

The Faculty of Science and the Leiden Institute of Physics invite applications for

Assistant professor in Theoretical Quantum Matter, tenure track (1.0 fte)
Vacancy number 14885

The Leiden Institute of Physics (LION) is searching for a new faculty member in the area of Theoretical Quantum Matter Physics to be appointed within the Institute Lorentz for Theoretical Physics. We are particularly interested in candidates with a broad approach and interest in strongly correlated electron systems in general ranging from non-Fermi-liquids, flat bands, topological insulators, unconventional superconductors, quantum criticality and/or strange metals with multiple perspectives including non-equilibrium physics, entanglement and quantum information. The ideal candidate complements and connects with our existing research lines and will also naturally be able and eager to collaborate with our experimental quantum matter and optics groups in strongly correlated systems and van der Waals materials. The position opens at the assistant professor level, however, in exceptional cases, appointments at associate or full professor level may be considered. To promote gender diversity we specifically welcome applications from female scientists.

Selection criteria

- Ph.D. in physics or closely related area and research experience at the postdoctoral level
- A publication record that demonstrates the skills and interest of the applicant
- Excellent communications skills in English, both written and verbal.
- Commitment to teaching in an inspiring manner
- Willingness to contribute to the organization of the institute and to learn Dutch

Key responsibilities of the successful candidate

- Establishing an independent, internationally recognized research group in Theoretical Quantum Matter Physics and publications in leading scientific journals;
- Acquisition of external funds through research grants;
- Teaching at the undergraduate and graduate level in physics;
- Supervision of BSc and MSc students in their thesis work;
- Contribution to the inclusive atmosphere, management and organization of the institute.

Information tenure track

We offer a perfect start of the tenure track by providing an attractive startup package, state-of-the-art infrastructure, including high performance computing and support departments, and continuous development of your personal and professional skills through courses and coaching. A special mentoring program is offered with fellow Tenure Trackers in a peer group as well as with senior staff members in the department. Successful performance will lead to promotion to a tenured position as associate professor and upon continued growth to promotion to full professor.

Quantum Matter at the Leiden Institute of Physics

The Institute Lorentz has several dynamic active research efforts in the direction of quantum matter consisting of the groups of Carlo Beenakker (quantum mesoscopics, topological states of matter; quantum information); Vadim Cheianov (topological matter; non-equilibrium physics) and Koenraad Schalm (quantum criticality and strange metals; non-equilibrium physics). There are close connections with the groups of Vedran Dunjko, Evert van Nieuwenberg, and Jordi Tura on quantum information and computing, quantum devices and Advanced Quantum Algorithms. The experimental Quantum Matter and Optics groups at the Leiden Institute of Physics are well known for their long history of research in strongly correlated systems. Kaveh Lahabi (strongly correlated systems), Sense Jan van der Molen (van der Waals materials) and Semonti Bhattacharya (van der Waals materials) groups are the most closely related. Tjerk Oosterkamp and Bas Hensen (quantum limits and gravitational entanglement), and Dirk Bouwmeester, Wolfgang Loeffler and Michiel de Dood (quantum optics) study closely adjacent questions. All groups are embedded in the Leiden Institute of Physics, which features a broad research spectrum ranging from biological and soft matter to quantum matter and cosmology, as well as a long-standing tradition of excellence in physics research. The institute offers

access to state-of-the-art research facilities and fosters an international atmosphere with strong interactions among the various groups.

Research at our faculty

The Faculty of Science is a world-class faculty where staff and students work together in a dynamic international environment. It is a faculty where personal and academic development are top priorities. We are committed to curiosity driven fundamental research and interdisciplinary research; we aim at advancing science and addressing the major societal challenges of the future.

The research carried out at the Faculty of Science is very diverse, ranging from mathematics, information science, astronomy, physics, chemistry and bio-pharmaceutical sciences to biology and environmental sciences. The research activities are organised in eight institutes. These institutes offer eight bachelor's and twelve master's programmes. The faculty has grown strongly in recent years and now has more than 2,200 staff and almost 4,200 students. We are located at the heart of Leiden's Bio Science Park, one of Europe's biggest science parks, where university and business life come together. For more information, see www.universiteitleiden.nl/en/science and <https://www.universiteitleiden.nl/en/working-at>.

Terms and conditions

We offer a full-time, 6-year term position, with the possibility of a tenured position and promotion to associate and full professorship based on performance. Salary ranges from € 3.637,- to € 4.660,- gross per month at the assistant professor level (pay grade 11 in accordance with the Collective Labour Agreement for Dutch Universities).

Leiden University offers an attractive benefits package with additional holiday (8%) and end-of-year bonuses (8.3 %), training and career development and sabbatical leave. Our individual choices model offers additional benefits that can be chosen by you. Candidates from outside the Netherlands may be eligible for a substantial tax break.

Diversity

Leiden University is strongly committed to diversity within its community and especially welcomes applications from members of underrepresented groups. Gender balance is an explicit aim of our institute, and we therefore strongly encourage women to apply and will give preference to female candidates in case of equal qualifications. We aim to ensure that candidates experience an equitable selection process.

Information

Scientific enquiries can be made to Koenraad Schalm (kschalm@lorentz.leidenuniv.nl) and Carlo Beenakker (beenakker@lorentz.leidenuniv.nl). If you have any questions about the procedure, please contact Prof. Sense Jan van der Molen, telephone: 071- 527 5479, email: wd-lion@physics.leidenuniv.nl. Additional information on research and education at the Institute Lorentz and at the Leiden Institute of Physics can be found at <https://lorentz.leidenuniv.nl> and <https://www.universiteitleiden.nl/en/science/physics>.

Applications

To apply for this vacancy, please send an email with the following documents to Cher van der Woude, e-mail: wd-assist@physics.leidenuniv.nl quoting the vacancy number:

- A full CV including a list of publications, your teaching experience and a link to your Google Scholar page;
- pdf's or links to 3 key publications and your PhD thesis;
- A brief description of your research plan (max. 2 pages)
- A teaching statement (max. ½ page);
- Name and address of at least three persons that can be contacted for a reference

For full consideration, please apply no later than **June 5th**.