



Ansökan

2025-08-19

2025-07495	Leijnse, Martin	VR-EXCBT
Information om sökande Projektledare: Martin Leijnse Födelsedatum: 19790812 Kön: Man Medelsförvaltare: Lunds universitet Hemvist: Fysiska institutionen 107131 Dr-examen: 2009-12-18 Akademisk titel: Professor Arbetsgivare: Lunds universitet		
Information om ansökan Utlisningsnamn: Bidrag för planering av framtida excellenskluster inom banbrytande tekniker 2025 (Vetenskapsrådet) Bidragsform: Nätverksbidrag Sökt inriktning: Banbrytande tekniker Ämnesområde utlysning: NT, MH, HS, UV		
Projekttitel: Kvantavkänning, metrologi och kontroll Projektstart: 2025-10-01 Sökt beredningsgrupp: VR-EXCBT Klassificeringskod: 10304. Den kondenserade materiens fysik, 10302. Atom- och molekylfysik och optik, 21199. Annan teknik Nyckelord: Quantum technology, Quantum sensing, Societal impact of new technologies, High-precision measurements		
Medverkande Medverkande forskare: Igor Abrikosov Födelsedatum: 19651015 Kön: Man Land: Sverige Dr-examen: 1997-12-18 Akademisk titel: Professor Arbetsgivare: Linköpings universitet		
Medverkande forskare: Vaishali Badrish Adya Födelsedatum: 19900331 Kön: Kvinna Land: Sverige Dr-examen: 2018-04-27 Akademisk titel: Doktor Arbetsgivare: Kungliga Tekniska högskolan		
Medverkande forskare: Markus Hennrich Födelsedatum: 19720421 Kön: Man Land: Sverige Dr-examen: 2004-01-12 Akademisk titel: Docent Arbetsgivare: Stockholms universitet		
Medverkande forskare: Anne L'Huillier Födelsedatum: 19580816 Kön: Kvinna Land: Sverige Dr-examen: 1986-01-06 Akademisk titel: Professor Arbetsgivare: Lunds universitet		
Medverkande forskare: Aurelija Lukoseviciene Födelsedatum: 19850204 Kön: Kvinna Land: Sverige Dr-examen: 2021-10-12 Akademisk titel: Doktor Arbetsgivare: Lunds universitet		

Medverkande forskare: Witlef Wieczorek

Födelsedatum: 19790120

Kön: Man

Land: Sverige

Dr-examen: 2009-12-17

Akademisk titel: Professor

Arbetsgivare: Chalmers tekniska högskola

Projektinformation

Projekttitel (svenska)

Kvantavkänning, metrologi och kontroll

Projekttitel (engelska)

Quantum sensing, metrology and control

Abstract och populärvetenskaplig beskrivning

Abstract (engelska)

We will prepare a plan for a Cluster of Excellence on Quantum Sensing, Metrology, and Control (Q-SMaC) to coordinate, strengthen, and further develop the research activities in the field of quantum sensing in Sweden. Q-SMaC would take advantage of fundamental quantum mechanical properties, such as superposition, entanglement, and coherence, to perform measurements with unprecedented sensitivity, accuracy, and precision. Quantum sensing technologies are, thus, capable of measuring quantities such as time and frequency, electromagnetic fields, gravity, and acceleration, with an accuracy that exceeds that of any classical sensor. The planning of Q-SMaC will ensure fundamental discoveries and ground-breaking applications based on developing and exploiting quantum sensors in biological and medical systems, geology, materials design, and other areas.

The planning of Q-SMaC will be carried out by about 50 research groups and about 10 industrial and institutional partners across Sweden with complementary expertise in solid-state and microwave systems, material science and quantum theory, trapped ions and atomic gases, opto- and electromechanical systems and quantum optics and ultrafast light-matter systems. Q-SMaC will be planned around three key objectives of quantum sensing: fundamental physics, novel technologies, and real-world applications. Altogether, the vision of Q-SMaC is to make a significant technological and societal impact in Sweden based on quantum sensing technologies.

Populärvetenskaplig beskrivning (svenska)

Forskningen inom det tilltänkta klustret handlar om att förstå och använda de grundläggande egenskaperna hos tillvarons minsta byggstenar, vilka beskrivs av kvantfysiken, för att ta fram nya sensorer och mätinstrument som är mer precisa, snabbare och effektivare än dagens. Det finns redan idag flera exempel på tillämpningar baserade på dessa så kallade kvantsensorer, bland annat atomur, som används t.ex. inom GPS-navigering, och magnetometrar, som används t.ex. inom medicin för att mäta de små magnetfält som skapas av elektriska strömmar i hjärnan. Andra exempel på användningsområden för kvantsensorer är prospektering av mineraler och mätning av gravitationsvågor i astrofysik.

Den snabba utvecklingen av kvantteknologin, det forskningsområde där man konstruerar och kontrollerar system vars egenskaper bestäms av kvantfysiken, skapar möjligheter för helt nya typer av kvantsensorer. Detta öppnar i sin tur upp för nya tillämpningar inom t.ex. medicin, biologi, materialvetenskap, försvarsteknik och geologi. Sverige har idag flera internationellt framstående forskargrupper som arbetar med kvantsensorer. För att Sverige skall kunna vara en världsledande aktör inom kvantsensorer, är det viktigt att det finns ett välfungerande ekosystem som kan stödja forskning, innovation och utveckling. Det omfattar allt från stark grundforskning och avancerad infrastruktur i form av laboratorier och stödjande teknologi till väl utvecklade processer för att ta nya sensorkoncept från idé till prototyp och vidare till innovation och avknopningsföretag.

Nätverket som vi föreslår skall planera för ett kluster som skall utgöra ryggraden i ett sådant ekosystem. Vi kommer att samla alla viktiga aktörer i Sverige som arbetar med kvantsensorer – forskare, företag, infrastrukturer och organisationer – för att delta i planeringsarbetet. Formerna för arbetet kommer vara gemensamma workshopar och digitala möten i mindre grupper, baserade på deltagarnas specialistkompetens och intresse.

Beräknad projekttid

2025-10-01 - 2026-03-31

Planerad användning av forskningsinfrastruktur

Planerad användning av forskningsinfrastruktur

Ja

Forskningsinfrastruktur/er

Myfab - The Swedish Research Infrastructure for Micro and Nano Fabrication

NAISS - National Academic Infrastructure for Supercomputing in Sweden

Annan forskningsinfrastruktur

Lund Laser Centre (LLC)

Övriga ansökningar och bidrag

Är någon eller flera av punkterna aktuella för dig?

Ja

Motivering och redogörelse för relationen mellan de olika projekten och/eller ansökningarna (engelska)

The applicant has an ongoing project grant from the Swedish Research Council with a grant period that overlaps with the grant applied for here. Because this application concerns a planning grant for a cluster of excellence, it has no scientific overlap with the regular VR project grant (or any other grant of the applicant). Similar conditions hold for the participating researchers.

Planering för användning av bidraget**Planering för användning av bidraget (engelska)**

Se nästa sida för bilaga.

Q-SMaC – Quantum Sensing, Metrology, and Control

We plan a Cluster of Excellence, Q-SMaC, to develop and coordinate the spearhead activities of the Swedish quantum sensing ecosystem, ensuring fundamental discoveries and ground-breaking applications in biological and medical systems, geology, materials design, defense, and other areas. Q-SMaC will be formed by research groups and collaboration partners with complementary expertise in solid-state and microwave systems, material science and quantum theory, trapped ions and atomic gases, opto- and electromechanical systems, quantum optics and ultrafast light-matter systems, see Fig. 1. Planning the cluster around key objectives of quantum sensing, metrology, and control guarantees that Q-SMaC will make a significant technological and societal impact.

Research area description

Quantum sensing, metrology, and control take advantage of fundamental quantum mechanical properties, such as superposition, entanglement, and coherence, to perform measurements with unprecedented sensitivity, accuracy, and precision [1–3]. Quantum sensors, built from precisely controlled single or multiple quantum systems, are capable of measuring quantities such as time and frequency, electromagnetic fields, gravity, and acceleration, with an accuracy that exceeds that of any classical sensor.

Quantum sensing, metrology, and control systems have a wide range of applications across different sectors. *In fundamental physics*, they are used to study phenomena such as gravitational waves, quantum gravity, dark matter, and variations in physical constants. In *time keeping*, ultra-precise optical atomic clocks are essential for global positioning systems and other technologies that depend on precise timing. *Metrology* also benefits from novel quantum sensors that can detect single quanta of microwave and terahertz radiation. In *health care*, quantum imaging and advanced magnetic resonance techniques offer enhanced sensitivity and resolution, enabling early disease detection. Quantum compasses and inertial navigation systems that function independently of satellite signals can revolutionize *navigation*, providing greater precision and reliability. *Environmental monitoring* can benefit from high-sensitivity detection of pollutants and greenhouse gases, as well as improved tracking of climate change indicators. In *geology*, quantum technologies facilitate precise mineral exploration, underground mapping, and detection of oil and gas reserves. Finally, the *defense and security sector* benefits from improved radar capabilities and more sensitive electromagnetic or seismic signal detection.

Quantum sensing utilizes different types of physical platforms. *Superconducting devices* are used for the detection of electromagnetic radiation and magnetic fields, with applications in medical imaging, geophysics, and materials characterization [4–6]. *Trapped ions and neutral atoms* offer long coherence times and precise control, making them ideal for high-accuracy time and frequency measurements, leading to extremely precise optical clocks, as well as gravimeters and

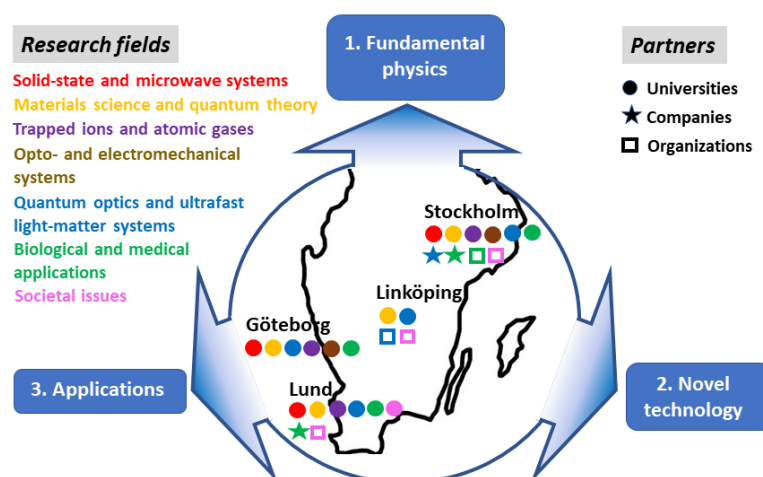


Figure 1: Overview of Q-SMaC objectives and participants.

microwave sensors [7, 8]. *Solid-state defects* provide a platform for nanoscale sensing of magnetic and electric fields, temperature, and pressure, with applications in health care and condensed matter physics [9]. Technologies based on *quantum states of light*, such as squeezed light and entangled photons, are used to improve laser interferometers, for gravitational wave detection, medical imaging, and distributed quantum measurements. *Mechanical oscillators* coupled to electromagnetic fields achieve quantum-limited measurements of macroscopic mechanical degrees of freedom [10–12]. This enables high-precision sensing of minute forces [13], accelerations [14], and the exploration of fundamental physics questions regarding the nature of dark matter and the quantization of gravity.

There is a global effort to develop quantum sensing technologies with major initiatives in the United States, China, the UK, Japan, and also in the EU through the Quantum Flagship initiative and the upcoming Quantum Act. In Sweden, quantum technologies, of which quantum sensing is a central part, have been identified as a strategic priority for groundbreaking innovation, see the [Swedish Quantum Agenda](#). Since 2018, the Wallenberg Centre for Quantum Technologies (WACQT) has supported quantum sensing through its Excellence Programme, with the applicant and participating researchers playing an active role in its development.

The planned Cluster of Excellence aims to build on this to create an internationally leading research and innovation environment in quantum sensing, metrology, and control. We will plan our cluster around three objectives (overview given in Fig. 1):

- 1. Fundamental physics.** This includes original concepts in quantum sensing, new research directions, for example, in quantum optics or attosecond physics, novel quantum materials and devices, and unconventional theoretical approaches.
- 2. Novel technology.** We will exploit the results obtained within the first objective to demonstrate new functionalities and build proof-of-concept devices and instruments which will out-perform their classical sensing counterparts. New quantum sensors could then be connected to quantum processors within a quantum network.
- 3. Applications.** Finally, we will identify powerful applications of quantum sensing, leveraging technology developed in the second objective, in key areas relevant for the modern society. This will enable the field to lift from labs to innovations and industry, and in this way make significant technological and societal impact.

Network description and mode of cooperation

The Swedish quantum sensing, metrology, and control ecosystem is diverse, spanning a wide range of topics and encompassing research groups, start-up companies, and organizations. Q-SMaC will be constructed to harness this topical and geographical diversity. In this planning step, we aim to include all quantum sensing activities in Sweden in a broad, inclusive bottom-up process that assemble academic, industrial, and organizational partners across Sweden, as suggested in Fig. 1.

The academic partners are more than 50 Swedish research groups active in quantum sensing, metrology, and control. The seven industrial partners, mainly start-ups and smaller companies, as well as the four public organizations, all have activities and interests in quantum sensing. To provide an overview of the partners, their key activities, and their contribution to the network, we have grouped them into topical or system-related fields, see Fig. 2. Since the planning of Q-SMaC covers the entire sensing ecosystem, geographically and topically, this grouping also provides an illustration of the strong areas of quantum sensing, metrology and control in Sweden. An important outcome of the planning project will then be to identify and prioritize the areas where Sweden can

become internationally leading, and to build a Cluster of Excellence around those areas.

Research field	Lund	Stockholm	Göteborg	Linköping
Solid-state and microwave systems	● M. Leijnse , V. Maisi, A. Burke, C. Thelander, P. Samuelsson (all LU).	● D. Haviland (KTH). ★ Intermodulation products	● S. Kubatkin, J. Splettstösser, S. Dash, T. Abad, A. Frisk Kockum, R. van Laer, W. Wieczorek (all CTH).	
Materials science and quantum theory	● V. Darakchieva, A. Tavakoli, C. Verdozzi (all LU).	● E. Bergholtz, S. Qvarfort, M. Zych (SU), E. Aurell (KTH).	● A. Frisk Kockum (CTH)	● I. Abrikosov , J. Ul-Hassan, N.T. Son, I.G. Ivanov, J.-Å. Larsson (all LiU)
Trapped ions and atomic gases	● S. M. Reimann (LU).	● M. Hennrich , P. Mognini (both SU).	● N. Engelsen (CTH)	
Opto- and electro-mechanical systems		● D. Haviland, V. Adya (both KTH), S. Qvarfort (SU)	● W. Wieczorek , N. Engelsen, J. Splettstösser, J. Monsel (all CTH).	
Quantum optics and ultrafast light-matter systems	● A. L'Huillier , D. Busto, A. Walther, L. Rippe, A. Kinos, M. Dahlström, T. Pullerits. (all LU). ★ Lund Adamant Quanta ■ RISE	● V. Adya , K. Gallo, A. Elshaari (all KTH), M. Bourennane, A. Predojevic (SU). ★ Quantum Scopes, quCertify, Svenska Laserfabriken AB. ■ RISE	● R. van Laer (CTH).	● F. Gao, G. B. Xavier, M.P. Jonsson (all LiU). ■ FOI
Biological and medical systems	● S. Kröll , T. Pullerits (both LU). ★ Deep light vision	● E. Aurell (KTH), M. Bourennane (SU), E. Carbonnier, D. Lundqvist (both KI). ★ Single photon quantum radiology, Quantum Scopes. ■ Quantum life science center.	● D. Winkler (CTH).	
Societal issues	● A. Lukoseviciene , A. Nordberg (both LU) ■ RISE	■ SIPRI		● H. Wiltse (LiU) ■ FOI

Figure 2: Table of partners and their location and research field, see Fig. 1. Names in boldface are coordinators of the field, one or two per field, together constituting the steering group.

The planning will be structured around the listed research fields. The coordinators of the fields, M. Leijnse, P. Samuelsson, I. Abrikosov, M. Hennrich, W. Wieczorek, A. L'Huillier, V. Adya, S. Kröll and A. Lukoseviciene, are indicated in boldface in Fig. 2. They will form a steering group, holding regular meetings and being responsible for the planning work. The steering group is also responsible for writing the final report at the end of the planning period. We emphasize that the steering group has a broad diversity in expertise, university affiliation, scientific seniority, and gender.

Several of the partners are also involved in a planning grant application to Vinnova, where the focus is on starting up, supporting, and scaling up companies in quantum sensing. Moreover, several partners are involved in other quantum technology-based planning applications, for example, on quantum computing and quantum communication, both to VR and Vinnova. We see this cross-involvement as a desirable manifestation of the strong links between the various activities within quantum technology in Sweden.

Forms of collaboration

The limited duration of the planning period, half a year, and the large amount and geographical and organizational diversity of collaboration partners, see Fig. 2, demand an efficient planning process. Our proposal, designed to meet this demands, is outlined below. The main planning activities will be two workshops, intra- as well as inter-research area meetings and steering group meetings. To provide a clear overview of the planning process, we have displayed the proposed activities on a timeline in Fig. 3.

The organization and purpose of the different activities are discussed individually:

Networking workshop. Early in November, in the beginning of planning process, we will gather all project partners and international experts in the field to a two-day workshop. By having short presentations by a majority of the participants, together with inspirational talks by guests and dedicated

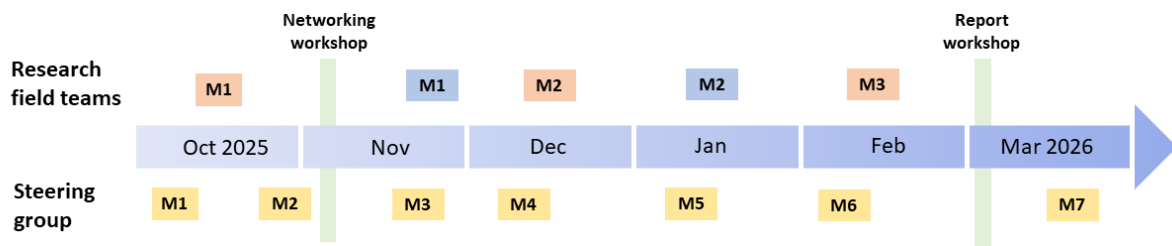


Figure 3: Timeline of the planning process, for the research fields and steering group. The colored boxes with an **M** denote meetings, intra- (orange) and inter- (blue) research field ones as well as for the steering group (yellow).

time for discussions and networking, we aim to strengthen existing collaborations, foster new cross-field interactions and initialize discussions on projects meeting the cluster objectives, see Fig. 1. The exact date will be decided as soon as the funding decision is announced.

Report workshop. Early in March, the steering group together with key individuals from the research fields will meet during one day to discuss the result of the planning process and structure and advance the work on the final report. Selected external collaborators and international experts will be invited to provide advice and input on the topics of the final report.

Intra-field meetings. The steering group member responsible for the respective research field, see Fig. 2, will gather the field partners and other relevant actors to three online meetings. The meetings will focus on discussing scientific projects within the research field as well as challenges and needs to meet the cluster objectives.

Inter-field meetings. Based on the existing collaborations and the results of the networking workshop, steering group members responsible for different research fields will organize two joint-field online meetings to discuss promising cross-field projects and collaborations.

Steering group meetings. The steering group will hold (approximately) seven meetings, predominantly online, to continuously monitor, lead and, if needed, modify the planning process. The steering group will also, as pointed out above, be responsible for organizing the networking and report workshop as well as the process of writing the final report. The applicant will lead the meetings.

Several of the groups involved in quantum activities in Sweden are currently using existing national infrastructures such as MyFab (clean rooms at LU, KTH, and CTH). Most groups are also affiliated with other research centres. We will invite representatives from these facilities to our workshops and research field meetings in order to devise a detailed plan for infrastructure utilisation and expansion, identifying gaps and proposing solutions to support the cluster.

Throughout the planning process, the foreseen societal impact of the cluster will be assessed and discussed. The research field of *Societal issues* contains experts on legal, philosophical, ethical, personal integrity, international relations and national security issues related to quantum technology and will form an integrated part of the planning work towards a vibrant, impactful Swedish quantum sensing, metrology and control excellence cluster.

References

- [1] C. L. Degen et al. *Rev. Mod. Phys.* **89**, (2017).
- [2] N. Aslam et al. *Nat. Rev. Phys.* **5**, (2023).
- [3] S. D. Bass et al. *Nat. Rev. Phys.* **6**, (2024).
- [4] I. Esmail Zadeh et al. *Appl. Phys. Lett.* **118**, (2021).
- [5] S. Danilin et al. *New J. Phys.* **26**, (2024).
- [6] W. Khan et al. *Nat. Commun.* **12**, (2021).
- [7] A. D. Ludlow et al. *Rev. Mod. Phys.* **87**, (2015).
- [8] J. Ye et al. *Phys. Rev. Lett.* **132**, (2024).
- [9] F. Wang et al. *PRX Quantum*, **6**, (2025).
- [10] M. Aspelmeyer et al. *Rev. Mod. Phys.* **86**, (2014).
- [11] S. Barzanjeh et al. *Nat. Phys.* **18**, (2022).
- [12] N. J. Engelsens et al. *Nat. Nanotechnol.* **19**, (2024).
- [13] A. K. Roos et al. *Phys. Rev. Appl.* **20**, (2023).
- [14] J. Prat-Camps et al. *Phys. Rev. Applied*, **8**, (2017).

Beskrivning av meriter

Meritbeskrivning (engelska)

The applicant and participating researchers have broad diversity in scientific expertise, university affiliation, scientific seniority, and gender. They are all leading researchers in their respective fields and have significant experience from leading major projects.

M. Leijnse (applicant) carries out theoretical research within quantum science and technology in solid state nanosystems. He is Deputy Director for the strategic research area NanoLund, a recipient of an ERC Synergy grant, a former member of the Young Academy of Sweden and was the main organizer of a Nobel Symposium on “Emerging quantum technologies” in 2022. **A. L’Huillier** leads the research on attosecond science at the Lund Laser Centre. She was awarded the Nobel Prize in Physics 2023, has received 3 ERC Advanced grants, is a WACQT PI and a member of the “high-level advisory board for the quantum European strategy”. **W. Wieczorek** heads the quantum technology laboratory at Chalmers and is an expert in mechanical systems used for quantum sensing. He is recipient of an ERC Consolidator grant and a Wallenberg Scholar. **V. Adya** leads a research group that uses squeezed light for quantum sensing and communication. She is a Göran Gustafsson prize awardee and a WACQT PI, and she previously led the quantum program of the Australian initiative for detection of gravitational waves. **I. A. Abrikosov** employs fundamental theory and machine learning tools in studies of condensed matter. He is the Head of the Theoretical Physics Division at Linköping University and a Wallenberg Scholar. **A. Lukoseviciene** specializes in intellectual property law and is a member of the Quantum law project. She is a co-coordinator of the “Interdisciplinary Research Working Group” in the Faculty of Law and of an upcoming Lund University Pufendorf Theme. **M. Hennrich** leads a research group focusing on trapped-ion quantum technologies. He is a WACQT PI and the recipient of an ERC starting grant and an ERC Synergy Grant.

Sökandes publikationer och andra forskningsoutputs (engelska)

Se nästa sida för bilaga.

The applicant's publications and other research outputs

1. Selection of research outputs

- [1] S. Wozny, **M. Leijnse**, *Current noise in quantum dot thermoelectric engines*, Physical Review B **111**, 075422 (2025).
- [2] A. Tsintzis, R. Seoane Souto, K. Flensberg, J. Danon, **M. Leijnse**, *Majorana qubits and nonabelian physics in quantum dot-based minimal Kitaev chains*, PRX Quantum **5**, 010323 (2024).
- [3] S. Matern, K. Macieszczak, S. Wozny, **M. Leijnse**, *Metastability and quantum coherence assisted sensing in interacting parallel quantum dots*, Physical Review B **107**, 125424 (2023).
- [4] R. Debbarma, A. Tsintzis, M. Aspegren, R. Seoane Souto, S. Lehmann, K. Dick, **M. Leijnse**, C. Thelander, *Josephson Junction 0- π Transition Induced by Orbital Hybridization in a Double Quantum Dot*, Physical Review Letters **131**, 256001(2023).
- [5] D. Majidi, M. Josefsson, M. Kumar, **M. Leijnse**, L. Samuelson, H. Courtois, C. B. Winkelmann, V. F. Maisi, *Quantum Confinement Suppressing Electronic Heat Flow below the Wiedemann–Franz Law*, Nano Letters **22**, 630 (2022).
- [6] M. Josefsson, **M. Leijnse**, *Double quantum-dot engine fueled by entanglement between electron spins*, Physical Review B **101**, 081408 (2020).
- [7] H. Potts, I.-J. Chen, A. Tsintzis, M. Nilsson, S. Lehmann, K. A. Dick, **M. Leijnse**, C. Thelander, *Electrical control of spins and giant g-factors in ring-like coupled quantum dots*, Nature Communications **10**, 5740 (2019).
- [8] M. Josefsson, A. Svilans, A. M. Burke, E. A. Hoffmann, S. Fahlvik, C. Thelander, **M. Leijnse**, H. Linke, *A quantum-dot heat engine operating close to the thermodynamic efficiency limits*, Nature Nanotechnology **13**, 920 (2018).
- [9] A. Svilans, M. Josefsson, A. M. Burke, S. Fahlvik, C. Thelander, H. Linke, **M. Leijnse**, *Thermoelectric characterization of the Kondo resonance in nanowire quantum dots*, Physical Review Letters **121**, 206801 (2018).
- [10] M. T. Deng, S. Vaitiekenas, E. B. Hansen, J. Danon, **M. Leijnse**, K. Flensberg, J. Nygård, P. Krogstrup, C. M. Marcus, *Majorana bound states in a coupled quantum-dot hybrid-nanowire system*, Science **354**, 1557 (2016).

2. Relevant peer-reviewed research outputs from 2017 – 2025

2.1 Original articles

- [1] R. A. Dourado, **M. Leijnse**, R. Seoane Souto, *Majorana sweet spots in three-site Kitaev chains*, Physical Review B **111**, 235409 (2025).
- [2] R. Seoane Souto, V. V. Baran, M. Nitsch, L. Maffi, J. Paaske, **M. Leijnse**, M. Burrello, *Majorana modes in quantum dots coupled via a floating superconducting island*, Phys. Rev. B **111**, 174501 (2025).
- [3] M. Valentini, R. Seoane Souto, M. Borovkov, P. Krogstrup, Y. Meir, **M. Leijnse**, J. Danon, G. Katsaros, *Subgap transport in superconductor-semiconductor hybrid islands: Weak and strong coupling regimes*, Physical Review Research **7**, 023022 (2025).
- [4] S. Wozny, **M. Leijnse**, *Current noise in quantum dot thermoelectric engines*, Physical Review B **111**, 075422 (2025).
- [5] M. Nitsch, L. Maffi, V. V. Baran, R. Seoane Souto, J. Paaske, **M. Leijnse**, M. Burrello, *The poor man's tetron*, accepted for publication in PRX Quantum – preprint on arXiv:2411.11981 (2025).
- [6] S. Matern, S. V. Moreira, P. Samuelsson, **M. Leijnse**, *Thermoelectric cooling of a finite reservoir coupled to a quantum dot*, Physical Review B **110**, 205423 (2024).
- [7] V. Svensson, **M. Leijnse**, *Quantum dot based Kitaev chains: Majorana quality measures and scaling with increasing chain length*, Phys. Rev. B **110**, 155436 (2024).

- [8] A. Kobińska, O. A. Awoga, **M. Leijnse**, T. Domański, P. Holmval, A. M. Black-Schaffer, *Topological superconductivity in Fibonacci quasicrystals*, Physical Review B **110**, 134508 (2024).
- [9] J. Benestad, A. Tsintzis, R. Seoane Souto, **M. Leijnse**, E. Van Nieuwenburg, J. Danon, *Machine-learned tuning of artificial Kitaev chains from tunneling spectroscopy measurements*, Physical Review B **110**, 075402 (2024).
- [10] K. Nestmann, **M. Leijnse**, M. R. Wegewijs, *RealTimeTransport: An open-source C++ library for quantum transport simulations in the strong coupling regime*, Journal of Chemical Physics **161**, 064108 (2024).
- [11] O. A. Awoga, I. Ioannidis, A. Mishra, **M. Leijnse**, M. Trif, T. Posske, *Controlling Majorana hybridization in magnetic chain-superconductor systems*, Physical Review Research **6**, 033154 (2024).
- [12] M. Nitsch, R. Seoane Souto, S. Matern, **M. Leijnse**, *Transport-based fusion that distinguishes between Majorana and Andreev bound states*, Physical Review B **109**, 165404 (2024).
- [13] M. Geier, R. Seoane Souto, J. Schulenburg, S. Asaad, **M. Leijnse**, K. Flensberg, *Fermion-parity qubit in a proximitized double quantum dot*, Physical Review Research **6**, 023281 (2024).
- [14] R. Seoane Souto, **M. Leijnse**, C. Schrade, M. Valentini, G. Katsaros, J. Danon, *Tuning the Josephson diode response with an ac current*, Physical Review Research **6**, L022002 (2024).
- [15] A. Tsintzis, R. Seoane Souto, K. Flensberg, J. Danon, **M. Leijnse**, *Majorana qubits and nonabelian physics in quantum dot-based minimal Kitaev chains*, PRX Quantum **5**, 010323 (2024).
- [16] D. Razmadze, R. Seoane Souto, E. C. T. O'Farrell, P. Krogstrup, **M. Leijnse**, C. M. Marcus, S. Vaitiekėnas, *Supercurrent transport through 1 e-periodic full-shell Coulomb islands*, Physical Review B **109**, L041302 (2024).
- [17] W. Samuelson, V. Svensson, **M. Leijnse**, *Minimal quantum dot based Kitaev chain with only local superconducting proximity effect*, Physical Review B **109**, 035415 (2024).
- [18] M. Valentini, O. Sagi, L. Baghumyan, T. Gijzel, J. Jung, S. Calcaterra, A. Ballabio, J. A. Servin, K. Aggarwal, M. Janik, T. Adletzberger, R. Seoane Souto, **M. Leijnse**, J. Danon, C. Schrade, E. Bakkers, D. Chrastina, G. Isella, G. Katsaros, *Parity-conserving Cooper-pair transport and ideal superconducting diode in planar germanium*, Nature Communications **15**, 169 (2024).
- [19] R. Debbarma, A. Tsintzis, M. Aspegren, R. Seoane Souto, S. Lehmann, K. Dick, **M. Leijnse**, C. Thelander, *Josephson Junction 0- π Transition Induced by Orbital Hybridization in a Double Quantum Dot*, Physical Review Letters **131**, 256001(2023).
- [20] R. Seoane Souto, A. Tsintzis, **M. Leijnse**, J. Danon, *Probing Majorana localization in minimal Kitaev chains through a quantum dot*, Physical Review Research **5**, 043182 (2023).
- [21] A. Maiani, K. Flensberg, **M. Leijnse**, C. Schrade, S. Vaitiekėnas, R. Seoane Souto, *Nonsinusoidal current-phase relations in semiconductor–superconductor–ferromagnetic insulator devices*, Physical Review B **107**, 245415 (2023).
- [22] O. A. Awoga, **M. Leijnse**, A. M. Black-Schaffer, J. Cayao, *Mitigating disorder-induced zero-energy states in weakly coupled superconductor-semiconductor hybrid systems*, Physical Review B **107**, 184519 (2023).
- [23] S. Matern, K. Macieszczak, S. Wozny, **M. Leijnse**, *Metastability and quantum coherence assisted sensing in interacting parallel quantum dots*, Physical Review B **107**, 125424 (2023).
- [24] J. Schulenburg, S. Krøjer, M. Burrello, **M. Leijnse**, K. Flensberg, *Detecting Majorana modes by readout of poisoning-induced parity flips*, Physical Review B **107**, L121401 (2023).

- [25] R. Seoane Souto, M. M. Wauters, K. Flensberg, **M. Leijnse**, M. Burrello, *Multiterminal transport spectroscopy of subgap states in Coulomb-blockaded superconductors*, Physical Review B **106**, 235425 (2022).
- [26] R. Seoane Souto, **M. Leijnse**, C. Schrade, *Josephson diode effect in supercurrent interferometers*, Physical Review Letters **129**, 267702 (2022).
- [27] A. Tsintzis, R. Seoane Souto, **M. Leijnse**, *Creating and detecting poor man's Majorana bound states in interacting quantum dots*, Physical Review B **106**, L201404 (2022).
- [28] M. Nitsch, R. Seoane Souto, **M. Leijnse**, *Interference and parity blockade in transport through a Majorana box*, Physical Review B **106**, L201305 (2022).
- [29] S. D. Escribano, A. Maiani, **M. Leijnse**, K. Flensberg, Y. Oreg, A. Levy Yeyati, E. Prada, R. Seoane Souto, *Semiconductor-ferromagnet-superconductor planar heterostructures for 1D topological superconductivity*, npj quantum materials **7**, 81 (2022).
- [30] R. Seoane Souto, **M. Leijnse**, *Fusion rules in a Majorana single-charge transistor*, SciPost Physics **12**, 161 (2022).
- [31] D. Majidi, M. Josefsson, M. Kumar, **M. Leijnse**, L. Samuelson, H. Courtois, C. B. Winkelmann, V. F. Maisi, *Quantum Confinement Suppressing Electronic Heat Flow below the Wiedemann–Franz Law*, Nano Letters **22**, 630 (2022).
- [32] S. Vaitiekėnas, R. Seoane Souto, Y. Liu, P. Krogstrup, K. Flensberg, **M. Leijnse**, C. M. Marcus, *Evidence for spin-polarized bound states in semiconductor–superconductor–ferromagnetic-insulator islands*, Physical Review B **105**, L041304 (2022).
- [33] R. Debbarma, H. Potts, C. Janlén Stenberg, A. Tsintzis, S. Lehmann, K. Dick, **M. Leijnse**, Claes Thelander, *Effects of Parity and Symmetry on the Aharonov–Bohm Phase of a Quantum Ring*, Nano Letters **22**, 334 (2022).
- [34] H. Potts, J. Josefi, I.-J. Chen, S. Lehmann, K. A. Dick, **M. Leijnse**, S. M. Reimann, J. Bengtsson, C. Thelander, *Symmetry-controlled singlet-triplet transition in a double-barrier quantum ring*, Physical Review B **104**, L081409 (2021).
- [35] J. Schulenburg, M. Burrello, **M. Leijnse**, K. Flensberg, *Multilevel effects in quantum dot based parity-to-charge conversion of Majorana box qubits*, Physical Review B **103**, 245407 (2021).
- [36] S. Wozny, **M. Leijnse**, S. I. Erlingsson, *Dynamic impurities in two-dimensional topological insulator-edge states*, Physical Review B **104**, 205418 (2021).
- [37] A. Maiani, R. Seoane Souto, **M. Leijnse**, K. Flensberg, *Topological superconductivity in semiconductor-superconductor-magnetic-insulator heterostructures*, Physical Review B **103**, 104508 (2021).
- [38] F. Viñas Boström, A. Tsintzis, M. Hell, **M. Leijnse**, *Band structure and end states in InAs/GaSb core-shell-shell nanowires*, Physical Review B **102**, 195434 (2020).
- [39] H. Potts, **M. Leijnse**, A. M. Burke, M. Nilsson, S. Lehmann, K. A. Dick, C. Thelander, *Selective tuning of spin-orbital Kondo contributions in parallel-coupled quantum dots*, Physical Review B **101**, 115429 (2020).
- [40] R. Seoane Souto, Karsten Flensberg, **M. Leijnse**, *Timescales for charge transfer based operations on Majorana systems*, Physical Review B **101**, 081407 (2020).
- [41] M. Josefsson, **M. Leijnse**, *Double quantum-dot engine fueled by entanglement between electron spins*, Physical Review B **101**, 081408 (2020).
- [42] H. Potts, I.-J. Chen, A. Tsintzis, M. Nilsson, S. Lehmann, K. A. Dick, **M. Leijnse**, C. Thelander, *Electrical control of spins and giant g-factors in ring-like coupled quantum dots*, Nature Communications **10**, 5740 (2019).
- [43] M. Josefsson, A. Svilans, H. Linke, M. Leijnse, *Optimal power and efficiency of single quantum dot heat engines: theory and experiment*, Physical Review B **99**, 235432 (2019).
- [44] Z.-Z. Li, **M. Leijnse**, *Quantum interference in transport through almost symmetric double quantum dots*, Physical Review B **99**, 125406 (2019).
- [45] C. Thelander, M. Nilsson, F. Viñas Boström, A. Burke, S. Lehmann, K. A. Dick, **M. Leijnse**, *Spectroscopy and level detuning of few-electron spin states in parallel InAs quantum dots*, Physical Review B **98**, 245305 (2018).

- [46] A. Svilans, M. Josefsson, A. M. Burke, S. Fahlvik, C. Thelander, H. Linke, **M. Leijnse**, *Thermoelectric characterization of the Kondo resonance in nanowire quantum dots*, Physical Review Letters **121**, 206801 (2018).
- [47] T. Li, W. A. Coish, M. Hell, K. Flensberg, **M. Leijnse**, *Four-Majorana qubit with charge readout: dynamics and decoherence*, Physical Review B **98**, 205403 (2018).
- [48] M. Nilsson, F. Viñas Boström, S. Lehmann, K. A. Dick, **M. Leijnse**, C. Thelander, *Tuning the two-electron hybridization and spin states in parallel-coupled InAs quantum dots*, Physical Review Letters **121**, 156802 (2018).
- [49] M. Hell, K. Flensberg, **M. Leijnse**, *Distinguishing Majorana bound states from localized Andreev bound states by interferometry*, Physical Review B **97**, 161401 (2018).
- [50] M. Josefsson, A. Svilans, A. M. Burke, E. A. Hoffmann, S. Fahlvik, C. Thelander, **M. Leijnse**, H. Linke, *A quantum-dot heat engine operating close to the thermodynamic efficiency limits*, Nature Nanotechnology **13**, 920 (2018).
- [51] R.J. Miao, H. L. Xu, M. Skripnik, L. J. Cui, K. Wang, K. G. L. Pedersen, **M. Leijnse**, F. Pauly, K. Wärnmark, E. Meyhofer, P. Reddy, H. Linke, *Influence of Quantum Interference on the Thermoelectric Properties of Molecular Junctions*, Nano Letters **18**, 5666 (2018).
- [52] A. Kringhøj, L. Casparis, M. Hell, T. W. Larsen, F. Kuemmeth, **M. Leijnse**, K. Flensberg, P. Krogstrup, J. Nygård, K. D. Petersson, C. M. Marcus, *Anharmonicity of a superconducting qubit with a few-mode Josephson junction*, Physical Review B **97**, 060508(R) (2018).
- [53] G. Kirsanskas, J. N. Pedersen, O. Karlström, **M. Leijnse**, A. Wacker, *QmeQ 1.0: An open-source Python package for calculations of transport through quantum dot devices*, Computer Physics Communications **221**, 317 (2017).
- [54] M. Hell, K. Flensberg, **M. Leijnse**, *Coupling and braiding Majorana bound states in networks defined in proximitized two-dimensional electron gases*, Physical Review B **96**, 035444 (2017).
- [55] F. Viñas, H. Q. Xu, **M. Leijnse**, *Extracting band structure characteristics of GaSb/InAs core-shell nanowires from thermoelectric properties*, Physical Review B **95**, 115420 (2017).
- [56] M. Hell, **M. Leijnse**, K. Flensberg, *Two-dimensional platform for networks of Majorana bound states*, Physical Review Letters **118**, 107701 (2017).
- [57] G. E. D. K. Prawiroatmodjo, **M. Leijnse**, F. Trier, Y. Z. Chen, D. V. Christensen, M. von Soosten, N. Pryds, T. S. Jespersen, *Transport and excitations in a negative-U quantum dot at the LaAlO₃/SrTiO₃ interface*, Nature Communications **8**, 395 (2017).

2.2 Conference contributions

2.3 Edited volumes

2.4 Research review articles

2.5 Books and book chapters

2.6 Artistic work

2.7 Other outputs

3. Relevant non peer-reviewed research outputs from 2017 – 2025

3.1 Artistic work

3.2 Publications including popular science books/presentations

- [1] **M. Leijnse**, *Verkligheten är inte så konstig – om barndomens fysikexperiment och kvantmekanik*, chapter in the book Ett kalejdoskop av kunskap, Santérus (2019).

3.3 Preprints

- [1] R. A. Dourado, J. Danon, **M. Leijnse**, R. Seoane Souto, *Measuring coherence factors of states in superconductors through local current*, arXiv:2507.20696 (under review for PRX Quantum).
- [2] M. Nitsch, V. Svensson, W. Samuelson, K. Nestmann, J. Danon, K. Flensberg, R. Seoane Souto, **M. Leijnse**, *Adiabatic nonabelian braiding of imperfect Majoranas*, arXiv:2507.11039 (under review for Physical Review Letters).

3.4 Other outputs

- [1] Together with the group of A. Wacker at Lund University, my group is developing the open-source software package QmeQ which calculates transport through quantum-dot-like nanosystems using various different master equation approaches. The fundamental methods are described in paper [53] in Section 2.1 above and the code can be found on github: <https://github.com/gedaskir/qmeg>.

Medverkande forskares publikationer och andra forskningsoutputs (engelska)

Se nästa sida för bilaga.

Selection of 10 relevant research outputs

2025 *Measuring the quantum state of photoelectrons*, H. Laurell, S. Luo, R. Weissenbilder, M. Ammitzböll, H. Söderberg, S. Ahmed, C. L. Petersson, V. Poulain, C. Guo, C. Dittel, D. Finkelstein-Shapiro, R. J. Squibb, R. Feifel, M. Gisselbrecht, C. L. Arnold, A. Buchleitner, E. Lindroth, A. Frisk Kockum **A. L'Huillier**, D. Busto, Nat. Phot. 19, 352 (2025), DOI: <https://doi.org/10.1038/s41566-024-01607-8>.

2025 *A multidimensional approach to quantum state tomography of photoelectron wavepackets*, H. Laurell, J. Banos-Gutiérrez **A. L'Huillier**, D. Busto, and D. Finkelstein-Shapiro, Sci Rep 15, 3937 (2025), DOI: <https://doi.org/10.1038/s41598-025-86701-9>.

2022 *Continuous-variable quantum state tomography of photoelectrons*, H. Laurell, D. Finkelstein-Shapiro, C. Dittel, C. Guo, R. Demjaha, M. Ammitzböll, R. Weissenbilder, L. Neorić, S. Luo, M. Gisselbrecht, C. L. Arnold, A. Buchleitner, T. Pullerits, **A. L'Huillier**, and D. Busto, Phys. Rev. Res. 4, 033220 (2022), DOI: <https://doi.org/10.1103/PhysRevResearch.4.033220>.

2022 *Probing electronic decoherence with high-resolution attosecond photoelectron interferometry*, D. Busto, H. Laurell, D. Finkelstein Shapiro, C. Alexandridi, M. Isinger, S. Nandi, R. J. Squibb, M. Turconi, S. Zhong, C. L. Arnold, R. Feifel, M. Gisselbrecht, P. Salières, T. Pullerits, F. Martín, L. Argenti, and **A. L'Huillier**, Eur. Phys. J. D 76, 112 (2022), DOI: <https://doi.org/10.1140/epjd/s10053-022-00438-y>.

2022 *How to optimize high-order harmonic generation in gases*, R. Weissenbilder, S. Carlström, L. Rego, C. Guo, C. M. Heyl, P. Smorenburg, E. Constant, C. L. Arnold, and **A. L'Huillier**, Nat. Rev. Phys. 4, 713 (2022), DOI: <https://doi.org/10.1038/s42254-022-00522-7>.

2021 *A high-repetition rate attosecond light source for time-resolved coincidence spectroscopy*, S. Mikaelsson, J. Vogelsang, C. Guo, I. Sytceвич, A.-L. Viotti, F. Langer, Y.-C. Cheng, S. Nandi, W. Jin, A. Olofsson, R. Weissenbilder, J. Mauritsson, **A. L'Huillier**, M. Gisselbrecht and C. L. Arnold, Nanophotonics 10, 117 (2021), DOI: <https://doi.org/10.1515/nanoph-2020-0424>.

2020 *Attosecond electron–spin dynamics in Xe 4d photoionization*, S. Zhong, J. Vinbladh, D. Busto, R. J. Squibb, M. Isinger, L. Neorić, H. Laurell, R. Weissenbilder, C. L. Arnold, R. Feifel, J. M. Dahlström, G. Wendin, M. Gisselbrecht, E. Lindroth, and **A. L'Huillier**, Nat. Comm. 11, 5042 (2020), DOI: <https://doi.org/10.1038/s41467-020-18847-1>.

2020 *Controlling photoionization using attosecond time-slit interferences*, Y.-C. Cheng, S. Mikaelsson, S. Nandi, L. Rämisch, C. Guo, S. Carlström, A. Harth, J. Vogelsang, M. Miranda, C. L. Arnold, **A. L'Huillier**, and M. Gisselbrecht, PNAS 117, 10727 (2020), DOI: <https://doi.org/10.1073/pnas.192113811>.

2019 *Spatiotemporal coupling of attosecond pulses*, H. Wikmark, C. Guo, J. Vogelsang, P.W. Smorenburg, H. Coudert-Alteirac, J. Lahl, J. Peschel, P. Rudawski, H. Dacasa, S. Carlström, S. Maclot, M. B. Gaarde, P. Johnsson, C. L. Arnold and **A. L'Huillier**, PNAS 116, 4779 (2019), DOI: <https://doi.org/10.1073/pnas.1817626116>.

2017 *Photoionization in the time and frequency domain*, M. Isinger, R.J. Squibb, D. Busto, S. Zhong, A. Harth, D. Kroon, S. Nandi, C. L. Arnold, M. Miranda, J.M. Dahlström, E. Lindroth, R. Feifel, M. Gisselbrecht, and **A. L'Huillier**, Science 358, 893 (2017), DOI: <https://doi.org/10.1126/science.aao7043>.

Selection of 10 relevant research outputs

2025 *Membrane phononic crystals for high-Qm mechanical defect modes at MHz frequencies in piezoelectric aluminum nitride*, Anastasiia Ciers, Laurentius Radit Nindito, Alexander Jung, Hannes Pfeifer, Armin Dadgar, Andre Strittmatter, and **Witlef Wieczorek**, Appl. Phys. Lett. 126, 253503 (2025), DOI: <https://doi.org/10.1063/5.0262362>.

2024 *Nanomechanical crystalline AlN resonators with high quality factors for quantum optoelectromechanics*, Anastasiia Ciers, Alexander Jung, Joachim Ciers, Laurentius Radit Nindito, Hannes Pfeifer, Armin Dadgar, Andre Strittmatter, and **Witlef Wieczorek**, Advanced Materials 36, 2403155 (2024), DOI: <https://doi.org/10.1002/adma.202403155>.

2023 *High-Q magnetic levitation and control of superconducting microspheres at millikelvin temperatures*, Joachim Hofer, Rudolf Gross, Gerard Higgins, Hans Huebl, Oliver F. Kieler, Reinhold Kleiner, Dieter Koelle, Philip Schmidt, Joshua A. Slater, Michael Trupke, Kevin Uhl, Thomas Weimann, **Witlef Wieczorek**, and Markus Aspelmeyer, Phys. Rev. Lett. 131, 043603 (2023), DOI: <https://doi.org/10.1103/PhysRevLett.131.043603>.

2023 *Localization and interaction of interlayer excitons in MoSe₂/WSe₂ heterobilayers*, Hanlin Fang, Qiaoling Lin, Yi Zhang, Joshua Thompson, Sanshui Xiao, Zhipei Sun, Ermin Malic, Saroj Dash, and **Witlef Wieczorek**, Nature Communications 14, 6910 (2023), DOI: <https://doi.org/10.1038/s41467-023-42710-8>.

2023 *Integrated microcavity optomechanics with a suspended photonic crystal mirror above a distributed Bragg reflector*, Sushanth Kini Manjeshwar, Anastasiia Ciers, Juliette Monsel, Hannes Pfeifer, Cindy Peralle, Shu Min Wang, Philippe Tassin, and **Witlef Wieczorek**, Optics Express 31, 30212 (2023), DOI: <https://doi.org/10.1364/OE.496447>.

2023 *Superconducting microsphere magnetically levitated in an anharmonic potential with integrated magnetic readout*, Martí Gutierrez Latorre, Gerard Higgins, Achintya Paradkar, Thilo Bauch, and **Witlef Wieczorek**, Phys. Rev. Applied 19, 054047 (2023), DOI: <https://doi.org/10.1103/PhysRevApplied.19.054047>.

2020 *Stationary optomechanical entanglement between a mechanical oscillator and its measurement apparatus*, C. Gut, K. Winkler, J. Hoelscher-Obermaier, S. G. Hofer, R. Moghadas Nia, N. Walk, A. Steffens, J. Eisert, **W. Wieczorek**, J. A. Slater, M. Aspelmeyer, and K. Hammerer, Phys. Rev. Research 2, 033244 (2020), DOI: <https://doi.org/10.1103/PhysRevResearch.2.033244>.

2017 *Ultrasensitive Inertial and Force Sensors with Diamagnetically Levitated Magnets*, J. Prat-Camps, C. Teo, C. C. Rusconi, **W. Wieczorek**, and O. Romero-Isart, Phys. Rev. Applied 8, 034002 (2017), DOI: <https://doi.org/10.1103/PhysRevApplied.8.034002>.

2015 *Optimal State Estimation for Cavity Optomechanical Systems*, **W. Wieczorek**, S. G. Hofer, J. Hoelscher-Obermaier, R. Riedinger, K. Hammerer, and M. Aspelmeyer, Phys. Rev. Lett. 114, 223601 (2015), DOI: <https://doi.org/10.1103/PhysRevLett.114.223601>.

2011 *Useful Multiparticle Entanglement and Sub-Shot-Noise Sensitivity in Experimental Phase Estimation*, R. Krischek, C. Schwemmer, **W. Wieczorek**, Weinfurter, P. Hyllus, L. Pezze, and A. Smerzi, Phys. Rev. Lett. 107, 080504 (2011), DOI: <https://doi.org/10.1103/PhysRevLett.107.080504>.

Selection of 10 relevant research outputs

2025 *Squeezing at the Normal-Mode Splitting Frequency of a Nonlinear Coupled Cavity*, Jonas Junker, Jiayi Qin, **Vaishali B. Adya** and Nutsinee Kijbunchoo and Sheon S.Y Chua, and Terry G.McRae, and Bram J. J.Slagmolen, and David E.McClelland, Phys. Rev. Lett,134, 243603, DOI: doi.org/10.1103/PhysRevLett.134.243603.

2024 *Amplified squeezed states: analyzing loss and phase noise*, Kwan, K M and Yap, M J and Qin, J and Gould, D W and Chua, S S Y and Junker, J and **Adya, V B** and McRae, T G and Slagmolen, B J J and McClelland, D E, Class. Quantum Grav. 41 215005, DOI: doi.org/10.1088/1361-6382/ad7cbb.

2024 *Quantum Enhanced Balanced Heterodyne Readout for Differential Interferometry*, Gould, Daniel W. and **Adya, Vaishali B.** and Chua, Sheon S. Y. and Junker, Jonas and Wilken, Dennis and McRae, Terry G. and Slagmolen, Bram J. J. and Yap, Min Jet and Ward, Robert L. and Heurs, Michèle and McClelland, David E., Phys. Rev. Lett,133, 063602, DOI: doi.org/10.1103/PhysRevLett.133.063602.

2022 *Nondegenerate internal squeezing: An all-optical, loss-resistant quantum technique for gravitational wave detection*, Gardner, James W. and Yap, Min Jet and **Adya, Vaishali B.** and Chua, Sheon and Slagmolen, Bram J. J. and McClelland, David E., Phys. Rev.D, 106, L041101, DOI: doi.org/10.1103/PhysRevD.106.L041101.

2021 *Optimal quantum noise cancellation with an entangled witness channel*, Daniel W. Gould, Min Jet Yap, **Vaishali B. Adya**, Bram J. J. Slagmolen, Robert L. Ward, and David E. McClelland, Phys. Rev. Res., 3, 043079, DOI: doi.org/10.1103/PhysRevResearch.3.043079.

2021 *Quantum enhanced kHz gravitational wave detector with internal squeezing*, **V B Adya**, M J Yap, D Töyrä, T G McRae, P A Altin, L K Sarre, M Meijerink, N Kijbunchoo, B J J Slagmolen, R L Ward, Class. Quantum Grav. 37 07LT02, DOI: doi.org/10.1088/1361-6382/ab7615.

2021 *Environmental noise in advanced LIGO detectors*, P Nguyen, R M S Schofield, A Effler, C Austin, **V Adya**, M Ball, et.al., Class. Quantum Grav. 38 145001, DOI: doi.org/10.1088/1361-6382/ac011a.

2020 *Practical test mass and suspension configuration for a cryogenic kilohertz gravitational wave detector*, Johannes Eichholz, N A Holland, **Vaishali B. Adya**, J V Van Heijningen, R L Ward, B J J Slagmolen, D E McClelland, D J Ottaway, Phys. Rev. D 102, 122003, DOI: doi.org/10.1103/PhysRevD.102.122003.

2020 *Neutron Star Extreme Matter Observatory: A kilohertz-band gravitational-wave detector in the global network*, K. Ackley, **V B Adya**, P. Agrawal, P. Altin, G. Ashton, M. Bailes, et.al., Publications of the Astronomical Society of Australia,2020;37:e047, DOI: doi.org/10.1017/pasa.2020.47.

2018 *Identification and mitigation of narrow spectral artifacts that degrade searches for persistent gravitational waves in the first two observing runs of Advanced LIGO*, PB Covas, A Effler, E Goetz, PM Meyers, A Neunzert, M Oliver, BL Pearlstone, VJ Roma, RMS Schofield, **V B Adya**, P Astone, S Biscoveanu,et.al., Phys. Rev. D,97, 082002, DOI: doi.org/10.1103/PhysRevD.97.082002.

Selection of 10 relevant research outputs

2025 *Surfactant-induced hole concentration enhancement for highly efficient perovskite light-emitting diodes*, J. Qin, J. Zhang, X. Liu Yu Wang, H. Wang, U. Singh, Y. Wang, H. Wang, T. Hu, Y. Zhan, Y. Tang, B. Hu, C. Bach, C. Deibel, W.-X. Ni, S. I. Simak, **I. A. Abrikosov**, M. Fahlman and F. Gao, *Nature Materials* 24, 778 (2025), DOI: <https://doi.org/10.1038/s41563-025-02123-y>.

2024 *Temperature dependence of the AB lines and optical properties of the carbon–antisite-vacancy pair in 4H-SiC*, O. Bulancea-Lindvall, J. Davidsson, I. G. Ivanov, A. Gali, V. Ivády, R. Armiento, and **I. A. Abrikosov**, *Phys. Rev. Appl.* 22, 034056 (2024), DOI: <https://doi.org/10.1103/PhysRevApplied.22.034056>.

2024 *Na in Diamond: High Spin Defects Revealed by the ADAQ High-Throughput Computational Database*, J. Davidsson, W. Stenlund, A. S. Parackal, R. Armiento, and **I. A. Abrikosov**, *Npj Comp. Mater.* 10, 109 (2024), DOI: <https://doi.org/10.1038/s41524-024-01292-9>.

2024 *Bright and stable near-infrared lead-free perovskite light-emitting diodes*, F. Yuan, G. Folpini, T. Liu, U. Singh, A. Treglia, J. Wei Melvin Lim, J. Klarbring, S. I. Simak, **I. A. Abrikosov**, T. Chien Sum, A. Petrozza, and F. Gao, *Nature Photonics* 18, 170 (2024), DOI: <https://doi.org/10.1038/s41566-023-01351-5>.

2023 *Remarkable Thermochromism in the Double Perovskite $\text{Cs}_2\text{NaFeCl}_6$* , F. Ji, J. Klarbring, B. Zhang, F. Wang, L. Wang, X. Miao, W. Ning, M. Zhang, X. Cai, B. Bakht, M. Magnuson, X. Ren, L. Sun, M. Fahlman, I. A. Buyanova, W. M. Chen, S. I. Simak, **I. A. Abrikosov**, and F. Gao, *Adv. Opt. Mater.* 2301102 (2023), DOI: <https://doi.org/10.1002/adom.202301102>.

2022 *Materials synthesis at terapascal static pressures*, L. Dubrovinsky, S. Khandarkhaeva, T. Fedotenko, D. Laniel, M. Bykov, C. Giacobbe, E. Lawrence Bright, P. Sedmak, S. Chariton, V. Prakapenka, A. V. Ponomareva, E. A. Smirnova, M. P. Belov, F. Tasnádi, N. Shulumba, F. Trybel, **I. A. Abrikosov**, N. Dubrovinskaia, *Nature* 605, 274 (2022), DOI: <https://doi.org/10.1038/s41586-022-04550-2>.

2021 *High-pressure synthesis of Dirac materials: layered van der Waals bonded BeN_4 polymorph*, M. Bykov, T. Fedotenko, S. Chariton, D. Laniel, K. Glazyrin, M. Hanfland, J. S. Smith, V. B. Prakapenka, M. F. Mahmood, A. F. Goncharov, A. V. Ponomareva, F. Tasnádi, A. I. Abrikosov, T. Bin Masood, I. Hotz, A. N. Rudenko, M. I. Katsnelson, N. Dubrovinskaia, L. Dubrovinsky, and **I. A. Abrikosov**, *Phys. Rev. Lett.* 126, 175501 (2021), DOI: <https://doi.org/10.1103/PhysRevLett.126.175501>.

2021 *Adaq: Automatic workflows for magneto-optical properties of point defects in semiconductors*, J. Davidsson, V. Ivády, R. Armiento, and **I. A. Abrikosov**, *Comput. Phys. Commun.* 269, 108091 (2021), DOI: <https://doi.org/10.1016/j.cpc.2021.108091>.

2019 *High-pressure synthesis of ultraincompressible hard rhenium nitride pernitride $\text{Re}_2(\text{N}_2)(\text{N})_2$ stable at ambient conditions*, M. Bykov, S. Chariton, H. Fei, T. Fedotenko, G. Aprilis, A. V. Ponomareva, F. Tasnádi, **I. A. Abrikosov**, B. Merle, P. Feldner, S. Vogel, W. Schnick, V. B. Prakapenka, E. Greenberg, M. Hanfland, A. Pakhomova, H.-P. Liermann, T. Katsura, N. Dubrovinskaia, L. Dubrovinsky, *Nature Commun.* 10, 2994 (2019), DOI: <https://doi.org/10.1038/s41467-019-10995-3>.

2015 *The most incompressible metal osmium at static pressures above 750 GPa*, L. Dubrovinsky, N. Dubrovinskaia, E. Bykova, M. Bykov, V. Prakapenka, C. Prescher, K. Glazyrin, H.-P. Liermann, M. Hanfland, M. Ekholm, Q. Feng, L. V. Pourovskii, M. I. Katsnelson, J. M. Wills, and **I. A. Abrikosov**, *Nature* 525, 226 (2015), DOI: <https://doi.org/10.1038/nature14681>.

Selection of 10 relevant research outputs

2025 *The Goldilocks Zone of Governing Technology: Leveraging Uncertainty for Responsible Quantum Practices*, M. Meckel, P. Hacker, L. Steinacker, **A. Lukoseviciene**, S. R. Soekadar, J. Slosser, G.-M. Pöhlmann, *Quantum Economics and Finance* 2 (2025), DOI: <https://doi.org/10.1177/29767032251363962>.

2025 *Regulatory Conversations in Quantum Computing: Insights into early patterns and trends in academic discourse on regulating the Quantum Revolution*, **A. Lukoseviciene**, *Law, Innovation and Technology* 17, 241 (2025), DOI: <https://doi.org/10.1080/17579961.2025.2469350>.

2024 *Protection of platform authors in the context of the EU DSM Directive: The invisible “Gig Authorship”?*, **A. Lukoseviciene**, in Buchheim, Kraetzig, Mendelsohn, Steinrötter (eds.), *Plattformen – Grundlagen und Neuordnung des Rechts digitaler Plattformen. (Platforms - exploring the elements and foundations of a new legal framework)*, *Nomos* (2024), DOI: <https://dx.doi.org/10.2139/ssrn.4562844>.

2021 *Authors and Creative Users. Addressing the Conceptual Challenges of Digital Creativity to EU Copyright Law from the Perspective of Author*, **A. Lukoseviciene**, Media Tryck (2021) – PhD thesis.

2021 *The Scientific Authorship and Copyright Law in Big Science User Facilities: the Case of the ESS*, **A. Lukoseviciene**, in Ulf Maunsbach, Axel Hilling, Olof Hallonsten, *Big Science and the Law*, ExTutto (2021).

2017 *Copyright and Originality: does the unified EU originality standard correspond to the digital reality in Wikipedia?*, **A. Lukoseviciene**, *Masaryk University Journal of Law and Technology*, 11 (2017), DOI: <https://doi.org/10.5817/MUJLT2017-2-2>.

Selection of 10 relevant research outputs

2023 *Single-shot measurements of phonon number states using the Autler-Townes effect*, M. Mallweger, M. H. de Oliveira, R. Thomm, H. Parke, N. Kuk, G. Higgins, R. Bachelard, C. J. Villas-Boas, and **M. Hennrich**, Physical Review Letters 131, 223603 (2023), DOI: <https://doi.org/10.1103/PhysRevLett.131.223603>

2021 *Micromotion minimization using Ramsey interferometry*, G. Higgins, S. Salim, C. Zhang, H. Parke, F. Pokorny, and **M. Hennrich**, New Journal of Physics 23, 123028 (2021), DOI: <https://doi.org/10.1088/1367-2630/ac3db6>

2020 *Submicrosecond entangling gate between trapped ions via Rydberg interaction* C. Zhang, F. Pokorny, W. Li, G. Higgins, A. Pöschl, I. Lesanovsky, and **M. Hennrich**, Nature 580, 345 (2020), DOI: <https://doi.org/10.1038/s41586-020-2152-9>

2020 *Tracking the dynamics of an ideal quantum measurement*, F. Pokorny, C. Zhang, G. Higgins, A. Cabello, M. Kleinmann, and **M. Hennrich**, Physical Review Letters 124, 080401 (2020), DOI: <https://doi.org/10.1103/PhysRevLett.124.080401>

2019 *Highly-polarizable Rydberg ion in a Paul trap*, G. Higgins, F. Pokorny, C. Zhang, and **M. Hennrich**, Physical Review Letters 123, 153602 (2019), DOI: <https://doi.org/10.1103/PhysRevLett.123.153602>

2013 *Atom-atom entanglement by single-photon detection*, L. Slodicka, G. Hétet, N. Röck, P. Schindler, **M. Hennrich**, and R. Blatt, Physical Review Letters 110, 083603 (2013), DOI: <https://doi.org/10.1103/PhysRevLett.110.083603>

2011 *14-qubit entanglement: creation and coherence*, T. Monz, P. Schindler, J. T. Barreiro, M. Chwalla, D. Nigg, W. A. Coish, M. Harlander, W. Hänsel, **M. Hennrich**, and R. Blatt, Physical Review Letters 106, 130506 (2011), DOI: <https://doi.org/10.1103/PhysRevLett.106.130506>

2009 *Quantum interference from remotely trapped ions*, S. Gerber, D. Rotter, **M. Hennrich**, R. Blatt, F. Rohde, C. Schuck, M. Almendros, R. Gehr, F. Dubin, and J. Eschner, New Journal of Physics 11, 013032 (2009), DOI: <https://doi.org/10.1088/1367-2630/11/1/013032>.

2004 *Quantum beat of two single photons*, T. Legero, T. Wilk, **M. Hennrich**, G. Rempe, and A. Kuhn, Physical Review Letters 93, 070503 (2004), DOI: <https://doi.org/10.1103/PhysRevLett.93.070503>

2002 *Deterministic single-photon source for distributed quantum networking*, A. Kuhn, **M. Hennrich**, and G. Rempe, Physical Review Letters 89, 067901 (2002), DOI: <https://doi.org/10.1103/PhysRevLett.89.067901>

Motivering av sökt budget

Motivering av sökt budget (engelska)

In line with the statement in the call text, we foresee two types of costs for the planning period, workshops, including housing and travelling, and salaries for the members of the steering group, who will spend time working actively on the planning.

Below we give an estimate of the two types of costs.

Workshop: Based on the number of partners listed in the table in fig. 2 in the application text, we foresee about 60 participants in the two-day networking workshop. In addition, for the one-day report writing workshop we foresee about 20 participants. A few international guests will be invited. From this we make the following cost estimates:

- Hotel/venue for both workshops: 400 kkr.
- Travel and housing for invited guests: 100 kkr.

We will ask participants in the networking workshop to pay for their own travel, to keep down costs and administration. For the report workshop, we might reimburse travel costs if needed.

Steering group travel/hotel: The steering group might have one or two on-site meetings depending on how the planning process unfolds. The group will also travel for the report workshop.

- Travel/hotel/venue: 100 kkr.

Salaries: The applicant and the participating researchers, together with S. Kröll and P. Samuelsson, form the steering group. This group will spend time working actively on the project, foreseen to be somewhere between 5-15% of full time during six months.

- Total salary cost: 600 kkr.

The cost estimates include overhead costs and salary surcharge (LKP) at the different universities.

CV

CV - Martin Leijnse

Projektledare: Martin Leijnse
Födelsedatum: 19790812
Kön: Man
Land: Sverige

Dr-examen: 2009-12-18
Akademisk titel: Professor
Arbetsgivare: Lunds universitet

Doktorsexamen			
Examen	Organisation	Avhandlingens titel (originalspråk)	Handledare
10304. Den kondenserade materiens fysik, 2009-12-18	RWTH Aachen	Transport spectroscopy and control of molecular quantum dots	Maarten Wegewijs

Utbildning

Forskarutbildning			
Examen	Organisation	Avhandlingens titel	Namn på handledare
Doktorsexamen, 10304. Den kondenserade materiens fysik, 2009-12-18	RWTH Aachen, Tyskland	Transport spectroscopy and control of molecular quantum dots	Maarten Wegewijs

Utbildning på grund- och avancerad nivå	
År	Examen
2007	10304. Den kondenserade materiens fysik, Civilingenjörsexamen/motsv, Chalmers tekniska högskola, Sverige
2006	10304. Den kondenserade materiens fysik, Civilingenjörsexamen/motsv, TU Delft, Nederländerna

Arbetsliv

Anställningar			
Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare
mars 2021 - Nuvarande	Professor, Tillsviareanställning	75	Lunds universitet, Sverige, Fysiska institutionen 107131
mars 2016 - april 2021	Lektor, Tillsviareanställning	85	Lunds universitet, Sverige, Fysiska institutionen 107131
april 2014 - februari 2016	Biträdande Lektor (Assistant Prof. with tenure track), Tidsbegränsad anställning	80	Lunds universitet, Sverige, Fysiska institutionen 107131
april 2013 - mars 2014	Forskare, Tidsbegränsad anställning	80	Lunds universitet, Sverige, Fysiska institutionen 107131
november 2009 - mars 2013	Postdoktor, Tidsbegränsad anställning	95	Københavns Universitet, Danmark, Science Fakultet
september 2006 - oktober 2009	Doktorand, Tidsbegränsad anställning	80	RWTH Aachen

Postdoktorvistelser		
Period	Organisation	Ämne
november 2009 - mars 2013	Københavns Universitet, Danmark, Science Fakultet	10304. Den kondenserade materiens fysik

Uppehåll i forskningen	
Period	Beskrivning
2019-01-01 - 2019-02-28	Parental leave 2 months
2016-02-01 - 2016-04-30	Parental leave 3 months

Meriter och utmärkelser

Docentur		
År	Ämne	Organisation
2014	103. Fysik	Lunds universitet, Sverige, Fysiska institutionen 107131

Handledda personer			
Handledda personer	Lärosäte (handledd person)	Roll	Antal
Doktorand	Lunds universitet, Sverige, Fysiska institutionen 107131	Huvudhandledare	8
Doktorand	Lunds universitet, Sverige, Fysiska institutionen 107131	Bihandledare	7
Postdok	Lunds universitet, Sverige, Fysiska institutionen 107131	Huvudhandledare	10
Student	Lunds universitet, Sverige, Fysiska institutionen 107131	Huvudhandledare	15
Gäststudent	Lunds universitet, Sverige, Fysiska institutionen 107131	Huvudhandledare	3

Bidrag erhållna i konkurrens					
Period	Finansiär	Projektledare	Din roll	Delbelopp (kr)	Totalt belopp (kr)
2025 - 2029	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Martin Leijnse	Projektledare	0	4 470 000
2020 - 2026	Europeiska Unionen (EU),	Karsten Flensberg	Medverkande	17 000 000	110 000 000
2020 - 2024	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Martin Leijnse	Projektledare	0	3 280 000
2020 - 2021	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Martin Leijnse	Projektledare	0	1 880 000
2018 - 2020	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Martin Leijnse	Projektledare	0	1 941 225
2018 - 2023	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Kimberly Dick Thelander	Medverkande	3 000 000	34 000 000
2017 - 2020	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Martin Leijnse	Projektledare	0	3 100 000
2017 - 2022	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Heiner Linke	Medverkande	3 000 000	47 500 000
2015 - 2017	The Crafoord Foundation, Sverige - Annan forskningsfinansiär	Martin Leijnse	Projektledare	0	1 200 000

Period	Finansiär	Projektledare	Din roll	Delbelopp (kr)	Totalt belopp (kr)
2013 - 2016	Vetenskapsrådet, Sverige - Övriga statliga medel	Martin Leijnse	Projektledare	0	4 000 000

Priser och utmärkelser				
År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2021	Sverige	Stipend from the Ruth och Nils-Erik Stenbäck Foundation (worth 300 000 SEK)	The Ruth och Nils-Erik Stenbäck Foundation	
2019	Sverige	ERC Synergy Grant	The European Research Council	One of four PIs awarded an ERC Synergy Grant worth in total 110 000 000 SEK
2016	Sverige	Elected member of The Young Academy of Sweden	The Young Academy of Sweden	One of approximately 35 members (all scientific disciplines in all Sweden) of the Young Academy of Sweden, elected for the period 2016 - 2021.
2009	Tyskland	PhD degree awarded with distinction	RWTH Aachen	
2006	Nederländerna	MSc degree awarded with honors	Delft University of Technology	

Andra meriter		
Period	Typ av merit	Beskrivning
2024 - 2025	Deputy Director NanoLund	Deputy Director of the Strategic Research Area NanoLund, which has over 400 participating researchers.
2020 - 2025	Awards given to my students	Main supervisor to PhD student Martin Josefsson who was awarded the Oseen medal in 2021 for best PhD thesis in physics in Sweden (100 000 SEK personal prize). Main supervisor for postdocs Konstantin Nestmann and Kosala Herath who were both awarded MSCA postdoctoral fellowships to join my group in Lund (Konstantin Nestmann also scored second highest among all applicants in Physics in all of Europe in 2022). Main supervisor for PhD student Florinda Viñas Boström who was awarded a three-year Swedish Research Council international postdoc grant in 2021 and then a MSCA postdoctoral fellowship in 2025. Main advisor for postdoc Rubén Seoane Souto who was twice (2020 and 2022) and Florinda Viñas Boström and Ferdinand Omlor who were once each (2024 and 2025) awarded the NanoLund Junior Scientists Ideas Award (100 000 SEK research grant).
2024 - 2025	Deputy Head of Division	Deputy head of Solid State Physics Division which has approximately 80 employees (including 20 professors and associate professors).
2016 - 2025	Faculty member, Center for Quantum Devices, University of Copenhagen	Member of the faculty group of the Center for Quantum Devices at University of Copenhagen, a DNRF Center of Excellence. I am the only faculty member who is not employed at University of Copenhagen.

Period	Typ av merit	Beskrivning
2016 - 2025	Member of boards and other commissions of trust	Board member of RIFO (riksdagsledamöter och forskare) - an organization bringing together Swedish members of Parliament and researchers. Member of the research committee of Nordita (Sweden's representative for condensed matter physics). Elected member of the Young Academy of Sweden. Lund representative on the governing board of the Baltic Theory Consortium. Member of scientific advisory board for the kick-off workshop of the Wallenberg Initiative in Networks and Quantum Information (WINQ).
2010 - 2025	Experience from review	Proposal reviewer for the European Research Council (ERC Starting Grant and ERC Synergy Grant), the Emmy Noether Programme of the German Research Foundation, the Netherlands Organisation for Scientific Research (NWO), the Royal Society University Research Fellowships Programme, the US Department of Energy, and many others. Referee for Nature, Nature Physics, Nature Nanotechnology, Nature communications, ACS Nano, Physical Review Letters, Physical Review X, Physical Review B, European Physics Letters, New Journal of Physics, and many others.
2022 - 2022	Main organizer of Nobel Symposium	Main organizer for a Nobel Symposium on Emerging quantum technologies, which was held August 25 - 29, 2022. Two of the invited speakers (Anton Zeilinger and Alain Aspect) were awarded the Nobel prize in physics later that year.

CV - Igor Abrikosov

Medverkande forskare: Igor Abrikosov

Födelsedatum: 19651015

Kön: Man

Land: Sverige

Dr-examen: 1997-12-18

Akademisk titel: Professor

Arbetsgivare: Linköpings universitet

Utbildning

Forskarutbildning		
Examen	Organisation	Namn på handledare
Doktorsexamen, 10304. Den kondenserade materiens fysik, 1997-12-18	Moskva institutet av stål och legeringar, Ryssland, Theoretical Physics Division	Yurii Vekilov

Arbetsliv

Anställningar				
Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare	Övrig information
september 2003 - Nuvarande	Professor, Tillsvidareanställning	100	Linköpings universitet, Sverige, Institutionen för fysik, kemi och biologi (IFM)	
januari 1999 - augusti 2003	Lektor, Tillsvidareanställning	100	Uppsala universitet, Sverige, Inst för fysik och astronomi	The position was financed via VR Senior Researcher grant
januari 1999 - augusti 2003	Senior Researcher, Tidsbegränsad anställning	100	Vetenskapsrådet	

Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare	Övrig information
juli 1995 - januari 1999	Forskarassistent, Tidsbegränsad anställning	100	Uppsala universitet, Sverige, Inst för fysik och astronomi	
juli 1993 - juni 1995	Visiting Scientists, Tidsbegränsad anställning	100	Uppsala universitet, Sverige, Inst för fysik och astronomi	
mars 1992 - juni 1993	Visiting Scientists, Tidsbegränsad anställning	100	Danmarks Tekniske Universitet	

Meriter och utmärkelser

Docentur		
År	Ämne	Organisation
1997	103. Fysik	Uppsala universitet, Sverige, Inst för fysik och astronomi

Handledda personer			
Handledda personer	Lärosäte (handledd person)	Roll	Antal
Doktorand	Uppsala universitet, Sverige	Huvudhandledare	2
Doktorand	Linköpings universitet, Sverige, Centrum för Biomedicinska Resurser (CBR)	Huvudhandledare	19
Doktorand	Linköpings universitet, Sverige	Bihandledare	5
Postdok	Uppsala universitet, Sverige	Huvudhandledare	3
Postdok	Linköpings universitet, Sverige	Huvudhandledare	25

Bidrag erhållna i konkurrens				
Period	Finansiär	Projektledare	Din roll	Totalt belopp (kr)
2025 - 2030	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Igor Abrikosov	Projektledare	18 000 000
2024 - 2027	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Igor Abrikosov	Projektledare	3 860 000
2020 - 2023	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Igor Abrikosov	Projektledare	4 000 000
2020 - 2024	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Igor Abrikosov	Projektledare	18 000 000
2019 - 2024	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Igor Abrikosov	Projektledare	30 400 000
2016 - 2019	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Igor Abrikosov		4 032 000
2012 - 2015	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Igor Abrikosov	Projektledare	3 348 000

Period	Finansiär	Projektledare	Din roll	Totalt belopp (kr)
2012 - 2016	SSF - Stiftelsen för strategisk forskning, Sverige - Annan forskningsfinansiär	Igor Abrikosov	Projektledare	10 000 000
2008 - 2010	KVA - Kungliga Vetenskapsakademin, Sverige - Annan forskningsfinansiär	Igor Abrikosov	Projektledare	1 450 000
2007 - 2011	SSF - Stiftelsen för strategisk forskning, Sverige - Annan forskningsfinansiär	Igor Abrikosov	Projektledare	10 000 000

Priser och utmärkelser				
År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2024	Sverige	Wallenberg Scholar (Renewal)	Knut och Alice Wallenbergs Stiftelse	
2019	Sverige	Wallenberg Scholar	Knut och Alice Wallenbergs Stiftelse	
2016	Sverige	Fellow of the Royal Swedish Academy of Sciences (KVA)	The Royal Swedish Academy of Sciences (KVA)	
2014	USA	Outstanding Referee Award	American Physical Society	
2007	Sverige	Göran Gustafsson Prize in Physics		
2000	Sverige	Oscar prize		

Andra meriter		
Period	Typ av merit	Beskrivning
2018 - 2023	Director	Materials Science Laboratory for Advanced Functional Materials, the Strategic Research Area formed with the grant from the Swedish Government with a budget 32 543 000 SEK/year (for 2023).
2007 - 2023	Academic Leadership	Main examples: 2014- European Network Psi-k Board of Trustees Member (www.psi-k.net). 2019- Member (from 2022 Chair) of the Nomination committee for elections to the Royal Swedish Academy of Sciences (KVA) class Physics. 2020- Member (from 2023 Chair) of the Göran Gustafsson Prize committee in Physics. 2022- Member of the Gregori Aminoff Prize committee, a highly prestigious international prize in the field of crystallography. 2018 – 2022 Board Member, National Supercomputer Centre, Linköping, Sweden. 2015 – 2020 Member of Scientific Advisory Board of a European e-science Center of Excellence “Novel Materials Discovery (NOMAD) Laboratory”, http://nomad-coe.eu/ . 2009 - 2014 Board Member: Dep. of Physics, Chemistry and Biology, Linköping University. 2007 – 2012, 2016 Member of 2 evaluation panels at the Swedish Research Council (VR).
1995 - 2023	On-going Editorial and Review Missions	Editorial Board Member, Nature PJ Computational Materials. Reviewer of scientific papers for large number of international journals, including Nature Materials, Phys. Rev. Lett., Rev. Mod. Phys., Appl. Phys. Lett., Chem. Phys. Lett., Phys. Rev. B. Reviewer of applications for the US Department of Energy, the American Chemical Society, ESF, EU, NOW, Netherlands, WWTF, Austria, RSF, ERC, EU and FWF, Austria. Examination Faculty Opponent/Committee Member of 16 PhD Dissertations. Examiner of 4 Licentiate Thesis.

Period	Typ av merit	Beskrivning
2005 - 2023	Member of Program Committees for International Conferences	Totally about 30 conferences. Main examples: 2013 Symposium D3II at EUROMAT2013, Sevilla, Spain. 2015 Psi-k2015 Conference, San Sebastian, Spain, as a Trustee. 2016 54th EHPRG International Meeting, Bayreuth, Germany, session organizer. 2022 48th International Conference on Metallurgical Coatings and Thin Films (ICMCTF22), San Diego, USA, session organizer. 2022 Defects in solids for quantum technologies, DSQT22, Stockholm, Sweden. 2022 Psi-k2022 Conference, Lausanne, Switzerland
1994 - 2023	Invited Presentations at international conferences	Invited presentations at more than 100 international conferences (6 Plenary/Keynote), including APS, MRS, TMS, DPG, and Psi-k meetings, 2 invited tutorial at CECAM.
2004 - 2010	Entrepreneurial achievements	Computer clusters Green, AFM and Matter built in collaboration with NSC
2001 - 2006	Leadership and Management Training	INGVAR-I Program from Swedish Foundation for Strategic Research (SSF)

CV - Vaishali Badrish Adya

Medverkande forskare: Vaishali Badrish Adya
Födelsedatum: 19900331
Kön: Kvinna
Land: Sverige

Dr-examen: 2018-04-27
Akademisk titel: Doktor
Arbetsgivare: Kungliga Tekniska högskolan

Utbildning

Forskarutbildning			
Examen	Organisation	Avhandlingens titel	Namn på handledare
Doktorsexamen, 10302. Atom- och molekylfysik och optik, 2018-04-27	Albert Einstein Institute, Max Planck for Gravitational Astrophysics, Tyskland	Ways to stop mirrors from moving unnecessarily: design of advanced gravitational wave detectors.	Harald Lück

Utbildning på grund- och avancerad nivå

År	Examen
2013	103. Fysik, Master of Science in Physics (90 credits), National Institute of Technology-Surathkal, Indien
2011	1. Naturvetenskap, Bachelor of Science in Physics, Chemistry, Mathematics, Christ University, Indien

Arbetsliv

Anställningar			
Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare
november 2023 - november 2028 (Nuvarande)	Forskarassistent, Meriteringsanställning	100	Kungliga Tekniska högskolan, Sverige, Institutionen för Tillämpad fysik

Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare
december 2021 - november 2023	Forskare, Projektanställning	100	Kungliga Tekniska högskolan, Sverige, Institutionen för Tillämpad fysik

Postdoktorvistelser		
Period	Organisation	Ämne
november 2018 - november 2021	The Australian National University, Australien, Centre for Gravitational Astrophysics	10302. Atom- och molekylfysik och optik
maj 2018 - november 2018	Albert Einstein Institute, Max Planck for Gravitational Astrophysics, Tyskland, Leibniz University	10302. Atom- och molekylfysik och optik

Forskarutbyten			
Period	Typ	Organisation	Ämne
februari 2017 - juni 2017	Gästforskare	California Institute of Technology (Caltech), USA, Laser Interferometer Gravitational Wave Observatory, LIGO Hanford	10302. Atom- och molekylfysik och optik

Meriter och utmärkelser

Handledda personer			
År	Handledda personer	Lärosäte (handledd person)	Roll
2028	Doktorand, Erik Svanberg	Kungliga Tekniska högskolan, Sverige	Bihandledare
2027	Doktorand, Hilma Karlsson	Kungliga Tekniska högskolan, Sverige, Institutionen för Tillämpad fysik	Bihandledare
2024	Doktorand, Daniel Gould	The Australian National University, Australien, Centre for Gravitational Astrophysics	Bihandledare
2025	Student, Axel Segendorf	Kungliga Tekniska högskolan, Sverige, Institutionen för Tillämpad fysik	Huvudhandledare
2021	Student, James Gardner	The Australian National University, Australien	Huvudhandledare
2020	Student, James Gardner	Australian National University, Australien	Bihandledare
2019	Student, James Gardner	The Australian National University, Australien	Bihandledare
2020	Gäststudent, Renuka Manjula Narayan	IISER Thiruvananthapuram, Indien, Physics	Huvudhandledare
2019	Gäststudent, Mart Meijerink	The Australian National University, Australien	Huvudhandledare

År	Handledda personer	Lärosäte (handledd person)	Roll
2018	Gäststudent, Isabella Molina	Albert Einstein Institute, Max Planck for Gravitational Astrophysics, Tyskland	Bihandledare

Bidrag erhållna i konkurrens					
Period	Finansiär	Projektledare	Din roll	Delbelopp (kr)	Totalt belopp (kr)
2024 - 2027	Göran Gustafsson Storapriset for young researchers, Sverige - Övriga privata utförare	Vaishali Badrish Adya	Projektledare	0	3 000 000
2024 - 2027	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Vaishali Badrish Adya	Projektledare	0	4 000 000
2023 - 2028	Wallenberg Centre for Quantum Technologies (tenure track start up package)), Sverige - Övriga privata utförare	Vaishali Badrish Adya	Projektledare	0	18 000 000
2022 - 2025	Australian Research Council, Ej Sverige - Statliga enheter, Australien	Robert Ward, David McClelland, Vaishali Badrish Adya, Minjet Yap, Michele Heurs	Medverkande	0	3 391 080
2019 - 2019	Australian Capital Territory government, Ej Sverige - Statliga enheter, Australien	Vaishali Badrish Adya	Projektledare	0	13 911
2008 - 2011	State Government of Karnataka, Ej Sverige - Statliga enheter, Indien	Vaishali Badrish Adya	Projektledare	0	1 858

Priser och utmärkelser				
År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2018	Storbritannien och Nordirland	Newton International Fellowship	The Royal Society	This is a fellowship involving a grant application written by the research fellow and the supervisor (in my case Dr. Dooley from Cardiff University) to do research in any discipline in any UK University. Salary costs, minor equipment costs are covered by this grant and this has a success rate of 17% (in 2017-18).

År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2017	Storbritannien och Nordirland	Royal Astronomical Society Group Achievement Award	Royal Astronomical Society	Awarded this as a part of the LIGO-Virgo Scientific collaboration for outstanding achievement by large consortia.
2017	USA	Bruno Rossi Prize for High Energy Astrophysics	The AAS High Energy Astrophysics Division	Awarded this as a part of the LIGO-Virgo Scientific collaboration for or a significant contribution to High Energy Astrophysics, with particular emphasis on recent, original work.
2017	Spanien	Princess of Asturias Award	The Princess of Asturias Foundation	Awarded this as a part of the LIGO-Virgo Scientific collaboration for Technical and Scientific Research
2016	USA	Special Breakthrough prize in Fundamental Physics	Fundamental Physics Prize Foundation	Awarded this as a part of the LIGO-Virgo Scientific collaboration
2016	USA	Gruber Cosmology prize	The Gruber Foundation	Awarded this as a part of the LIGO-Virgo Scientific collaboration
2013	Indien	University Gold medal for MSc Physics	National Institute of Technology Karnataka, Surathkal, India	Award given to recognise the highest score obtained for course work and project work in my Masters in Physics Program
2012	Indien	Summer research fellow	Indian Academy of Science	Competitive summer research fellowship at the Aryabhata Research Institute of Observational Sciences (ARIES) through the Indian Academy of Science

Andra meriter

Period	Typ av merit	Beskrivning
2013 - 2028	Teaching activities	•2024 –present : Track responsible, Quantum Technology (Masters level), teacher of squeezed light module • 2022-present : Teaching optical interferometry module in BSc course on experimental physics at KTH (SK1105) • 2019 : Masterclasses on Gravitational Wave Interferometry - four Universities in Bengaluru, India • 2016 – 2017 : Lab instructor Albert Einstein Institute, Max Planck für Gravitationsphysik • 2013 – 2018 : Physics seminar supervisor – Albert Einstein Institute, Max Planck für Gravitationsphysik

Period	Typ av merit	Beskrivning
2013 - 2028	Institutional responsibilities	•2024 –Principal Investigator, Wallenberg Centre for Quantum Technology •2024 –head, Equality, Diversity Initiative of Wallenberg Centre for Quantum Technology (EDI-WACQT) •2024 –present Member, Graduate school board of Wallenberg Centre for Quantum Technology (EDU-WACQT) •2023 – 2025 : Deputy leader for NQCIS (National Quantum Communication Infrastructure in Sweden) •2023 – 2024 : KTH representative for the Equality, Diversity Initiative of Wallenberg Centre for Quantum Technology •2021 : Co-chair for OzGrav (Australian Research Council Centre of Excellence for Gravitational wave discovery) quantum program •2018 – 2021 : Postdoctoral representative for the LIGO Academic Advisory Council •2013 – 2017 : PhD student representative at the Albert Einstein Institute, Max Planck für Gravitationsphysik. •2013 : Science Magazine editor ('Physics Prime'), National Institute of Technology Karnataka, Surathkal, India
2022 - 2023	Plenary lectures	• 2022, Australian Institute of Physics meeting, Adelaide, Australia. Title: Building NEMO : Neutron star Extreme Matter Observatory. • 2022, OzGrav Annual retreat, Canberra, Australia. Title: Generation, detection and applications of squeezed light.
2018 - 2022	Invited talks	•2024, Beilstein Symposium, Rüdesheim, Germany. Title : Quantum enhanced advanced LIGO : Dawn of Gravitational wave astronomy •2024, Photonics Future, Paderborn University, Germany. Title : Squeezed light : Generation, uses and the future •2022,Astronomical Society of Australia meeting (remote),Tasmania. Title: Present and future gravitational wave detectors •2021,Research School of Astronomy and Astrophysics winter school,Canberra, Australia. Title: An overview of gravitational wave instrumentation •2021,Gravitational Wave Advanced Detector Workshop (GWADW), Elba, (online only conference due to pandemic). Title: NEMO, the concept of a high frequency gravitational wave detector. •2019,OzGrav Annual retreat, Melbourne. Title : Quantum program update for the year 2018-19 •2019,Astronomical Society of Australia meeting,Brisbane. Title: Practical realisation of a high frequency matter detector: OzHF •2019,GWADW, Elba, Italy. Title: 2 micron squeezing in gravitational wave detectors
2019 - 2019	Masterclasses on Gravitational Wave Interferometry	Created and delivered four lectures on gravitational wave interferometry at four different Universities in Bengaluru, India (through The Australian National University). Approximately 100 students per lecture

CV - Markus Hennrich

Medverkande forskare: Markus Hennrich
Födelsedatum: 19720421
Kön: Man
Land: Sverige

Dr-examen: 2004-01-12
Akademisk titel: Docent
Arbetsgivare: Stockholms universitet

Utbildning

Forskarutbildning			
Examen	Organisation	Avhandlingens titel	Namn på handledare
Doktorsexamen, 10302. Atom- och molekylfysik och optik, 2004-01-12	Technical University Munich (Max-Planck-Institute of Quantum Optics), Tyskland	Kontrollierte Erzeugung einzelner Photonen in einem optischen Resonator hoher Finesse	Gerhard Rempe

Utbildning på grund- och avancerad nivå

År	Examen
1998	10302. Atom- och molekylfysik och optik, Högskoleexamen, Universität Stuttgart, Tyskland

Arbetsliv

Anställningar			
Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare
september 2024 - Nuvarande	Professor, Tillsvdareanställning	50	Stockholms universitet, Sverige, Fysikum
februari 2015 - september 2024 (Nuvarande)	Lektor, Tillsvdareanställning	30	Stockholms universitet, Sverige, Fysikum
januari 2013 - januari 2015	Lektor, Tillsvdareanställning	50	University of Innsbruck
juli 2007 - december 2012	Forskarassistent, Vikariat	50	University of Innsbruck
april 2004 - juni 2007	Postdoktor, Projektanställning	100	The Institute of Photonic Sciences
april 1999 - mars 2004	Doktorand, Projektanställning	100	Max-Planck-Institute of Quantum Optics
november 1998 - mars 1999	Doktorand, Vikariat	100	Universität Konstanz

Postdoktorvistelser		
Period	Organisation	Ämne
april 2004 - juni 2007	The Institute of Photonic Sciences, Spanien	10302. Atom- och molekylfysik och optik

Meriter och utmärkelser

Docentur		
År	Ämne	Organisation
2012	10302. Atom- och molekylfysik och optik	University of Innsbruck, Österrike

Handledda personer			
År	Handledda personer	Lärosäte (handledd person)	Roll
2028	Doktorand, Vinay Shankar	Stockholms universitet, Sverige, Fysikum	Huvudhandledare
2026	Doktorand, Natalia Kuk	Stockholms universitet, Sverige, Fysikum	Huvudhandledare
2026	Doktorand, Robin Thomm	Stockholms universitet, Sverige, Fysikum	Huvudhandledare
2026	Doktorand, Simon Schey	Stockholms universitet, Sverige, Fysikum	Huvudhandledare
2025	Doktorand, Harry Parke	Stockholms universitet, Sverige, Fysikum	Huvudhandledare
2025	Doktorand, Marion Mallweger	Stockholms universitet, Sverige, Fysikum	Huvudhandledare

År	Handledda personer	Lärosäte (handledd person)	Roll
2020	Doktorand, Chi Zhang	Stockholms universitet, Sverige, Fysikum	Huvudhandledare
2020	Doktorand, Fabian Pokorny	Stockholms universitet, Sverige	Huvudhandledare
2018	Doktorand, Gerard Higgins	University of Innsbruck, Österrike	Huvudhandledare
2025	Postdok, Ivo Straka	Stockholms universitet, Sverige, Fysikum	Huvudhandledare

Bidrag erhållna i konkurrens					
Period	Finansiär	Projektledare	Din roll	Delbelopp (kr)	Totalt belopp (kr)
2025 - 2031	Europeiska Unionen (EU),	Igor Lesanovsky	Medverkande	37 975 000	108 011 000
2024 - 2026	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Markus Hennrich	Projektledare	0	3 900 000
2022 - 2025	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Markus Hennrich	Projektledare	0	3 720 000
2022 - 2025	Europeiska Unionen (EU),	Markus Hennrich	Projektledare	0	37 600 000
2018 - 2021	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Markus Hennrich	Projektledare	0	3 600 000
2018 - 2020	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Markus Hennrich	Projektledare	0	2 970 873
2018 - 2029	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Per Delsing / Göran Johansson	Medverkande	15 000 000	1 000 000 000
2018 - 2022	Europeiska Unionen (EU),	Markus Hennrich	Projektledare	0	4 500 000
2016 - 2021	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Mohamed Bourennane	Medverkande	5 000 000	34 250 000
2012 - 2017	Europeiska Unionen (EU),	Markus Hennrich	Projektledare	0	13 846 014

Priser och utmärkelser				
År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2024	Sverige	ERC Synergy grant (acronym OPEN-2QS)	European Union	partner groups: Igor Lesanovsky, Tübingen University and Ferdinand Schmidt-Kaler, Mainz University

År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2020	Storbritannien och Nordirland	Finalist of the Top 10 Breakthrough of the Year 2020 by Physics World	Physics World	Our publication "Tracking the Dynamics of an Ideal Quantum Measurement", F. Pokorny, C. Zhang, G. Higgins, A. Cabello, M. Kleinmann, and M. Hennrich, Phys. Rev. Lett. 124, 080401 (2020) was selected as one of the Top 10 Breakthrough of the Year 2020 by Physics World, see https://physicsworld.com/a/physics-world-announces-its-breakthrough-of-the-year-finalists-for-2020/
2012	Österrike	ERC starting grant (acronym QuaSIRIO)	European Union	
2005	Spanien	Marie-Curie intra-European fellowship (acronym Pecado)	European Union	

Andra meriter

Period	Typ av merit	Beskrivning
2011 - 2026	Organisation of scientific conferences	2022, 2024, 2026 Co-organizer ICTP-SAIR School on Quantum Computation, São Paulo, Brazil 2021, 2023, 2025 Member organizing committee of WACQT Summer School 2023 Co-organizer Quantum Systems in Noronha Workshop – QuSys 23, Fernando de Noronha, Brazil 2021 Chair of hybrid European Conference on Trapped Ions 2021 – hybrid ECTI 2019 Chair of the programme committee for Quantum Optics and Ultracold Quantum Matter, CLEO/Europe-EQEC 2019 conference, Munich, Germany 2017 Member of the organising committee, Nordita workshop on Topological phases in cold atom systems; 2017 Chair of the programme committee, topic: IA - Quantum Optics, CLEO/Europe-EQEC 2017 conference, Munich, Germany; 2013 – 2015 Member of the programme committee, topic: IA - Quantum Optics, CLEO/Europe-EQEC conference, Munich, Germany; 2012 Member of the organizing committee, European Conference on Trapped Ions 2012 - ECTI, Obergurgl, Austria;
2004 - 2025	Invited talks	In total, I have given 68 invited talks at conferences and seminars. Recent invited talks: 28 Oct 20 "Speeding up trapped ion quantum processors via Rydberg interaction", APTQS 2020, Online conf. 4 June 20 "Sub-microsecond entangling gates between trapped ions via Rydberg interaction", Virtual DAMOP 2020 4 Dec 19 "Trapped Rydberg ions", Seminar talk, UFSCar, São Carlos, Brazil 26 Nov 19 "Tracking the dynamics of a quantum measurement, Conf. Quantum Correlations ..., Natal, Brazil 16 Oct 19 "Entangling trapped ion via Rydberg interaction", ITAMP workshop: Many-body Phys. with Cold Ions, Harvard, USA 3 Sep 19 "Entangling trapped ion via Rydberg interaction", QION 2019, Tel Aviv, Israel 23 July 19 "Entangling trapped ion via Rydberg interaction", CATMIN, ENS Paris-Saclay, France 17 June 19 "Strong interaction between Rydberg ions", CAMEL 2019, Nessebar, Bulgaria 6 Feb 19 "Interacting Rydberg ions", SFB conf., Innsbruck, Austria 22 Nov 18 "Interacting Rydberg ions", ECTI 5, Weizmann Institute, Israel

Period	Typ av merit	Beskrivning
2009 - 2025	Institutional responsibilities	2024 Member of Ph.D. thesis committee, ETH Zurich, Switzerland; 2024 Member of Ph.D. thesis committee, Oxford University, UK; 2023 Member of Ph.D. thesis committee, Gothenburg, Sweden; 2022 Member of PhD thesis committee, University of Sussex, UK 2021 Member of PhD thesis committee, ICFO, Spain 2020 Member of PhD thesis committee, University of Sussex, UK 2016 Member of 2 Ph.D. thesis committees, Stockholm University, Sweden; 2015 Member of Ph.D. thesis committee, Oxford University, UK; 2014 Member of Habilitation committee, University of Innsbruck, Austria; 2013 Member of Ph.D. thesis committee, University of Innsbruck, Austria; 2012 - Member of MSc defensio committees: 6 times (5x University of Innsbruck, 1x Medical University Innsbruck); 2011 – 2012 Member of the search committee for the professor position in theoretical bio-nano physics, University Innsbruck, Austria
2003 - 2025	Commissions of trust	2024 Reviewer for SSF, Sweden 2023 Reviewer for European Flagship QS and QT platforms (EU) 2022 Reviewer for Dutch Research Council (NWO) 2022 Reviewer for Israel Science Foundation (ISF) 2020 – 2024 Reviewer for ERC Starting Grants 2021/2022, EU 2020 Reviewer for ERC Consolidator Grant 2020, EU 2019 Panel Member in the QuantERA Call 2019 Scientific Evaluation Panel 2019 Reviewer for the MRC, UKRI – UK Research and Innovation, UK 2017 – 2018 Reviewer for the DFG – German Research Foundation, Germany 2017 Reviewer for the ANR - L'Agence nationale de la recherche, France 2016 Reviewer for the European Union, ICT FP7 project; 2015 Reviewer for the Agencia Nacional de Evaluación y Prospectiva, Spain; Referee for several scientific journals including Nature Publishing Group (Nature, Nat. Photonics), APS (Phys. Rev. X, Phys. Rev. Lett., Phys. Rev. A), OSA (JOSA B, Opt. Lett.), IOP (Phys. Scr., New J. Phys., J. Phys. B)
1998 - 2025	Dissemination of science	2018/19 Participation in Forskarfredag and Fysikfest (European Researchers' Nights), Stockholm University 2016 Open lecture “Quantum computation with trapped ions” at Stockholm University (6 October 2016) 1998 – 2015 Demonstrator for Open Day / Open Night at the Universität Innsbruck, ICFO Barcelona, Max-Planck-Institut für Quantenoptik, Garching 18 March 2010 Organiser and instructor vocational training for teachers from South Tirol 2008 Organiser “Schüler-Schnupperwoche”, a one-week holiday program for school kids at the physics faculty, Universität Innsbruck, Austria
2009 - 2025	Teaching at university level	2015 – present: Lecturer at Stockholm University; Given courses: 2017 – 2024 "Optics and Laser Physics", 2018 – 2020 “Introduction to Quantum Technologies”, 2018 – 2025 “Colloquium’s Course for PhD students”, 2018 – 2025 Coordinator for Bachelor projects in Physics 2009 – 2015: Lecturer at University of Innsbruck; Given courses: 2011 – 2015 "Physics for pharmacology and biology students" (12 x 2 hrs/yr), 2008 – 2014 "Experimental quantum information" (12 x 2 hrs/yr), 2008 – 2012 "Key experiments in quantum optics" (12 x 2 hrs/yr), 2007 – 2015 Supervisor "Basic and advanced physics lab courses", 2007 – 2014 Organiser / Supervisor "Exercises in “Atomic and solid state physics”, “Electromagnetism and optics”, & “Mathematics preparation course”

Immaterialrätt

Immaterialrätt					
Typ	Datum för beviljning	Status	ID	Licensierad till annan	Produkt klassificering

Typ	Datum för beviljning	Status	ID	Licensierad till annan	Produkt klassificering
Patent	2024-03-27	Beviljad	EP20750784.9	Ej Sverige - Företag	72. Tjänster avseende vetenskaplig forskning och utveckling

CV - Anne L'Huillier

Medverkande forskare: Anne L'Huillier	Dr-examen: 1986-01-06
Födelsedatum: 19580816	Akademisk titel: Professor
Kön: Kvinna	Arbetsgivare: Lunds universitet
Land: Sverige	

Utbildning

Forskarutbildning			
Examen	Organisation	Avhandlingens titel	Namn på handledare
Doktorsexamen, 10302. Atom- och molekylfysik och optik, 1986-01-06	Université Paris VI Pierre et Marie CURIE, Frankrike	Ionisation multiphotonique et multiélectronique	Gérard Mainfray

Utbildning på grund- och avancerad nivå	
År	Examen
1980	101. Matematik, Lärarexamen, École normale supérieure, Frankrike
1979	101. Matematik, Masterexamen, Université Paris VI Pierre et Marie CURIE, Frankrike
1979	103. Fysik, Masterexamen, Université Paris VI Pierre et Marie CURIE, Frankrike

Arbetsliv

Anställningar				
Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare	Övrig information
juli 1997 - Nuvarande	Professor, Tillsvidareanställning	80	Lunds universitet, Sverige, Fysiska institutionen 107131	
juli 1995 - juni 1997	Lektor, Tidsbegränsad anställning	80	Lunds universitet, Sverige, Fysiska institutionen 107131	75% VR-finansierat
oktober 1986 - juni 1995	Forskare, Tillsvidareanställning	100	Commissariat à l'Energie Atomique, Frankrike, Centre d'Etudes de Saclay	
oktober 1981 - januari 1986	Doktorand, Tidsbegränsad anställning	100	Commissariat à l'Energie Atomique, Frankrike, Centre d'Etudes de Saclay	

Postdoktorvistelser

Period	Organisation	Ämne
oktober 1988 - april 1989	University Southern California, USA, Physics Department	10302. Atom- och molekylfysik och optik
januari 1986 - oktober 1986	Chalmers tekniska högskola, Sverige, 160501 - Kondenserade materiens fysik	10302. Atom- och molekylfysik och optik

Forskarutbyten

Period	Typ	Organisation	Ämne
mars 1993 - september 1993	Gästforskare	Lawrence Livermore National Laboratory	10302. Atom- och molekylfysik och optik

Uppehåll i forskningen

Period	Beskrivning
2000-04-01 - 2001-03-01	Mammaledighet för Victor född 2000-04-05
1999-01-01 - 1999-12-01	Mammaledighet för Oscar född 1999-01-07

Meriter och utmärkelser**Docentur**

År	Ämne	Organisation
1995	103. Fysik	Lunds universitet, Sverige, Fysiska institutionen 107131

Handledda personer

År	Handledda personer	Lärosäte (handledd person)	Roll
2024	Doktorand, Ann-Kathrin Raab	Lunds universitet, Sverige, Fysiska institutionen 107131	Huvudhandledare
2023	Doktorand, Robin Weissenbilder	Lunds universitet, Sverige	Huvudhandledare
2020	Doktorand, David Busto	Lunds universitet, Sverige	Huvudhandledare
2019	Doktorand, Marcus Isinger	Lunds universitet, Sverige	Huvudhandledare
2018	Doktorand, Chen Guo	Lunds universitet, Sverige	Huvudhandledare
2018	Doktorand, Hélène Coudert-Alteirac	Lunds universitet, Sverige	Huvudhandledare
2018	Doktorand, Maïté Louisy	Lunds universitet, Sverige	Huvudhandledare
2016	Doktorand, David Kroon	Lunds universitet, Sverige	Huvudhandledare
2014	Doktorand, Christoph Heyl	Lunds universitet, Sverige	Huvudhandledare
2014	Doktorand, Diego Guénot	Lunds universitet, Sverige	Huvudhandledare
2014	Doktorand, Piotr Rudawski	Lunds universitet, Sverige	Huvudhandledare
2012	Doktorand, Kathrin Klünder	Lunds universitet, Sverige	Huvudhandledare
2012	Doktorand, Miguel Miranda	Lunds universitet, Sverige	Huvudhandledare
2011	Doktorand, J Marcus Dahlström	Lunds universitet, Sverige	Huvudhandledare
2023	Postdok, Sizuo Luo	Lunds universitet, Sverige	Huvudhandledare
2021	Postdok, Jan Vogelsang	Lunds universitet, Sverige	Huvudhandledare
2020	Postdok, Fabien Langer	Lunds universitet, Sverige	Huvudhandledare
2020	Postdok, Shiyang Zhong	Lunds universitet, Sverige	Huvudhandledare
2018	Postdok, Saikat Nandi	Lunds universitet, Sverige	Huvudhandledare
2016	Postdok, Anne Harth	Lunds universitet, Sverige	Huvudhandledare

Bidrag erhållna i konkurrens				
Period	Finansiär	Projektledare	Din roll	Totalt belopp (kr)
2024 - 2031	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Anne L'Huillier	Projektledare	40 000 000
2023 - 2025	Europeiska Unionen (EU),	Anne L'Huillier	Projektledare	1 500 000
2021 - 2025	Europeiska Unionen (EU),	Anne L'Huillier	Projektledare	25 000 000
2014 - 2019	Europeiska Unionen (EU),	Anne L'Huillier	Projektledare	18 330 000
2014 - 2023	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Anne L'Huillier	Projektledare	25 000 000
2014 - 2023	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Anne L'Huillier	Projektledare	50 000 000
2012 - 2015	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Anne L'Huillier	Projektledare	3 260 000
2010 - 2016	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Anne L'Huillier	Projektledare	15 000 000
2008 - 2013	Europeiska Unionen (EU),	Anne L'Huillier	Projektledare	20 621 475

Priser och utmärkelser				
År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2023	Sverige	Nobel Prize in Physics	Nobel Foundation	
2023	Tyskland	Leibinger Zukunpfpris	Leibinger Foundation	
2022	Spanien	BBVA Frontiers of knowledge award	BBVA foundation	
2022	Israel	Wolf prize	Wolf Foundation	
2021	USA	Max Born award	Optica	
2020	Sverige	Gothenburg Lise Meitner award	Gothenburg Physics Center	
2019	Frankrike	EPS/QEOD prize for fundamental aspects of quantum electronics and optics	European Physical Society	
2018	USA	Outstanding referee	American Physical Society	
2016	USA	Fellow of the Optical Society of America	OSA	
2009	Sverige	Wallenberg Scholar	KAW	

Andra meriter		
Period	Typ av merit	Beskrivning
2004 - 2030	Academy membership	Elected to the Royal Swedish Academy of Sciences
2012 - 2030	Academy membership	Elected to the Royal Swedish Academy of Engineering Sciences
2022 - 2030	Academy membership	Foreign associate of the French Académie des Sciences

Period	Typ av merit	Beskrivning
2018 - 2030	Academy membership	Elected Foreign associate to the National Academy of Sciences (USA)
2021 - 2030	Academy membership	Corresponding member abroad of the Austrian Academy of Sciences
2022 - 2030	Academy membership	Foreign member of the Accademia Nazionale dei Lincei, Italy
2025 - 2027	Advisory board member	High-level Advisory Board for the Quantum European Strategy
2021 - 2027	Principal Investigator	PI of the Wallenberg Center for Quantum Information
2020 - 2024	SAC member	Scientific Advisory Council member of the European X-FEL
2017 - 2023	Board member	Member of the board of Lund University
2018 - 2023	Board member	Member of the board of the "Institut d'Optique Graduate School" Palaiseau, France
2023 - 2023	Scientific Council member	Member of the scientific council of the Institut Pascal, Université Paris-Saclay, France
2020 - 2022	SAB member	Member of the International Scientific Advisory Board, Institut Polytechnique, Palaiseau
2017 - 2021	Board member	Member of the Board of the AMO Physics Division of the European Physical Society
2014 - 2016	Expert ERC	Member (2014) and Chairman (2016) of the PE2 panel for Consolidator grants (European Research Council)
2011 - 2016	Board member	Member of the board of MAX IV
2014 - 2016	SAC member	Member of the Scientific Advisory Committee of ELI-ALPS, Szeged, Hungary
2012 - 2016	Board member	Member of the board of LLC
2007 - 2015	Nobel committee	Member of the Nobel Committee for Physics, chairman in 2015
2000 - 2004	Coordinator of EU network	Coordinator of a European IHP network: "Generation and Characterisation of Attosecond Pulses in Strong Laser-Atom Interactions: A step towards Attophysics"

Immaterialrätt

Immaterialrätt					
Typ	Datum för beviljning	Status	ID	Licensierad till annan	Produkt klassificering
Patent	2013-04-18	Beviljad	WO2013/0542 92 A1	Ej Sverige - Företag	26. Datorer, elektronikvaror och optik
Patent		Beviljad	PCT/IB2018/0 58792	Ej Sverige - Företag	26. Datorer, elektronikvaror och optik

CV - Aurelija Lukoseviciene

Medverkande forskare: Aurelija Lukoseviciene
Födelsedatum: 19850204
Kön: Kvinna
Land: Sverige

Dr-examen: 2021-10-12
Akademisk titel: Doktor
Arbetsgivare: Lunds universitet

Utbildning

Forskarutbildning			
Examen	Organisation	Avhandlingens titel	Namn på handledare
Doktorsexamen, 50501. Juridik, 2021-10-12	Lunds universitet, Sverige	Authors and Creative Users - Addressing the Conceptual Challenges of Digital Creativity to EU Copyright Law from the Perspective of the Author	Ulf Maunsbach

Utbildning på grund- och avancerad nivå	
År	Examen
2011	50501. Juridik, Juristexamen/motsv, Lunds universitet, Sverige
2009	50501. Juridik, Juristexamen/motsv, Vilniaus Universitetas, Litauen

Arbetsliv

Anställningar				
Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare	Övrig information
september 2022 - februari 2026 (Nuvarande)	Postdoktor, Projektanställning	80	Lunds universitet, Sverige, Juridiska institutionen 202011	
oktober 2021 - september 2022	Lecturer, Vikariat	0	Lunds universitet, Sverige, Juridiska institutionen 202011	
januari 2013 - oktober 2021	Doktorand, Tillsvidareanställning	75	Lunds universitet, Sverige, Juridiska institutionen 202011	
september 2011 - januari 2013	Programme assistant, Vikariat	10	Stiftelsen Raoul Wallenberg Institutet för mänskliga rättigheter och humanitär rätt, Sverige, Programme Department	

Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare	Övrig information
mars 2011 - april 2011	Forskningsassistent, Vikariat	100	World Intellectual Property Organization (WIPO), Schweiz, Copyright and Creative Industries	Intern
augusti 2010 - november 2010	Forskningsassistent, Vikariat	100	Stiftelsen Raoul Wallenberg Institutet för mänskliga rättigheter och humanitär rätt, Sverige, Research Department	

Postdoktorvistelser		
Period	Organisation	Ämne
januari 2023 - januari 2026	Lunds universitet, Sverige, Juridiska institutionen 202011	50501. Juridik

Forskarutbyten			
Period	Typ	Organisation	Ämne
september 2019 - november 2019	Gästforskare	Copenhagen University, Danmark, Faculty of Law, Centre of Information and Innovation Law (CIIR)	50501. Juridik
maj 2019 - juni 2019	Gästforskare	Universitetet i Oslo, Norge, Institutt for privatrett	50501. Juridik
mars 2017 - april 2017	Gästforskare	Amsterdam University, Nederländerna, Faculty of Law, Institute for Information Law (IVIR)	50501. Juridik
januari 2014 - februari 2014	Gästforskare	Max Planck Institute for Innovation and Competition	50501. Juridik

Meriter och utmärkelser

Handledda personer				
År	Handledda personer	Lärosäte (handledd person)	Roll	Antal
	Student		Huvudhandledare	30
2025	Student, Ana Guerreiro Morais		Huvudhandledare	
2025	Student, Isabella Savela		Huvudhandledare	
2025	Student, Olivia Myrén		Huvudhandledare	
2025	Student, Sarah Sabri Matti Hadaya		Huvudhandledare	
2025	Student, Stella Hauschild		Huvudhandledare	

Bidrag erhållna i konkurrens					
Period	Finansiär	Projektledare	Din roll	Delbelopp (kr)	Totalt belopp (kr)
2025 - 2026	Lund University, The Pufendorf Institute for Advanced Studies, Sverige - Universitet och högskolor	Aurelija Lukoseviciene, Kristina Hug	Medverkande	1 773 157	1 773 157
2024 - 2025	VINNOVA - Verket för innovationssystem, Sverige - Annan forskningsfinansiär	Ana Nordberg	Medverkande	1 000 000	1 000 000

Priser och utmärkelser				
År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2023	Sverige	Nomination for Stig Strömholm Prize	Faculty of Law, Lund University	

CV - Witlef Wieczorek

Medverkande forskare: Witlef Wieczorek
Födelsedatum: 19790120
Kön: Man
Land: Sverige

Dr-examen: 2009-12-17
Akademisk titel: Professor
Arbetsgivare: Chalmers tekniska högskola

Utbildning

Forskarutbildning			
Examen	Organisation	Avhandlingens titel	Namn på handledare
Doktorsexamen, 10302. Atom- och molekylfysik och optik, 2009-12-17	Ludwig Maximilian Universität München, Tyskland, Department of Physics	Multi-Photon Entanglement: Experimental Observation, Characterization, and Application of up to Six-Photon Entangled States	Harald Weinfurter

Utbildning på grund- och avancerad nivå	
År	Examen
2005	10304. Den kondenserade materiens fysik, Masterexamen, Technische Universität Berlin, Tyskland

Arbetsliv

Anställningar				
Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare	Övrig information
juni 2024 - Nuvarande	Professor, Tillsvidareanställning	100	Chalmers tekniska högskola, Sverige, Kvantteknologi	

Period	Anställning	Del av forskning i anställningen (%)	Arbetsgivare	Övrig information
april 2021 - maj 2024 (Nuvarande)	Associate Professor (Docent), Tillsvidareanställning	100	Chalmers tekniska högskola, Sverige, Kvantteknologi	
april 2017 - mars 2021 (Nuvarande)	Forskarassistent, Meriteringsanställning	100	Chalmers tekniska högskola, Sverige, Kvantteknologi	Tenure track position

Postdoktorvistelser		
Period	Organisation	Ämne
maj 2010 - mars 2017	University of Vienna, Österrike, Department of Physics	10302. Atom- och molekylfysik och optik
januari 2010 - april 2010	Ludwig Maximilian Universität München, Tyskland, Department of Physics	10302. Atom- och molekylfysik och optik

Uppehåll i forskningen	
Period	Beskrivning
2015-10-24 - 2016-01-31	Paternity leave
2014-11-27 - 2014-12-10	Paternity leave
2012-09-09 - 2012-11-08	Paternity leave

Meriter och utmärkelser

Docentur		
År	Ämne	Organisation
2018	103. Fysik	Chalmers tekniska högskola, Sverige, Kvantteknologi

Handledda personer			
År	Handledda personer	Lärosäte (handledd person)	Roll
2029	Doktorand, Alireza Hashemi	Chalmers tekniska högskola, Sverige, Kvantteknologi	Huvudhandledare
2028	Doktorand, Alexander Jung	Chalmers tekniska högskola, Sverige, Kvantteknologi	Huvudhandledare
2027	Doktorand, Fabian Resare	Chalmers tekniska högskola, Sverige	Huvudhandledare
2026	Doktorand, Achintya Paradkar	Chalmers tekniska högskola, Sverige, Kvantteknologi	Huvudhandledare
2023	Doktorand, Martí Latorre	Chalmers tekniska högskola, Sverige, Kvantteknologi	Huvudhandledare
2023	Doktorand, Sushanth Kini	Chalmers tekniska högskola, Sverige, Kvantteknologi	Huvudhandledare
2017	Doktorand, Jason Hoelscher-Obermaier	University of Vienna, Österrike, Faculty of Physics	Bihandledare
2026	Postdok, Hannes Pfeifer	Chalmers tekniska högskola, Sverige, Kvantteknologi	Huvudhandledare

År	Handledda personer	Lärosäte (handledd person)	Roll
2026	Postdok, Paul Nicaise	Chalmers tekniska högskola, Sverige	Huvudhandledare
2023	Postdok, Anastasiia Ciers	Chalmers tekniska högskola, Sverige, Kvantteknologi	Huvudhandledare
2023	Postdok, Gerard Higgins	Chalmers tekniska högskola, Sverige, Kvantteknologi	Huvudhandledare
2023	Postdok, Hanlin Fang	Chalmers tekniska högskola, Sverige, Kvantteknologi	Huvudhandledare
2020	Postdok, Matthias Rudolph	Chalmers tekniska högskola, Sverige, Kvantteknologi	Huvudhandledare
2022	Student, Avan Mirkhan	Chalmers tekniska högskola, Sverige, Kvantteknologi	Huvudhandledare
2022	Student, Fia Hellman	Chalmers tekniska högskola, Sverige, Kvantteknologi	Huvudhandledare
2021	Student, Johan Kolvik	Chalmers tekniska högskola, Sverige, Kvantteknologi	Huvudhandledare
2020	Student, Joey Frey	Chalmers tekniska högskola, Sverige, Kvantteknologi	Huvudhandledare
2019	Student, Karim Elkhoully	Chalmers tekniska högskola, Sverige, Kvantteknologi	Huvudhandledare
2025	Student, Johanna Örgård	Chalmers tekniska högskola, Sverige, Kvantteknologi	Bihandledare
2025	Student, Somiya Islam	Chalmers tekniska högskola, Sverige, Kvantteknologi	Bihandledare

Bidrag erhållna i konkurrens				
Period	Finansiär	Projektledare	Din roll	Totalt belopp (kr)
2025 - 2030	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Witlef Wieczorek	Projektledare	18 000 000
2024 - 2028	Europeiska Unionen (EU),	Witlef Wieczorek	Projektledare	22 000 000
2023 - 2028	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Witlef Wieczorek	Projektledare	27 000 000
2022 - 2023	Olle Engkvist stiftelse, Sverige - Annan forskningsfinansiär	Witlef Wieczorek	Projektledare	2 550 000
2022 - 2026	Europeiska Unionen (EU),	Witlef Wieczorek	Projektledare	30 000 000
2020 - 2023	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Witlef Wieczorek	Projektledare	3 200 000
2020 - 2022	VR - Vetenskapsrådet, Sverige - Annan forskningsfinansiär	Witlef Wieczorek	Projektledare	4 580 274
2020 - 2025	Knut och Alice Wallenbergs Stiftelse, Sverige - Annan forskningsfinansiär	Witlef Wieczorek	Projektledare	7 500 000
2020 - 2022	Carl Tryggers stiftelse, Sverige - Annan forskningsfinansiär	Witlef Wieczorek	Projektledare	499 500
2019 - 2021	Chalmers University of Technology, Sverige - Universitet och högskolor	Witlef Wieczorek	Projektledare	5 540 000

Priser och utmärkelser				
År	Land	Namn på priset/utmärkelsen	Utfärdare	Beskrivning
2025	Sverige	Wallenberg Academy Scholar	Knut och Alice Wallenberg stiftelse	
2019	Sverige	Wallenberg Academy Fellow	Knut och Alice Wallenberg stiftelse	
2012	Österrike	Marie Curie Action Intra-European Fellowship of the 7th framework program of the European Union	European Commission	Postdoctoral fellowship from 02/2012-04/2014
2010	Österrike	Feodor Lynen Research Fellowship for Postdoctoral Researchers, Alexander von Humboldt-Foundation	Alexander von Humboldt-Foundation, Germany	Postdoctoral fellowship from 12/2010-02/2012

Andra meriter		
Period	Typ av merit	Beskrivning
2009 - 2030	Reviewer for journals	Review activities include: Nature, Nature Communications, Scientific Reports, Physical Review Letters, Physical Review X, Physical Review A, Optics Express
2017 - 2030	Member in multiple PhD theses committees	
2022 - 2026	Head of the Quantum technology laboratory, Department of Microtechnology and Nanoscience, Sweden	Management and leadership responsibility for the Quantum technology division (65 employees)
2020 - 2025	Reviewer for various EU/US programmes	Reviewer DOE Office of High Energy Physics 2024 Reviewer for EU FET Open Horizon 2020 project Reviewer for Marie Skłodowska Curie actions Reviewer for ERC StG
2022 - 2024	Member of the International Quantum Technologies Network LeviNet: Levitation for Advanced Quantum Technologies	Member of the International Quantum Technologies Network LeviNet: Levitation for Advanced Quantum Technologies; Main PI: James Millen, KCL London, UK
2021 - 2022	Coordinating editor of Quantum - the open journal of quantum science (https://quantum-journal.org)	Coordinating editor of Quantum - the open journal of quantum science (https://quantum-journal.org)
2021 - 2022	Member of Chalmers central hiring committee	
2020 - 2022	Elected member of Chalmers Faculty Senate (fakultetsrådet)	
2016 - 2021	Editorial board member of Quantum - the open journal of quantum science	Editorial board member of Quantum - the open journal of quantum science (https://quantum-journal.org)
2017 - 2020	Co-organizer Linné-Colloquium Chalmers	Co-organizer of Linneaus Colloquium at Department of Microtechnology and Nanoscience, Chalmers. The colloquium addresses the field of Quantum Engineering.

Period	Typ av merit	Beskrivning
2019 - 2019	Outstanding Reviewers of 2018: Journal Quantum Science and Technology (IOP)	
2015 - 2015	Summer school lecturer	Summer Academy of the Studienstiftung des deutschen Volkes & Max-Weber Programme: jointly lead a work group with Prof. E. Malic on The fascinating world of quantum particles in Ftan, Switzerland
2012 - 2014	Marie Curie Action Intra-European Fellowship	Marie Curie Action Intra-European PostDoctoral Fellowship of the 7th framework program of the European Union, title "Optomechanical entanglement and teleportation", carried out at the Faculty of Physics, University of Vienna, Vienna, Austria
2010 - 2012	Feodor Lynen Research Fellowship for Postdoctoral Researchers	Feodor Lynen Research Fellowship for Postdoctoral Researchers, Alexander von Humboldt-Foundation, title "Optomechanical quantum entanglement and quantum teleportation", carried out at the Faculty of Physics, University of Vienna, Vienna, Austria
2006 - 2009	Elitenetwork of Bavaria: PhD student of the PhD program of excellence	Elitenetwork of Bavaria, PhD student of the PhD program of excellence "Quantum Computing, Control and Communication" at the Faculty of Physics, Ludwig-Maximilians-Universität München, Munich, Germany
2006 - 2008	PhD fellowship of the German Academic Scholarship Foundation	PhD fellowship of the German Academic Scholarship Foundation at the Faculty of Physics, Ludwig-Maximilians-Universität München, Munich, Germany
2002 - 2005	Student fellowship of the German Academic Scholarship Foundation	Student fellowship of the German Academic Scholarship Foundation at the Department of Physics, Technical University Berlin, Berlin, Germany

Immaterialrätt

Immaterialrätt					
Typ	Datum för beviljning	Status	ID	Licensierad till annan	Produkt klassificering
Patent application		Beviljad	2450131-4	Sverige - Företag (även statliga och kommunala bolag samt statliga affärsdrivande verk)	26. Datorer, elektronikvaror och optik

Registrera

Villkor

Ansökan ska förutom av den sökande även signeras av behörig företrädare för medelsförvaltaren. Företrädaren är vanligtvis prefekten vid den institution där forskningen ska bedrivas men beror på medelsförvaltares organisationsstruktur.

Signering av den *sökande* innebär en bekräftelse av att

- uppgifterna i ansökan är korrekta och följer Vetenskapsrådets instruktioner
- eventuella bisysslor och kommersiella bindningar har redovisats för medelsförvaltaren och att det där inte framkommit något som strider mot god forskningssed
- de tillstånd och godkännanden som krävs finns innan forskningen påbörjas, exempelvis tillstånd från Läkemedelsverket eller godkännande från Etikprövningsmyndigheten respektive djurförsöksetisk nämnd
- sökande kommer att följa samtliga övriga villkor som gäller för bidraget.

Signering av *medelsförvaltaren* innebär en bekräftelse av att

- den beskrivna forskningen eller forskningsstödande verksamheten kan beredas plats vid medelsförvaltaren under den tid och i den omfattning som anges i ansökan
- den sökande kommer vara anställd vid medelsförvaltaren under den tid som ansökan avser
- medelsförvaltaren godkänner kostnadsberäkningen i ansökan
- medelsförvaltaren kommer att följa samtliga övriga villkor som gäller för bidraget.

Ovanstående punkter ska ha diskuterats mellan parterna innan företrädaren för medelsförvaltaren godkänner och signerar ansökan.