115 19 PRAHA 1 CZECH REPUBLIC

WWW.FJFI.CVUT.CZ/EN