



## Professor in Physics with focus on magnetism - Hiring in process/Finished, not possible to apply

### Lund University, Faculty of Science, Department of Physics

Lund University was founded in 1666 and is repeatedly ranked among the world's top 100 universities. The University has 40 000 students and 7 400 staff based in Lund, Helsingborg and Malmö. We are united in our efforts to understand, explain and improve our world and the human condition.

The Faculty of Science conducts research and education within Biology, Astronomy, Physics, Geosciences, Chemistry, Mathematics and Environmental Sciences. The Faculty is organized into nine departments, gathered in the northern campus area. The Faculty has approximately 1500 students, 330 PhD students and 700 employees.

The Department of Physics is with a staff of about 350 scientists and educators one of the largest departments within Lund University. There are seven research divisions and a number of research centra within the department. The research activities at the department cover a broad spectrum of modern physics.

[www.fysik.lu.se/english](http://www.fysik.lu.se/english)

The Division of Synchrotron Radiation Research (<http://www.sljus.lu.se>) at the Department of Physics is currently in a dynamic and expansive phase, and has in recent years grown to more than 40 employees. The main focus of the research is experimental studies of electronic, structural and chemical properties of materials. At the Division we use and develop a wide range of synchrotron- and lab-based techniques, such as X-ray photoelectron spectroscopy/imaging and X-ray diffraction/imaging. We also host one of Sweden's largest facilities for scanning probe microscopy.

Several large research facilities and environments relevant for research in magnetism already exist or are currently under construction in Lund and will be located in biking distance from Department of Physics:

The European Spallation Source (ESS) is a multi-disciplinary research facility currently under construction. Based on the world's most powerful neutron source the laboratory creates new opportunities for researchers in a variety of fields including fundamental physics. Neutron scattering/spectroscopy is a powerful tool to study microscopic magnetic properties of materials and provides insights complementary to laboratory and other scattering techniques. Information about the ESS can be found at <https://europeanspallationsource.se/>.

The MAX IV Laboratory (<https://www.maxiv.lu.se/>) is a national laboratory hosted by Lund University. It operates accelerators producing x-rays of very high intensity and quality. The storage rings have been designed using a novel multibend achromat scheme resulting in a very small emittance, which implies that MAX IV will be the world's brightest storage ring-based light source when opening in 2016. General user operation will start in 2017, and almost 1000 scientists per year are expected to come to the laboratory and use the x-rays for scientific research.

NanoLund (<http://www.nano.lu.se>) is the Centre for Nanoscience at Lund University. NanoLund is today Sweden's largest research environment for nanoscience, engaging approximately 270 PhD students and scientists in the Faculties of Engineering, of Science, and of Medicine, and operates Lund Nano Lab, a state-of-the-art cleanroom for the synthesis, processing and characterization of semiconductor nanostructures.

#### Description of responsibilities

The new professor, placed at the the Division of Synchrotron Radiation Research of the Department of Physics, should establish a new extensive experimental research activity within the area of experimental magnetism.

Emphasis should be on novel materials and collective phenomena and may include devices. The goal of the recruitment is to initiate new research on magnetism which can exploit the possibilities for neutron scattering/spectroscopy that the ESS will bring and which can take advantage of the possibilities for synchrotron radiation experiments at the MAX IV facility. Fabrication and synthesis of relevant materials and/or devices is highly relevant in this context. It will be important to develop collaborations with other researchers from the large and excellent materials research activities at Lund University, both at the Department of Physics and the Department of Chemistry. Start-up funding and general faculty funding will be made available to the candidate, but it is expected that he/she will very actively exploit opportunities for external funding from basic as well as applied research funding bodies, especially from Swedish, but also from European agencies.

The Department aims to foster a strong research group of international significance in the area; the group should contain both senior and junior faculty, and the new professor will have a central role in building up the group. It is expected that she/he initiates new teaching activities at both the undergraduate and graduate levels in the area of magnetism and materials science related to the new large-scale facilities in Lund. The professor is also expected to participate in the leadership and general development of the Division of Synchrotron Radiation Research and the Department of Physics beyond her/his own field of research. The major focus of the position is on research and postgraduate education, but the new professor is also expected to share the existing teaching duties of the Division and the Department at the Bachelor and Master levels in addition to the development of new teaching activities as above and to supervise degree project and research students.

#### **Qualifications and assessment criteria**

According to Chapter 4, Section 3 of the Higher Education Ordinance, a person who has demonstrated both research and teaching expertise shall be qualified for employment as a professor except in disciplines in the fine, applied or performing arts. Ordinance (2010:1064).

**Most important criteria for the present position will be scientific excellence** and future potential in the area of magnetism with a clear emphasis on novel materials and collective phenomena and on the experimental methods that will become available in Lund (see above), especially, but not exclusively, the neutron-based ones. The candidate must be able to establish a new scientifically excellent research group, to collaborate with other researchers and research groups at Lund University, and to attract external funding.

The successful candidate shall be a skilful teacher with experience in teaching at different levels. Experience in developing new courses and activities in the general area of magnetism, but also related to neutron and other scattering methods, is considered an advantage.

The candidate shall be a dynamic, creative, and open person and demonstrate a willingness to collaborate. She or he should be communicative and shall be scientifically independent. Further, he/she shall show social competence and be sensitive to the requirements of the duties included in the position. The candidate shall provide scientific and personnel leadership and be willing to engage him-/herself in Division and Department activities.

If the new professor does not speak Swedish, he/she is expected to learn the language within three years to a degree that he/she is able to communicate fluently with employees and students in Swedish, to teach students at the undergraduate level in Swedish and to communicate with the university's boards and working groups in Swedish.

**The assessment criteria for appointment as a professor shall be the degree of the expertise required as a qualification for employment.** As much attention shall be given to the assessment of teaching expertise as to the assessment of research or artistic expertise.

When making the appointment, consideration will be given to the Lund University Appointment Rules. The regulations require that the person has passed university pedagogical education or in an equivalent way acquired corresponding knowledge covering 5 weeks. In certain cases exceptions can be made from this requirement.

In the overall assessment we will also take into consideration any personal ability regarded as valuable in fulfilling the requirements of the position.

#### **Required content of the application**

The University has specified instructions for the application and its accompanying documents. These can be found here.

Lund University welcomes applicants with diverse backgrounds and experiences. We regard gender equality and

diversity as a strength and an asset. We kindly decline all sales and marketing contacts.

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|--------------------------------|---|
| <b>Type of employment</b>      | Permanent position  |
| <b>Contract type</b>           | Full time   |
| <b>First day of employment</b> | As soon as possible   |
| <b>Salary</b>                  | Monthly   |
| <b>Number of positions</b>     | 1   |
| <b>Working hours</b>           | 100%  |
| <b>City</b>                    | Lund  |
| <b>County</b>                  | Skåne län   |
| <b>Country</b>                 | Sweden  |
| <b>Reference number</b>        | PA2016/374  |
| <b>Contact</b>                 | Professor Joachim Schnadt (Deputy Head of Division), +46 46-222 39 25,<br>joachim.schnadt@sljus.lu.se<br>Professor Knut Deppert (Head of Department), +46 46-222 76 70, prefekt@fysik.lu.se<br>Recruitment Officer Helen Johansson, +46 46-222 36 09, helen.johansson@science.lu.se |
| <b>Union representative</b>    | OFR/S:Fackförbundet ST:s kansli, +46 46-222 93 62, st@st.lu.se<br>SACO:Saco-s-rådet vid Lunds univ, +46 46-222 93 64, kansli@saco-s.lu.se<br>SEKO: Seko Civil, +46 46-222 93 66, sekocivil@seko.lu.se   |
| <b>Published</b>               | 27.Apr.2016   |
| <b>Last application date</b>   | 15.Sep.2016 11:59 PM CET  |



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COOKIES