



PhD position in Experimental Physics

The Relativistic Attosecond Physics Laboratory (REAL, www.realumu.org), at the Department of Physics is looking for a PhD student in experimental physics for a project aimed at “Attosecond XUV pump – XUV probe spectroscopy”. Application deadline is January 15, 2022. The position will open February 1, 2022 (exact start date can be negotiated).

Department of Physics at Umeå University (<https://www.umu.se/en/departement-of-physics/>) conducts strong research in the areas of organic electronics, condensed matter physics, nanotechnology, photonics, space physics, and theoretical physics.

Project Description

You will work on the nonlinear attosecond physics project to time-resolve inner-shell electron dynamics with intense attosecond pulses. The project utilizes the sub-5 fs Light Wave Synthesizer optical parametric synthesizer [1] with its recent CEP-stabilized 100 TW upgrade, and a fully developed 24 m-long gas harmonic beam line for intense attosecond pulse generation [2], and electron and ion detectors to trace the nonlinear processes [3]. Furthermore, involvement in the laser operation is also expected.

[1] D. E. Rivas et al., Sci. Rep. Vol. 7, p. 5224 (2017)

[2] D. E. Rivas et al., Optica Vol. 5, p. 1283 (2018)

[3] B. Bergues et al., Optica Vol. 5, p. 237 (2018)

Qualifications

To fulfil the general entry requirements, the applicant must have qualifications equivalent to a completed degree at second-cycle level, or completed course requirements of at least 240 ECTS credits including at least 60 ECTS credits at second-cycle level. To fulfil the specific entry requirements to be admitted for studies at third-cycle level within the subject of experimental physics, the applicant is required to have completed courses within the field of physics comprising at least 120 credits. The requirements must be met at the time of admission to the doctoral program and do not have to be met at the time of application. The recruitment procedure will follow the Higher Education Ordinance (Högskoleförordningen). The candidate must be highly motivated and have the ability to work independently as well as a part of the research group. The applicant is required to be fluent in both oral and written English. Interest in experimental work and numerical simulations is a requirement. A master degree (or equivalent), experience in experimental laboratory research, including optics, electronics, LabVIEW, MATLAB, and lasers will be seen as an advantage.

Terms of employment

The position is a full-time employment that extends up to four years. If part-time teaching (max 20%) is offered, then the period of employment can be extended up to five years. The salary is fixed according to the established salary level for doctoral students.

Application

The application should include:

1. A cover letter with a brief description of qualifications, research interests, and motivation (<1 page).
2. Curriculum vitae (CV).
3. Verified copies of relevant degree certificate(s) translated into English or Swedish.
4. A list of university courses with grades. Note that for international applicants the grading system should be explained in brief.
5. A copy of master thesis and publications (if any).
6. Contact information of two-three reference persons.

Information

For more information contact Professor Laszlo Veisz, laszlo.veisz@umu.se

Applications must be submitted no later than January 15th 2022 via the e-recruitment system Varbi:

https://www.umu.se/en/work-with-us/open-positions/phd-position-in-experimental-physics_454104/

We look forward to receiving your application!