

Public Summary

The Leiden Institute of Physics (LION) is a research institute in the Faculty of Science of Leiden University. The mission of LION is to perform foundational and curiosity driven research in the domains of experimental and theoretical physics, and to provide physics education at the highest international standard. LION research covers a wide range of physics phenomena. With the advent of new hires, strong core groups have evolved in Quantum Physics, in Soft and Active (bio)Matter, and in Cosmology. The LION ambition is that these cores are impactful and visible, both in frontier research as well as through connections to society.

LION is well embedded in the Dutch research landscape, through partnerships in three NWO-funded 'Gravitation' programs; through links with the Dutch research institutes Nikhef and AMOLF; and through collaborations within the various institutes in the Leiden Science Faculty. Being part of such networks is a strategic goal, in view of the strong synergistic advantages, especially when it comes to large-scale cutting-edge projects and national funding schemes.

LION works at connecting its research to society at large, through training of students and PhD students, through finding economic valorization for its research, and by addressing the communication between science and society. This can be outreach, but also research into such communication, which we find a natural and fitting activity for a foundationally inclined research institute.

LION aims at fostering a stimulating and supportive research atmosphere for researchers to excel and PIs to pursue their independent scientific goals. We strive for a working environment in which efforts are valued, with sufficient technical and administrative support, where our researchers can find a good work-life balance. For all staff members, LION wants to provide a culture and an atmosphere of mutual support. Improving the gender balance continues to be a specific challenge and a goal. In addition, LION strives to be an inclusive community for all staff and students, in the belief that such a community is strong and agile.

For the coming years, LION aims are as follows:

In research, there are clear further opportunities in the field of quantum applications, through the Quantum Growth fund, where we are one of the five "research hubs". This provides possibilities to forge stronger connections with small and starting businesses. LION also sees opportunities in the area of soft, living and active matter. We aim at making this a visible and well-recognized research activity. LION intends to keep up its current strength in Cosmology, in close collaborations with Leiden Astronomy and to have a visible activity in Science Communication Research.

More generally, LION sees the necessity to diversify its funding income. More funding becomes available in thematic areas, often coupled to Key Enabling Technologies (KET). LION is actually well positioned to profit from this development, but it requires new collaborations. LION can be a valued partner in teams or consortia involving Technical Universities and other partners in the knowledge chain. LION will actively seek to become part of such networks, in particular in the (KET-)clusters Advanced Materials, Life Sciences Technologies, Nanotechnologies, Light Technologies, and Quantum Technologies. New staff openings after coming retirements (around 2025) can be used to support this direction.

LION is committed to keep working on a diverse and inclusive environment, for all its members (permanent (support) staff, postdocs, PhD students, and students). This will be reflected in the policy

for hiring new research staff, offering trainings of various kinds, and by embracing other initiatives to further these aims.

List of Appendices

Appendix A	LION Research Staff
Appendix B	Recommendations visiting committee 2016
Appendix C	Publications, theses, citations; number of research grants
Appendix D	Mandatory Tables not given in the main text
Appendix E	Case Studies