Associate Professor in Accelerator Physics with specialization in future colliders for high-energy physics

Uppsala University is a comprehensive research-intensive university with a strong international standing. Our mission is to pursue top-quality research and education and to interact constructively with society. Our most important assets are all the individuals whose curiosity and dedication make Uppsala University one of Sweden’s most exciting workplaces. Uppsala University has 44.000 students, 7.100 employees and a turnover of SEK 7 billion.

Uppsala University’s tenure track system grants associate professors the possibility to be assessed for promotion to the position as professor. The university provides support in various areas, such as scientific and educational development, leadership development as well as patent and innovation support.

The experimental collider physics group is one of the three pillars of the [division for high-energy physics](https://www.uu.se/en/department/physics-and-astronomy/research/high-energy-physics) (in addition to theoretical particle physics and astroparticle physics) at the Department of Physics and Astronomy. The experimental collider physics group explores elementary particles and fundamental forces in nature using data from the ATLAS experiment at CERN’s Large Hadron Collider (LHC). The main activities of the group include development of instrumentation, data collection, and physics analysis of the collision data; as well as the design and development of future colliders, namely the Future Circular Collider (FCC) at CERN.

**Description of subject area of the employment:**

Within the division for high-energy physics, the successful candidate will participate in the final design and construction of the next flagship collider at CERN, which may be the FCC-ee project with an energy range of 91-365 GeV, or a linear e+e- collider. In parallel, R&D in accelerator technology shall be pursued towards a future high-energy hadron or muon collider, in particular development of high-field superconducting magnets. Close cooperation with the FREIA laboratory at Uppsala University, CERN and industry is expected to conduct this research.

**Duties:**

* Teaching, research and administration. Teaching duties include course responsibility and course administration and supervision of second- and third-cycle students.
* Follow developments within the subject area and the development of society in general that is important for the work at the university.
* The position includes leadership of projects involving R&D in accelerator technology, as well as collaboration with both international research institutes and industry.

**Qualifications Required:**

* PhD in accelerator or experimental particle physics.
* Research Expertise and Teaching Expertise. It is necessary that the pedagogical skills, the research expertise and the professional skills are relevant to the content of the employment and the tasks that will be included in the employment.
* Applicants must have completed teacher training of relevance to operations at the University, comprising ten weeks, or have acquired the equivalent knowledge. If special circumstances apply, this training for teachers in higher education may be completed during the first two years of employment.
* Documented ability to teach in Swedish or English is a requirement unless special reasons prevail.
* Personal capabilities necessary to carry out fully the duties of the appointment.

**Assessment Criteria/Ranking of applicants that fulfil the above-mentioned qualifications required**

The ranking of eligible applicants will be based primarily on their **research** **and** **teaching expertise**, which will be given equal weights.

**Research Expertise** comprises research merits. In addition to academic merits, research merits from other activities, including technology development, may also be taken into account including research merits obtained outside the academy, which includes for example technology development and innovation ability. In assessing research expertise, research quality must be the prime consideration. The scope of research, primarily in regard to depth and breadth, must also be afforded consideration. In assessing research expertise special weight will be attached to research merits in accelerator physics and R&D in accelerator technology.

Furthermore, consideration must be given to the capacity to plan, initiate, lead, and develop research and education in the third cycle, the ability to acquire funding for research in competition, as well as the demonstrated capacity to interact with others both within academia and in the wider community.

**Teaching Expertise** comprises educational and teaching qualifications. This expertise can have been achieved outside the academy through supervision, internal training, mentoring programs, etc. In assessing teaching expertise, teaching quality must be the prime consideration. The scope of teaching experience, in terms of both breadth and depth, must also be afforded consideration. In assessing teaching expertise, special weight will be attached to merits in teaching physics at various levels.

Furthermore, consideration must be given to the capacity to plan, initiate, lead, and develop teaching and instruction, as well as the ability to connect research to teaching in respect to research in the subject at hand, subject didactics, as well as teaching and learning in higher education. The ability to interact concerning issues of teaching and learning in higher education with actors inside and outside the University is also included in teaching expertise.

**Collaboration Expertise** is important and will be afforded high consideration. Collaborative expertise is demonstrated by the ability and skill of planning, organizing and implementing interaction with the surrounding community. Examples of such collaboration include popular publications and industrial cooperation. The ability to translate knowledge sharing with the surrounding community into activities of importance to the education's development and quality is part of the collaboration expertise.

**Management Expertise**is important and will be afforded high consideration. Management expertise is demonstrated through the capacity to lead operations and personnel, make decisions, take responsibility, and motivate others, providing them with what is needed for the efficient achievement of common goals. The abilities to coordinate the group and help create a sense of involvement, participation, and enjoyment in work and to deal with conflicts constitute further examples of demonstrated expertise.

All merits must be documented in a manner that makes it possible to assess both quality and scope.

In filling this position the university aims to appoint the applicant who, following a qualitative holistic assessment of her/his competence and expertise, is judged to have the best potential to carry out and develop the relevant duties and to help advance operations.

**Further information**

In an overall assessment of the applicant’s qualifications, parental leave, part-time work relating to care of children, union assignments, military service, or the like are to be regarded as work experience.

[University appointment regulations](http://regler.uu.se/document/?contentId=92570)

[Faculty appointment regulations](https://www.uu.se/en/staff/organisation-and-governance/regulations/guidelines-for-the-appointment-and-promotion-of-teachers-and-for-appointment-of-docents-and-of-distinguished-university-teachers-at-the-faculty-of-science-and-technology-teknat-2023-69)

[Instructions for application](https://www.uu.se/download/18.521b26ff18c42ff37f011095/1702283849851/Instructions%20to%20applicants%20for%20teaching%20positions%20170509.pdf)

**For further information** about the position, please contact Prof. Arnaud Ferrari ([arnaud.ferrari@physics.uu.se](mailto:arnaud.ferrari@physics.uu.se))

**Type of position**: Permanent full-time position, a probationary period may be applied.

**Salary:** Individually negotiated salary.

**Number of positions**: 1

**Working hours**: 100%

**Town**: Uppsala

In the event of any disagreement between the English and the Swedish versions of this announcement, the Swedish version takes precedence.