

# University of Luxembourg

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## Highlights 2023



UNIVERSITÉ DU  
LUXEMBOURG





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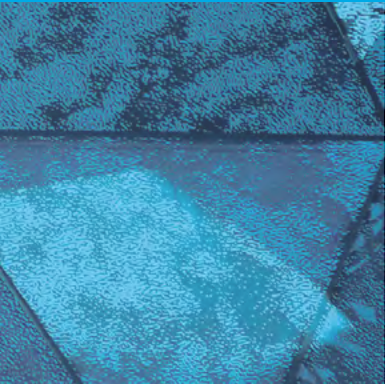
Sophie Margue: pages 1, 6, 8, 9, 10, 11, 14, 15, 16, 17, 24, 25, 28, 29, 30, 31, 46, 47, 48, 50, 51, 53, 55, 60, 62, 64, 65, 72, 75, 78, 79, 85, 86, 87;  
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## Rector's message

In 2023, I had the privilege of assuming the role of rector as the University of Luxembourg celebrated its 20<sup>th</sup> anniversary. At a commemorative ceremony, we expressed our gratitude to our partners and supporters and were graced by the presence of the Grand Duke, the Prime Minister, esteemed alumni, and over 600 distinguished guests. As part of our lecture series themed "20 Years of Ideas," our researchers shared their findings and solutions for the challenges of tomorrow with an audience exceeding 1,500 attendees.

This special anniversary represents two decades marked by pioneering international research, modern pedagogy, and dedicated service to society. In 2023, we continued to embark on a journey of innovation and progress, tackling key priorities with determination and passion. From advancing digital transformation initiatives to researching key issues in health and sustainability, our collective efforts have propelled our University forward.

In teaching, we've made tangible strides with the introduction of new programmes like the Bachelor's programmes in Nursing Sciences, directly supporting the Luxembourg health system. Our research endeavours have also garnered international recognition, as evidenced by our ranking of 135<sup>th</sup> worldwide in the CWTS Leiden Ranking in terms of the proportion of top 10% most frequently cited publications.

Additionally, strategic appointments within our leadership team have fortified our operational capabilities. With nearly 2,500 dedicated employees, we stand as one of the country's largest employers, reflecting our commitment to growth and excellence.

Explore the University's noteworthy achievements in research, teaching, and societal contributions over the past year in our annual report.

Happy reading!

**Jens Kreisel**





Explore the University's noteworthy achievements in research, teaching, and societal contributions over the past year in our annual report.

Jens Kreisel



# Rector's view



Through 20 years of commitment to students, research and society, we have made the University a strong partner for Luxembourg.

”

Prof. Jens Kreisel,  
Rector

Prof. Jens Kreisel

## *What made you particularly proud in 2023, your first year in office?*

Graduation Week with over 1,600 graduates was a special experience. For the first time, we awarded more than 200 doctoral students their degrees – a record for our still-young University. In teaching, we provided a lot of new impetus: I particularly remember the launch of the Bachelor's courses in Nursing Sciences and the first cohort of graduates from our Bachelor in Medicine. Both of these programmes support Luxembourg's important healthcare system. In research, several of our scientists have received awards. We also raised a record amount of third-party funding, a clear sign of the international quality of our research and its innovative strength. Overall, the University has continued to grow in stature.

With the new Vice-Rectors Simone Niclou and Marie-

Hélène Jobin and Director of Administration and Finance Marc Grabowski, we have completed our leadership team in the past year. Today, the University is one of the largest employers in Luxembourg with almost 2,500 employees.

## *After celebrating its 20<sup>th</sup> anniversary, the University is now entering a new decade. Where does it stand today?*

Through 20 years of commitment to students, research and society, we have made the University a strong partner for Luxembourg. What began as a unique experiment for our country has long since shown its value. Our profile as an international research university with an interdisciplinary outlook and a focus on excellence in all missions has proven its worth.

Our anniversary guests were impressed by the breadth of our scientific activities, which encompass everything from the



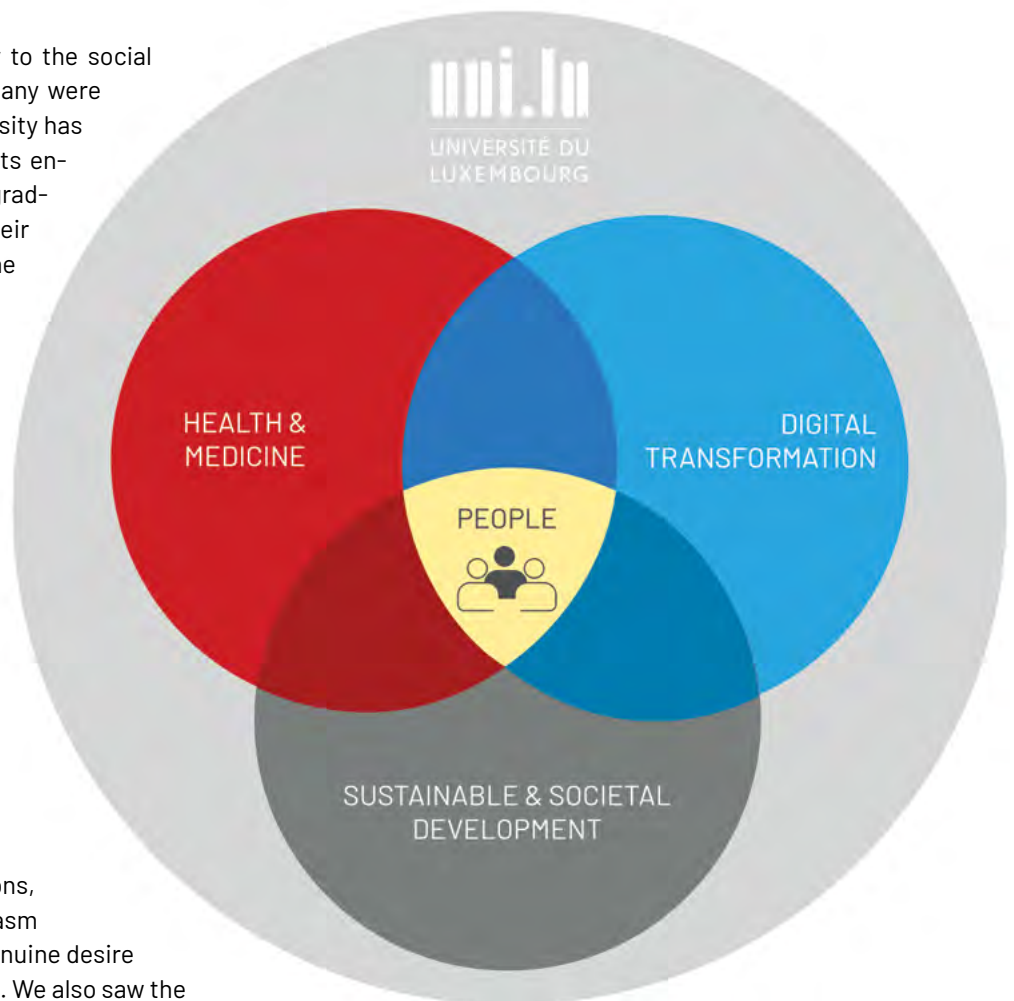
natural sciences and technology to the social sciences and humanities. And many were delighted to learn that the University has over a thousand doctoral students enrolled and that over half of our graduates stay in Luxembourg for their first job, bringing their talent to the country.

*You set out with the aim of promoting internal dialogue. What have you achieved?*

The many personal discussions I had with students, academics, administrative staff and visitors were instructive and inspiring. In autumn, our Rectorate team visited each of the 13 Faculty departments and all three Interdisciplinary Centres and discussed activities across all three missions and ideas for future strategy with our researchers. During the discussions, there was a great deal of enthusiasm for high-quality teaching and a genuine desire for interdisciplinary collaboration. We also saw the strengths of our research confirmed. We learned too that our researchers very much welcome the University's focus areas: Medicine and Health, Digital Transformation, and Sustainable and Societal Development.

*The University regards interdisciplinarity as a "superpower". How is it wielding that power?*

I am convinced that by exploring the interdisciplinary intersections between our focus areas, we can tap into a wealth of knowledge that is important for society. The Institute for Advanced Studies (IAS) has established itself as an important instrument for interdisciplinary projects at the University. The IAS is already funding 33 projects. In the area of sustainable development, we are making progress in establishing an Interdisciplinary Centre for Environmental Systems – a hub for research, education and practice – because environmental systems are complex and require a holistic view of technology in conjunction with the social sciences and humanities.



The University's three focus areas

*The University recently founded the Luxembourg Centre for European Law, which integrates over 50 former employees and the activities of the former Max Planck Institute Luxembourg (MPI). How do the MPI's research focuses fit into the University's strategy?*

Law and European law have long been among the University's areas of excellence. The integration of the MPI allows us to complement and strengthen our academic portfolio. Current political issues in the European Union, such as the digital and green transitions, and European sovereignty in the face of geopolitical change, raise many legal questions and occupy the Luxembourg-based European Court of Justice. With new research on these issues, the University is helping to bring the country to the forefront of European legal expertise and thus secure Luxembourg's position as a European hub. ■





A person with long dark hair, wearing a light-colored long-sleeved shirt and jeans, is sitting on a blue beanbag chair. The background shows a modern interior with a staircase and a large pillar. A semi-transparent blue overlay covers the middle section of the image, where the text is located.

# Milestones in 2023

# Milestones in 2023

## Cape Verdean President José Maria Neves visits Belval Campus

In May 2023, Cape Verdean President José Maria Neves and First Lady Débora Katisa Carvalho visited Belval Campus.

The visit showcased collaborations between the University of Luxembourg and the University of Cape Verde, with a special emphasis on potential partnerships and research projects. The presidential couple also met with Cape Verdean students and researchers.

## German President Frank-Walter Steinmeier visits the LCSB

In July, German President Frank-Walter Steinmeier and his spouse, jurist Elke Büdenbender, visited Belval Campus at the invitation of Their Royal Highnesses the Grand Duke and the Grand Duchess.

The first stop was the Luxembourg Centre for Systems Biomedicine (LCSB), where the visitors learned about the LCSB's groundbreaking research on neurodegenerative diseases like Alzheimer's and Parkinson's.

Both President Steinmeier and HRH the Grand Duke were particularly interested in the transition to digital medicine.

Minister Claude Meisch (left), the Grand Ducal couple, Elke Büdenbender and the German President visit the LCSB's facilities.

I am very proud to see that Luxembourg is at the forefront of research in digital medicine, with the support and commitment of the population.

”

HRH the Grand Duke





## HRH the Grand Duchess welcomes new nursing students

In September, Her Royal Highness the Grand Duchess visited Belval Campus to welcome students onto the University's four new Bachelors in specialised nursing sciences.

The occasion was an opportunity for the 47 new students to get acquainted with the facilities and chat to their professors. The welcome was kicked off by Prof. Simone Niclou, Vice-Rector for Research, and Prof. Serge Haan, Vice-Dean of the Faculty of Science, Technology and Medicine, who stressed how important these new courses are for Luxembourg.

## The University of Luxembourg moves further up the rankings

In the Times Higher Education World University Rankings 2023, the University of Luxembourg achieved its highest scores ever in the Research and Industry Income categories and ranked 4<sup>th</sup> worldwide in International Outlook, cementing its place among the world's leading universities in that category. It also ranked 25<sup>th</sup> worldwide in the Times Higher Education Young University Rankings 2022.

In September, the QS World University Rankings 2024 ranked the University of Luxembourg 381<sup>st</sup> worldwide and 160<sup>th</sup> in Europe, putting it among the top 26% of universities worldwide.



# Milestones in 2023



January



Prof. Jens Kreisel begins his mandate as Rector of the University of Luxembourg. "Our University can already look back on a successful history for Luxembourg and is full of ambition. It is an honour and a privilege for me to continue to write this history, to promote and stimulate cutting-edge international research, innovative teaching, and service to society", Prof. Kreisel said at his inaugural speech.

The University launches a new Master's programme in Cybersecurity, together with Université Libre de Bruxelles and Université Bretagne Sud.

February



Building on foundations forged back in 2010, the University extends the ArcelorMittal Chair of Steel Construction until 2025, in partnership with the ArcelorMittal Foundation. The focus is on investigating innovative steel-based solutions, with a strong emphasis on sustainability and reducing greenhouse gas emissions.



Prof. Robert Harmsen is appointed dean of the Faculty of Humanities, Education and Social Sciences. His goal is to strengthen the Faculty's international presence and its role in Luxembourg society, with a focus on expanding education programmes and contributing to key research priorities like sustainability and digital ethics.

March



The University's Centre for Contemporary and Digital History (C<sup>2</sup>DH) signs an agreement with the City of Dudelange that will give researchers access to municipal archives to study the historical migrations that have shaped the city's urban, social and cultural identity.



The University launches the Bachelor en Formation Pédagogique. The new one-year course, which is open to those with an existing Bachelor's degree in another field, trains students to become qualified primary school teachers – this will help to meet the demand for teaching staff in Luxembourg.

April



Prof. Marie-Hélène Jobin, a Canadian national and former Vice-Rector for International Relations at HEC Montréal, is appointed Vice-Rector for Partnerships and International Relations, completing the University's leadership team.

Prof. Jobin's portfolio includes strategy development in key areas such as international relations, knowledge and technology transfer, and public and private partnerships.



PwC Luxembourg partners with the University to celebrate graduates of the Certificate in Sustainable Finance, strengthening the connection between academia and industry. This collaboration underscores the shared importance of Environmental, Social and Corporate Governance (ESG) and Sustainable Finance in shaping a successful and environmentally friendly future.





May



In collaboration with law firms Arendt & Medernach and Elvinger Hoss Prussen, the University establishes a Chair in Investment Funds Law and the first Master's programme in Europe dedicated to this discipline. The curriculum will provide specialised training for professionals in the Luxembourg investment funds sector, addressing the industry's growing demand for skilled talent.



Prof. Yves Le Traon is appointed the new director of the Interdisciplinary Centre for Security, Reliability and Trust (SnT). Prof. Le Traon, who has been deputy director of SnT since 2020, has extensive experience in computer science and software engineering, and brings a deep understanding of the University and of Luxembourg to his new role.

June



Currently, heavy-duty trucking contributes significantly to road transport emissions in the EU. To address this, the Interdisciplinary Centre for Security, Reliability and Trust (SnT) and Gulliver, a tech company based in Luxembourg and Italy, announce a partnership to develop an AI-based solution to make logistics operations more efficient and more sustainable.



Two University researchers, Francelle Cane and Marija Marić, are selected to represent Luxembourg at the 2023 Venice Architecture Biennale with their project Down to Earth – a critical unpacking of space mining through the perspective of resources.

July



We put satellites into space – but how do we take care of them once they're up there? The Interdisciplinary Centre for Security, Reliability and Trust (SnT) launches AI4Space, its very own in-space experiment, which aims to enhance anomaly detection in satellite temperature patterns using advanced machine learning algorithms. This innovation could significantly improve satellite health by detecting issues in real time, potentially extending their lifespan.



The University signs an agreement with Cigale asbl, Luxembourg's centre for support, training and empowerment for LGBTIQ+ people, to offer on-campus support for staff and students. The University of Luxembourg is firmly committed to equality, diversity and respect for all individuals, regardless of their sexual orientation or gender identity.



Pascal Bouvry, Professor of Computer Science and Head of High-Performance Computing infrastructure at the University, is appointed dean of the Faculty of Science, Technology, and Medicine. He brings to the role a unique blend of academic and industrial expertise in advancing STEM education.

September



How can Luxembourg's voters make more informed choices in elections? Smartwielen, an innovative online tool, helps citizens understand where candidates stand on key issues. It does this through a comprehensive questionnaire that matches voters' own political stances to those of parties, offering a valuable resource for informed decision-making.



20 ans – déjà ! The University of Luxembourg celebrates its 20th anniversary in the presence of 600 supporters including His Royal Highness the Grand Duke. In his speech, Prime Minister Xavier Bettel reflects on the journey towards the creation of the University, summing it up as "a good investment". (See also: "Celebrating 20 Years" from page 38.)



Luxembourg's Minister of Education Claude Meisch announces that the Max Planck Institute for European and Regulatory Procedural Law will be transferred to the University of Luxembourg on 1 January 2024, becoming a new Interdisciplinary Centre.



## October

- The academic year officially kicks off at the Rentrée Académique. Rector Jens Kreisel emphasises the symbiotic relationship between teaching and research at the University of Luxembourg, describing it as an opportunity for students to learn from accomplished professionals in their field.
- Two University researchers collect FNR Awards – Dr. Emanuele Penocchio takes home the FNR Award for Outstanding Thesis, and Dr. Dominique Santana wins the FNR Award for Outstanding Promotion of Science to the Public for her transmedia documentary *A Colônia Luxemburguesa*.

## November

- Three University professors – Prof. Michael Heneka, Prof. Alexandre Tkatchenko and Prof. Paul Wilmes – earn a place on the prestigious Highly Cited Researchers list for 2023. This recognition is reserved for individuals who have demonstrated significant and broad influence in their fields of research.



## December

- The nine newly elected members of the Board of Governors begin their mandate. They will serve a five-year term.



Prof. Björn Ottersten, the founding director of the Interdisciplinary Centre for Security, Reliability and Trust (SnT), ends his mandate. Prof. Ottersten's 15 years of leadership shaped the SnT into the vibrant research centre it is today.

Graduation Week sees 1,600 students receive their diplomas, including the first graduates of the Bachelor of Medicine, the Bachelors in Mathematics, Physics and Engineering, and the Masters in Data Science and in Technopreneurship.













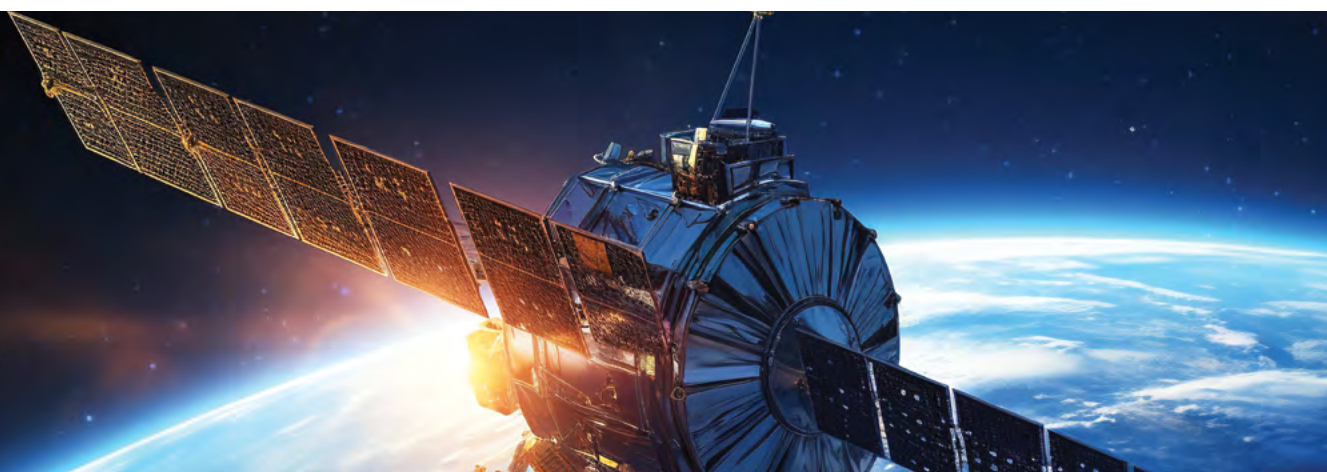
# Research at the University's Faculties

# Unravelling quantum mysteries

Physicists and materials scientists from the University of Luxembourg might revolutionise our understanding of how molecules interact with each other, unravel the intricate dance of atoms and molecules, and pave the way for groundbreaking discoveries in chemistry and medicine.

From tiny single molecules to complex biological systems like proteins and DNA, the research project “Field-Theory Approach to Molecular Interactions” (FITMOL) aims to provide the tools to explore and manipulate the molecular world. More concretely, FITMOL contributes to modelling and comprehending intra- and inter-molecular interactions within complex and expansive molecular systems - from elucidating the behaviours of individual molecules to unravelling the complexities of biomolecular assemblies, including solvated protein-protein and enzyme-DNA complexes.

With the fourth Advanced Grant from the European Research Council in hand, the professor of theoretical chemical physics, Prof. Alexandre Tkatchenko, can lead his team into the next phase of their research. Armed with 2.5 million euros, they explore how large molecules and materials behave, unlocking new insights and discoveries along the way. ■



## Navigating the skies to innovate weather forecasting

Have you ever been caught in the rain without an umbrella, ending up completely soaked? If so, you've probably wished for a way to make weather forecasts more reliable! Fortunately, progress is being made in this area through collaborative efforts between the University of Luxembourg and the United Kingdom Met Office, the national meteorological service for the UK.

This cooperation is instrumental in generating information about the troposphere and ionosphere. Tropospheric data is a crucial component in various weather models used for predicting weather globally or in Europe, ultimately enhancing weather forecasts. On the other hand, ionospheric information is vital for predicting space weather, a critical aspect for global communication networks, satellite operators, and power grids.

In September 2023, Prof. Rebecca Teferle from the Department of Engineering and her team started a new cooperation with the Met Office in utilising atmospheric data derived from Global Navigation Satellite System (GNSS) observations. This agreement allows both groups to work together to add more GNSS constellations or devise better ways to process the information they collect. So you can be ready for rain next time. ■





## Exploring science through comics

Ready to embark on an out-of-this-world journey with the University of Luxembourg's latest science comic "LUX:plorations – A Universe of Research," exploring space colonies and Earth-bound discoveries? Readers can now explore the life of the protagonist Najma, who travels through mind and space, or go on a treasure hunt on a Belval campus map.

In 2023, this third volume of the comic stories was released. For this new LUX:ploration, the German storyteller Veronika Mischitz and the comic expert Jessica Burton, who is a doctoral graduate from the Luxembourg Centre for Contemporary and Digital History (C<sup>2</sup>DH), supervised doctoral candidates and comic artists to produce an entertaining story about science and research in Luxembourg. Additionally, hands-on science activities related to the comic's themes were made available at exhibitions and events in Luxembourg.

The comic is available for free and can be downloaded from [sciencecomics.uni.lu](https://sciencecomics.uni.lu). Veronika Mischitz summarises the creative collaboration with the following words: "LUX:plorations is a dream come true: a group of highly motivated experts from different fields joining forces and creating outstanding science comics as a result!" ■





# How physical proximity powers knowledge spillovers

A team of researchers including Prof. Benjamin Balsmeier, associate professor in Entrepreneurship and Innovation at the University of Luxembourg, have devised a novel method using patents from inventors who died after filing as an experiment to isolate knowledge spillovers. Their findings suggest that having knowledge workers concentrated in one place is attractive from both an individual as well as a policy perspective.

Over the years, researchers have attempted to use patents as proof of knowledge transfer – but they compared

different inventions, casting doubts on the validity of the results.

Prof. Benjamin Balsmeier and his co-authors introduced a completely new strategy: they looked at patents filed by several inventors, but where one of the co-inventors died after filing.

The results of the study suggest that the physical proximity of inventors plays a significant role in facilitating knowledge spillovers among inventors, scientists and corporate researchers ■



# Why closer is still better when it comes to our social interactions

In today's digital age, where a click can connect us with someone halfway across the globe, it's tempting to believe that distance no longer shapes our social interactions. However, a study co-authored by the University of Luxembourg's Prof. Pierre Picard challenges this notion. Despite the expansive reach of the internet, people tend to interact more with those geographically nearby.

The researchers developed a theoretical model to explore how geographical distance affects social capital: the value derived from social interactions. Their findings highlight a trade-off: while increasing social capital through frequent interactions with socially active individuals is beneficial, it often requires costly travel.

The study suggests that improving urban transport infrastructure could enhance social capital by reducing the barriers posed by geographical distance, ultimately fostering stronger social bonds and potentially driving economic growth through increased social interactions among businesses and workers. ■

# The imperative of retaining foreign talent for a brighter future

What happens to foreign students after they earn their degrees? Do they stay and contribute to the local workforce, benefitting firms near their alma maters? These questions hold immense significance for host countries, particularly as many higher education institutions rely on government subsidies.

Addressing these issues, a recent paper in the *Journal of Public Economics* by Prof. Michel Beine and the post-doctoral researcher Morgan Raux from the University of Luxembourg looked at US data spanning the past 15 years to shed light on the complex relationship between international student migration and local labour markets.

The findings unveil a significant drain of foreign talent during the transition from academia to the workforce, with only a fraction of bachelor's and master's degree holders securing their first jobs in the same state they studied in.

This research highlights the importance to retain foreign students in their graduating countries: to maximise the potential economic and societal benefits for host nations – and ultimately create a brighter future for students. ■

# Advancing inclusive education in Luxembourg and beyond

In a new study on European public schools, researchers of the Faculty of Humanities, Education and Social Sciences (FHSE) pave the way towards a more inclusive and dynamic educational system both in Luxembourg and beyond. The study focuses on the six state-run European schools in the country established by the government over the past seven years.

As a first recommendation, the researchers advocate for a more inclusive and equitable educational environment. They envision in a second recommendation a future where parents are well-informed partners in their children's educational journey, working collaboratively with educators to ensure the best possible outcomes. The third and final recommendation suggests introducing features of European schools such as diverse language offerings into national curricula.

The journey toward educational excellence will continue. ■



# Thousands of genes contribute to our intelligence

Genes play a significant role in shaping the structure and function of the brain, influencing various behaviours. Researchers from the University of Luxembourg and the Ruhr University Bochum provide new insights into the link between genes and behaviour. Prof. Robert Kumsta, one of the study's authors, explains: "We focus on the interplay between genes and stress exposure to understand how different types of stress contribute to mental health problems."

When the researchers looked at how genes relate to brain features without considering intelligence test scores, they discovered many connections all over the brain. But when they focused on how brain features relate to intelligence, they found fewer connections. And when they looked at all three things together – genes, brain features, and intelligence test scores – they only found connections in a few areas of the brain.

The findings revealed specific brain regions where genetic variations influence brain characteristics, subsequently impacting intelligence. This innovative approach also holds promise for future research, potentially shedding light on various traits and their genetic underpinnings. ■






# Research in practice: Housing Day 2023

Do housing policies and markets impact inequalities within and between nations? During Housing Day 2023, a get-together of experts from science and practice, participants had the opportunity to discuss current housing research and practices and engage in discussions on policy-related topics directly impacting Luxembourg's residents and workers.

In Luxembourg, housing policy plays a crucial role in shaping social and economic opportunities, wealth accumulation, and levels of inequality.

Housing Day 2023 complements the PROactive Policymaking for Equal Lives (Propel) project, which assembles a diverse research team dedicated to exploring both theoretical and practical aspects of housing. Their goal is to devise effective solutions for structuring housing policies that address inequality in Luxembourg. ■



Lindsay Flynn, Associate Professor in Political Science, orchestrated the event, with a clear focus on advancing solutions in the domain.





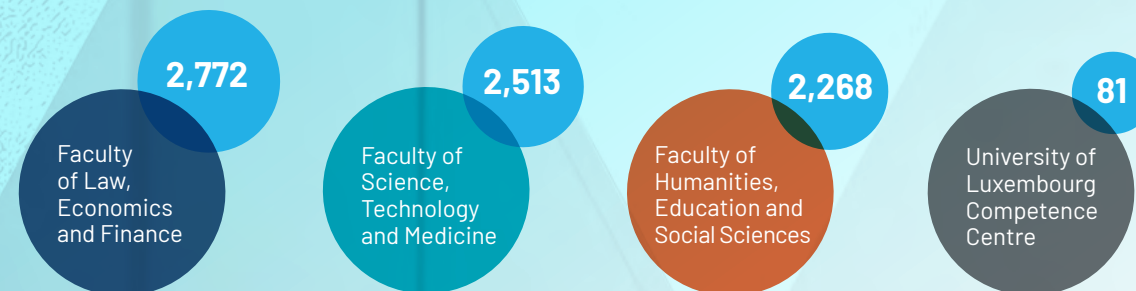


# Facts and Figures

## Student registrations by degree



## Student registrations by faculty



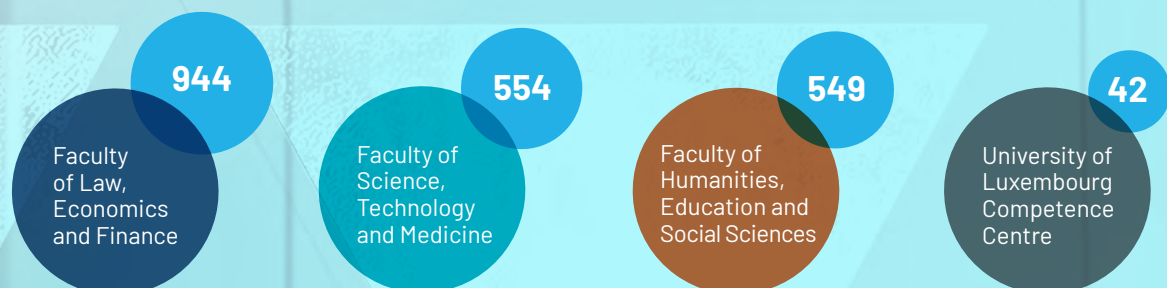
Total number of student registrations: **7,636**



## Graduates by degree



## Graduates by faculty



Total number of graduates: **2,089**

Total student nationalities: **140**

## University staff

**1,292**

Academic staff  
postdocs

**586**

Administrative  
staff

**316**

Technical staff

**305**

Academic staff  
professors

Total staff: **2,499\***

\* Headcount as at 31 December 2023



## Publications 2023

Total  
publications:  
**2,583**

**1,737**

Journal papers

**310**

Book chapters

**34**

Authored  
books

**454**

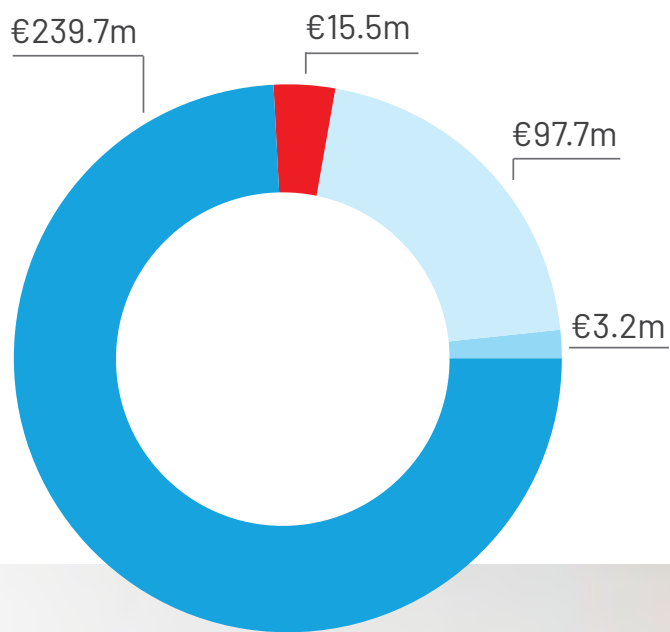
Conference  
proceedings

**48**

Edited books

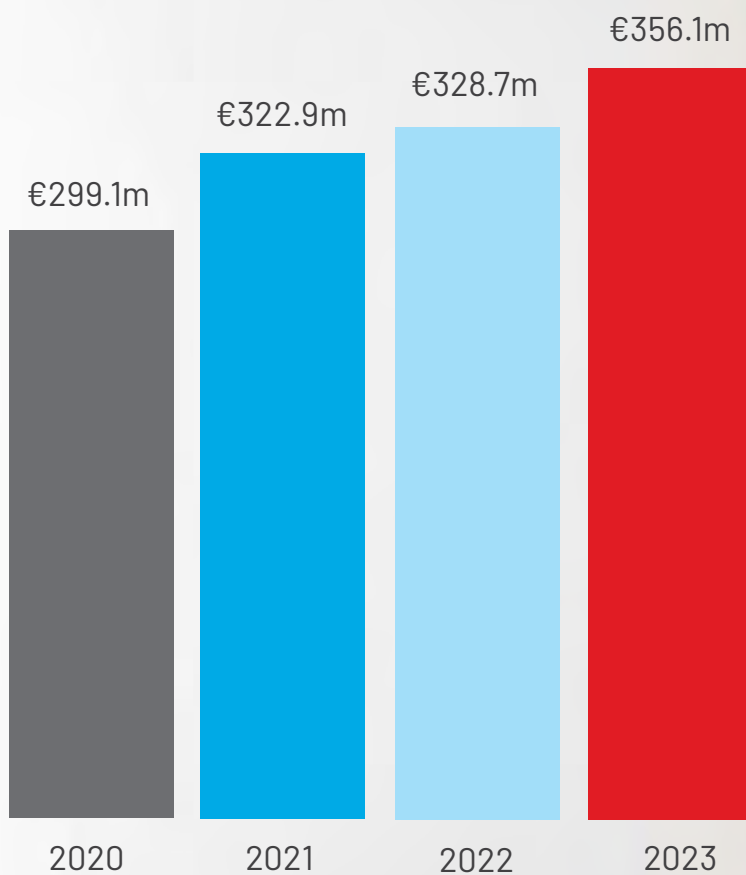


## University Budget in 2023



- State endowment
- Third party funding
- Self funding
- Other

## Budget Evolution 2020-2023







A yellow robotic arm is the central focus, positioned in a laboratory or industrial setting. The arm is yellow with black joints and is mounted on a base. In the background, there are white cabinets and a blue gas cylinder. The text "Research at the University's Centres" is overlaid on a blue semi-transparent banner across the middle of the image.

# Research at the University's Centres

# Pioneering the future of finance in Luxembourg

If Luxembourg is to stay competitive as a financial centre, it needs to embrace digitalisation – and all that comes with it. In March 2023, the National Centre of Excellence in FinTech (NCER-FT) was inaugurated. The Centre's interdisciplinary approach will be crucial for developing solutions to the challenges of digitalisation in finance.

The Centre's research roadmap focuses on four topics: new frontiers for digital and automated finance; regulatory technology and compliance by design; financial inclusion; and trust and security.

Yuriko Backes, Luxembourg's then Minister of Finance, welcomed the creation of the centre: "By focusing on cutting-edge interdisciplinary research, the NCER-FT will play a key role in helping to develop new talent, increase competitiveness and strengthen our Fintech ecosystem to drive the digital transformation of our financial sector."

To quick-start the initiative, a total of 14 interdisciplinary projects are being launched in the two-year ramp-up phase. ■



From left to right: Minister Claude Meisch, Prof. Catherine Léglu, Prof. Arnaud Dupuy, Minister Yuriko Backes, Marc Schiltz, Prof. Herwig Hofmann, Prof. Yves Le Traon

# Bolstering Luxembourg's cyber defences with CyberHub

In November 2023, the Luxembourg Directorate of Defence announced the launch of a Competence Hub in Research in Cybersecurity and Cyber Defence (CyberHub), in partnership with the University's Interdisciplinary Centre for Security, Reliability and Trust (SnT).

The goal of the initiative is to bolster the country's ability to defend itself against cyber-attacks – which are becoming increasingly sophisticated and harder to detect. The University will support the government's Cybersecurity Strategy IV and Cyber Defence Strategy through research, technology transfer, and education.

"With the CyberHub, we will increase Luxembourg's capabilities in this crucial area," said Prof. Björn Ottersten, founding director of the SnT. "Cybersecurity and cyber defence are topics that impact many domains, and our interdisciplinary method ensures a holistic approach to our work in this area. By launching this CyberHub, we can expect to see benefits for many related activities in Luxembourg's public and private sectors." ■



# Optimising electric car charging for sustainable change

To drive the green transition, Luxembourg wants just under half of its vehicle fleet to be electric. But how will the energy grid meet this surging demand while relying on renewable energy sources – which are known for their volatility?

Researchers from the INDUCTIVE project, funded by a donation from the Enovos Foundation under the aegis of Fondation de Luxembourg, have devised a pilot decision-making system that would allow electric vehicle (EV) charging stations to automatically begin charging at the most favourable time for the consumer – in other words, when electricity prices are at their lowest.

The system is just one of the outputs of the research project, which is proposing technological solutions to optimise EV charging while meeting the needs of users, energy providers and grid managers.

The INDUCTIVE team spent two years looking at several parameters to gain an in-depth understanding of the scenarios drivers and providers might face during the charging process and come up with ways to better respond to these.

The project's findings open the door to an array of potential innovations in the energy market and target a future where EV charging will be optimised and automated from the provider level all the way to the driver. ■

Luxembourg is a global leader in electromobility. Combining and optimising the use of renewable energy in electric car charging, as the INDUCTIVE project has done, is a real asset in accelerating the phasing out of fossil fuels.



Claude Turmes,  
then Minister for Energy and Spatial Planning



# A breakthrough discovery for diagnosing Parkinson's disease

What if we could accurately diagnose Parkinson's disease from a simple blood test? In May 2023, a team of researchers from Japan and Luxembourg published some ground-breaking results in *Nature Medicine* that constitute a major step towards making this a reality. They have shown, for the first time, that pathological forms of the alpha-synuclein protein found in patients' blood can be used to diagnose Parkinson's disease and distinguish it from several other neurodegenerative disorders.

Aggregation of this protein is a characteristic hallmark of a group of disorders called synucleinopathies, which include Parkinson's disease, dementia with Lewy bodies and multiple system atrophy. Currently, diagnosing these disorders is a lengthy process involving clinical examinations and medical imaging, and distinguishing between the different disorders is challenging.

The Japanese scientists developed a novel method to detect very small amounts of  $\alpha$ -synuclein in the blood and conducted a large-scale screening of patients with different synucleinopathies. They teamed up with researchers from Luxembourg to benefit from the unique longitudinal clinical and neuropathological database established during the past decade in the country, as part of the National Centre of Excellence in Research on Parkinson's Disease. The collaboration proved successful, paving the way for improved diagnostics.

"We are very proud to contribute to this pioneering research," said Prof. Rejko Krüger, director of Transversal Translational Medicine at the Luxembourg Institute of Health and head of the Translational Neuroscience group at the Luxembourg Centre for Systems Biomedicine (LCSB). "It illustrates the importance of large cohorts for which comprehensive data have been collected to address major unmet needs of people with Parkinson's disease." ■

## Launching BRAINS into outer space

In March 2023, an interdisciplinary team of five University of Luxembourg students successfully launched midbrain organoids to the International Space Station (ISS). After more than a year of preparation, the students watched the launch of this first experiment from Luxembourg on the ISS on board a SpaceX Falcon 9 rocket live at the Kennedy Space Centre. The experiment was part of the BRAINS (Biological Research using Artificial Intelligence for Neuroscience in Space) research project which aims to understand the growth of midbrain 3D cell cultures in microgravity.

Midbrain organoids are essential to study the brain and gain insights into neurodegenerative diseases such as Alzheimer's and Parkinson's. The aim of the project, selected in the framework of the Überflieger 2 student competition run by the German Space Agency and the Luxembourg Space Agency, was to further improve these research models by investigating the effect of microgravity on their development. "We expected our organoids to

grow larger and less densely packed on the ISS," explains Elisa Zuccoli, leader of the BRAINS team and PhD student in the Developmental and Cellular Biology group at the Luxembourg Centre for Systems Biomedicine (LCSB).

The project was a collaboration between the LCSB, who oversaw the biological side of the experiment, and the Interdisciplinary Centre for Security, Reliability and Trust (SnT), whose innovative contribution is the CUBE LAB: an automated mini laboratory designed to supply the cell cultures with nutrients and keep them at body temperature while onboard the ISS.

After 30 days in outer space, the organoids returned to the LCSB laboratories in Luxembourg, where they are being analysed using high-content microscopy and artificial intelligence and compared with the control experiment performed back down on Earth. ■





From left to right: Prof. Simone Niclou, Prof. Paul Wilmes, HRH the Hereditary Grand Duchess, Dr Elisabeth John

# Celebrating 10 years of the Scienseens Lab

At the Scienseens Lab, secondary school pupils from across the Greater Region get the chance to put down their textbooks, don lab coats and goggles, and get stuck into some truly hands-on experiments.

Since its creation by the LCSB in 2013 on Belval campus, the lab has welcomed over 14,000 budding young scientists with workshops to ignite their interest in multiple areas of science, from biology and physics to mathematics and computing.

The Scienseens Lab has since expanded its outreach efforts to include summer schools and recently launched Test IT, a free online platform ([testit.uni.lu](http://testit.uni.lu)) where teens can dive head-first into computer science, learning both by themselves and by interacting with experts. The lab now plans to introduce further activities focused on sustainable development – including workshops on CO<sub>2</sub> and energy storage – as well as a Scienseens Academy dedicated to cancer research.

In October 2023, the Scienseens Lab celebrated 10 years of success with an event attended by Her Royal Highness

It is an important initiative to anchor the University into Luxembourg's society and to promote scientific research to young people. These emerging talents will tackle the challenges of the future. Congratulations to the whole team and happy birthday to the Scienseens Lab!

Jens Kreisel

the Hereditary Grand Duchess of Luxembourg and more than a hundred guests, who got to try their hand at some interactive activities. ■





## Uncovering remarkable stories from "The Station of the Stars"

Radio Luxembourg emerged from one of the world's smallest countries to influence generations of listeners across the globe. In July 2023, the Luxembourg Centre for Contemporary and Digital History (C²DH), supported by partners Samsa Film and the Centre national de l'audiovisuel (CNA), launched **"Radio Luxembourg – the station that changed our world"**, a documentary research project exploring the station's fascinating history.

During its heyday in the 50s and 60s, Radio Luxembourg became a magnet for international talent, drawing in some 100 million daily listeners from all over the world. It was the first radio station ever to play a Beatles song live on air, and the Rolling Stones, the Beach Boys and Elton John were just

some of the big names that visited the station's iconic Villa Louvigny studios in Luxembourg City.

Radio Luxembourg moved out of the Villa Louvigny in 1991, marking the end of a golden era in radio history.

Researchers will interview former disc jockeys, listeners and stars and critically revisit official and more intimate archives to construct a 360-degree transmedia platform that will catapult Radio Luxembourg's history into the limelight once again.

*"Radio Luxembourg – the station that changed our world"* is sponsored by the Luxembourg National Research Fund and Film Fund Luxembourg. ■



# Preserving memories for future generations

“Histoiresch gesinn” can mean both “historically speaking” and “historically seeing” in Luxembourgish. In the same way, this three-year project launched in June 2023 aims to get the public involved in Luxembourg’s history through both audio and visual means, bridging cultural institutions and the public.

Led by principal investigator Joëlla van Donkersgoed, the collaborative project serves as a sustainable social hub where the Luxembourg Centre for Contemporary and Digital History (C²DH) and institutions like the Lëtzebuerg City Museum can engage with Luxembourg residents about ongoing historical research, providing somewhere for them to contribute their personal testimonies and photographs. Two of the project’s main outputs will be an

online open-access photo archive through crowdsourcing, and a multilingual audio tour with oral histories.

“Histoiresch Gesinn” will bring hidden knowledge into the open, preserving memories and heritage and making them accessible for scholars and history enthusiasts in the years to come. ■



## Gábor Mihály Tóth wins the 2023 Richard Deswarte Prize in Digital History

Thanks to molecular physics, we now know that solidarity and social cohesion were stronger among women than men at Auschwitz-Birkenau.

Researchers have long sought to produce evidence that the behaviour of men and women at the camp differed. However, perpetrators often destroyed documentation, and victims’ experiences are scattered across thousands of oral history interviews, which would be too time-consuming to analyse manually.

Gábor Mihály Tóth, a researcher at the Luxembourg Centre for Contemporary and Digital History, used concepts from molecular physics to systematically analyse an ensemble

of 6628 survivor testimonies, allowing him and his team to compare how men and women remembered their time in the camp. They found that not only were women more likely to mention and engage in acts of solidarity and social bonding.

In October 2023, Gábor Mihály Tóth and his co-authors won the 2023 Richard Deswarte Prize in Digital History for their article, ‘Studying Large-Scale Behavioral Differences in Auschwitz-Birkenau with Simulation of Gendered Narratives’. The findings give compelling insights into social dynamics during a dark period of history, and reveal the potential for collaboration between history, computer science and physics in exploring cultural heritage. ■







The background of the entire image is a light blue-grey color, decorated with numerous small, out-of-focus, colorful confetti pieces in shades of red, orange, yellow, pink, and blue. A solid blue horizontal band spans the middle of the image, serving as a backdrop for the text.

# Celebrating 20 years

# 20 years of research, 20 years of success

# 2003 - 2023



The adoption of the Higher Education Act **12 on August 2003 marks the creation of the University of Luxembourg**. Four institutions are combined into the new university, which is established in response to calls for an economic reorientation in Luxembourg.

The aim of the new institution is to attract intellectual potential back to the country and to offer an education to anyone who cannot study abroad. The objective is to create a research-centred, international and multilingual university.

**A first Board of Governors** is appointed with Raymond Kirsch as its Chair.

2003

Under the leadership of the new **Rector Rolf Tarrach**, the University presents its first Strategic Framework for the next four years and launches several new Bachelor programmes.



The Government decides about the future site of the University: the administrative departments, the Science Faculty and the Humanities Faculty will be housed on the Belval-West brownfield site in the future **"Cité des Sciences"**.

2005

2004

The first Rector of the University of Luxembourg, the French Canadian **François Tavenas**, passes away in February 2004.

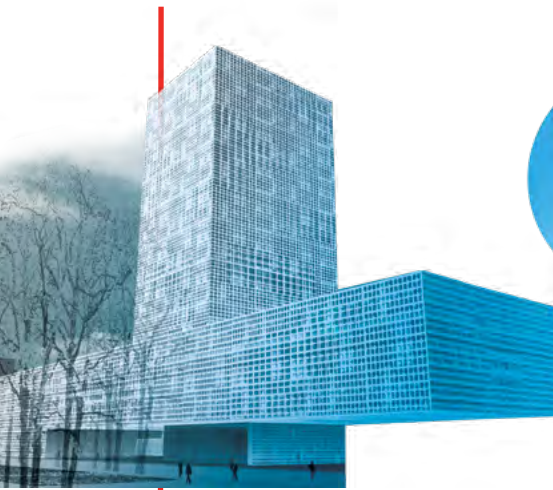


2006

The Japanese manufacturer TDK Corporation endows the University with €3.5 million for **a first funded chair to research** solar cell materials using compound semiconductors.

The **first agreements** are signed with **foreign universities**, for example with **Chinese universities** during the Luxembourg state visit to China.





The plan for the University's central building in Esch-Belval, the "**Maison du Savoir**", is presented to the public.

The University's first spin-off company, resulting from its Life Sciences Research Unit, is launched in the field of health technology.

**2007**



The University's first interdisciplinary research centre is launched: the Interdisciplinary Centre for Security, Reliability and Trust (SnT), under the leadership of Björn Ottersten.



Rudi Balling is appointed as the founding Director of the future Luxembourg Centre for Systems Biomedicine (LCSB), the University's second interdisciplinary centre.

The new Board of Governors and its Chair, Raymond Kirsch, are appointed.

**2009**



The House of Biomedicine – the first University building on the new campus in Esch-Belval housing the Luxembourg Centre for Systems Biomedicine (LCSB) – is inaugurated.

**2011**

**2008**

Five years after it was founded, the young University has 4,000 students – including 200 PhD students –, nearly 30 study programmes, approximately 20 partnerships with foreign universities and 150 professors and lecturers.

The Government announces a strategic partnership initiative with three US research institutions to develop a centre of expertise in molecular medicine.

**2010**



A major partnership agreement is signed with the global satellite operator SES. It includes a Chair in Space Law and an important cooperation agreement with the SnT.

The world's largest steel producer, Arcelor-Mittal, finances a Chair in Façade Engineering, and Deutsche Bank announces the funding of a Chair in International Finance.

20 years of research, 20 years of success

# 2003 - 2023

The new Chair of the Board of Governors, judge **Marc Jaeger**, is appointed.

The **doctoral education framework** was **approved**, leading to the creation of the Doctoral school of Law. Today, the University has four doctoral schools: of Law, in Science and Engineering, in Humanities and Social sciences, and in Economics, Finance and Management.

An **agreement with the Max-Planck Institute Luxembourg** for International European and Regulatory Procedural Law is signed.

As part of an **official visit to Luxembourg**, the **Secretary-General of the United Nations, Ban Ki-moon**, gives a speech to students of the University of Luxembourg.



2012



Inauguration of the **largest University hall of residence**: UNI-VAL I in Belval.

The University's **third Four-Year Plan** (2014-2017) **highlights strategic** and other research priorities.

2014

2013

The **foundations are officially laid** for the University's "House of Numbers" and "House of Arts and Students" as well as for the University library - the "House of Books" - **in Esch-Belval**.



2015

The University administrative staff and the Faculty of Language and Literature, Humanities, Arts and Education **move to Belval Campus**, the new headquarters of the University.

The Luxembourg National Research Fund creates a **National Centre of Excellence in Research on Parkinson's disease** (NCER), coordinated by Rudi Balling, Director of the University's Luxembourg Centre for Systems Biomedicine (LCSB).

Rainer Klump takes office as the new Rector of the University.

The **University is ranked 193<sup>rd</sup> worldwide** in the Times Higher Education (THE) World University Rankings 2015-2016.



The Government appoints **Yves Elsen** as the **third Chair** of the Board of Governors.

The **Luxembourg Centre for Contemporary and Digital History (C<sup>2</sup>DH)** is **launched** as the University's third interdisciplinary centre.



2016



The University and the OGBL union conclude a first **collective bargaining agreement**.

Stéphane Pallage, the **new Rector** of the University, **takes office on 1 January**.

Adoption of a **new Higher Education Law**.

2018



The University celebrates its **1000<sup>th</sup> doctoral graduate**.

The University plays a central role in Luxembourg's **COVID-19 Task Force**.

Launch of the University's **Institute for Advanced Studies**.

2020

2017

**Prof. Stéphane Pallage** is appointed as the **new rector**, taking office in 2018.



2019

The University publishes its **digital strategy**.

Preparations begin for a full **Bachelor's degree in medicine**.



20 years of research, 20 years of success

# 2003 – 2023



The University launches its **new AION supercomputer** and is chosen to lead the first pan-European Master's programme in **High Performance Computing**.

Development of a **long-term Strategic Framework** until 2039.

2021



# 20 YEARS

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UNIVERSITÉ DU  
LUXEMBOURG

2023

2022



**Jens Kreisel**, Vice-Rector for Research, is appointed as the **new Rector** of the University, taking office on 1 January 2023.

The **University** and the **Ministry of Higher Education and Research** sign a new **multi-year contract** covering the period 2022-2025.





## 20 Years of Ideas

Throughout winter 2023/2024, the University brought its research to the wider Luxembourg community with its science lecture series "20 Years of Ideas". The series was organised on the occasion of the anniversary year and allowed members of the public to discover science made in Luxembourg from across all areas.

Some 1,500 participants attended lectures across the University's campuses and at Luxembourg City's Neimënster Abbey, discovering science and solutions from the world of tomorrow.

The well-attended presentations showed that there is a great interest among the public in finding out more about the research activities of the country's only University. ■



## Celebrating 20 years dedicated to students, research and society

Throughout 2023, the University of Luxembourg celebrated 20 years of dedication to students, research and society. The highlight was a special 20th anniversary ceremony – an entertaining mix of speeches, interviews with graduates, specially composed music, the presentation of the new University video and a huge birthday cake. The event was attended by His Royal Highness the Grand Duke, the then Prime Minister, members of the government, and close to 600 of the University's friends, partners, graduates and supporters.

During the ceremony, Chairman of the Board of Governors Yves Elsen addressed the audience, delving into the past with media headlines from 2005. While many were dubious about the future of the new institution, he said that most of them have now been proven wrong in light of the University's achievements and position today. He thanked the current and previous governments and the University's many donors for their support throughout the years, noting that the University has used their support wisely and will continue to act as a pillar for society in the future.





From left: Georges Mischo, former mayor of Esch-sur-Alzette; Minister Claude Meisch; Kristin Ingólfssdóttir, former member of the Board of Governors; Prime Minister Xavier Bettel; HRH the Grand Duke; Chairman Yves Elsen; Rector Jens Kreisel

Rector Jens Kreisel turned the spotlight on those who contributed to the success of the University: people like Erna Hennicot-Schoepges, former Minister of Culture, Higher Education and Research, who he said had been “proven right” in her conviction for the need for a knowledge society, and former rector Rolf Tarrach, who he called the “architect of the University”. He also praised the staff and students who each day add building blocks to the University’s development. The rector concluded by outlining the three success factors that will shape the University: interdisciplinarity, people and partnerships.

Claude Meisch, then Minister for Higher Education and Research, summed up some key milestones from the preceding 20 years and some major developments for the years to come, noting the University’s contributions in areas of interest for the country. The then Prime Minister Xavier Bettel concluded that 20 years after the University’s creation, he sees the University not as an expense, but as a good investment. ■



1



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- 1 Yves Elsen, Chairman of the University's Board of Governors, HRH the Grand Duke, and Rector Jens Kreisel cut the University's 20<sup>th</sup> anniversary cake.
- 2 Luxembourgish musician Pol Belardi performed his piece Soniversary, composed especially for the occasion.
- 3 Prime Minister Xavier Bettel gave a speech in which he looked back on the journey towards the creation of the University, summing it up as "a good investment".
- 4 Notable University alumni from across several professional fields returned for a roundtable discussion.  
From left to right: Nathalie Reuter, Christophe Ley, Maria Grosbusch, Samy Picard, Beatriz García Santa Cruz.
- 5 The University's new mascot, Léiwi the red lion, made its debut appearance.
- 6 Members of University staff among the audience at the anniversary ceremony.
- 7 The rector chats to HRH the Grand Duke and keynote speaker Professor Dame Sarah Springman, Principal of St Hilda's College, University of Oxford.



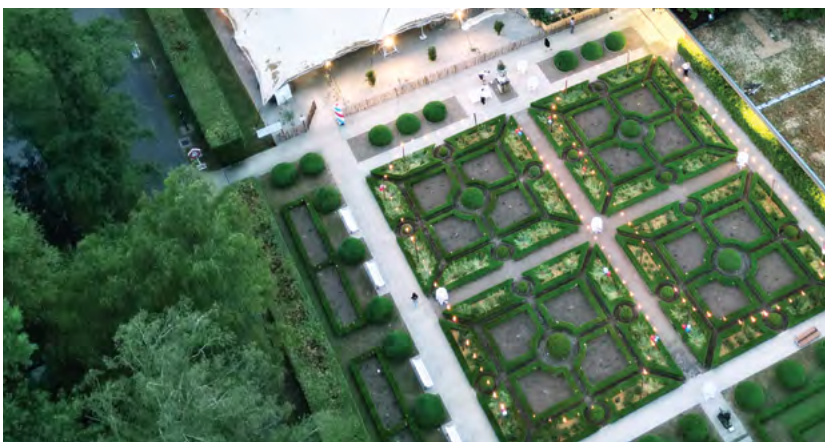
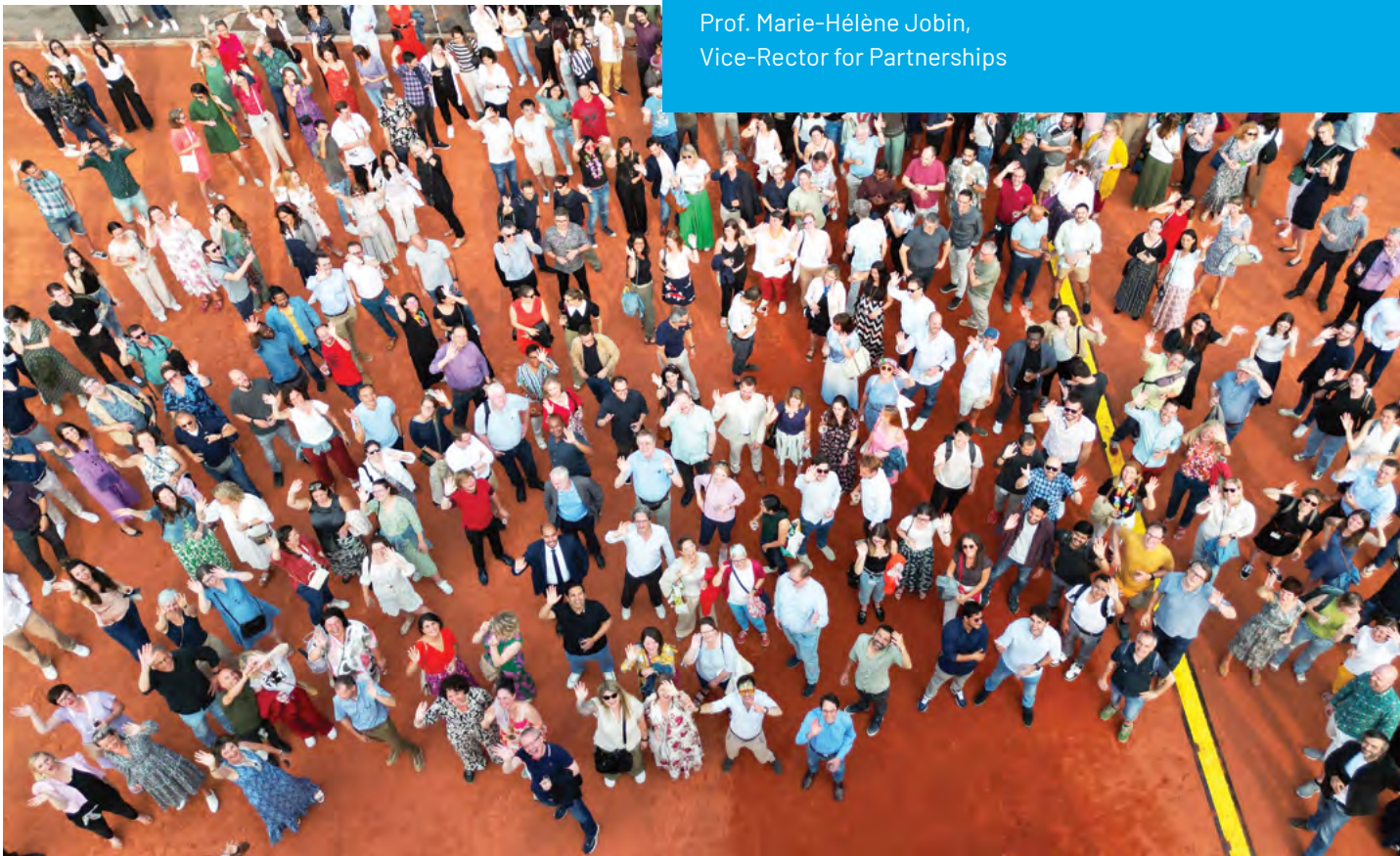
# Celebrating 20 years of success

"This year's Staff Party holds particular significance as we celebrate the University's 20th anniversary. I can affirm that we have ample cause for celebration and pride in our collective achievements." With these words resonating in the warm June air, Prof. Marie-Hélène Jobin, the newly appointed Vice-Rector for Partnerships and International Relations, welcomed over 700 academic and administrative staff to the University's summer festivities. Recognising the array of talent present, she observed: "it's truly remarkable to witness such a diverse assembly of scientists and administrative professionals gathered in one place. Today, it's abundantly clear: we stand as one University!" The picturesque Orangerie at the Mondorf

thermal spa area provided the backdrop as staff members celebrated two decades of shaping the University's journey. ■

It's truly remarkable to witness such a diverse assembly of scientists and administrative professionals gathered in one place. Today, it's abundantly clear: we stand as one University!

Prof. Marie-Hélène Jobin,  
Vice-Rector for Partnerships









The background of the image is a photograph of a study area. It features a light-colored wooden shelf at the bottom, a grey acoustic foam panel with a triangular pattern in the upper right, and a green plant with long, thin leaves. A large, semi-transparent blue banner is overlaid across the middle of the image, containing the text 'Studying at the University' in white.

# **Studying at the University**

# New study programmes in Nursing

What strides has Luxembourg made in nursing education and practice, and how does the University of Luxembourg support this vital field? In response to the long-term needs of Luxembourg's healthcare sector, the government has tasked the University with developing several specialised study programmes in Nursing. These initiatives aim to enhance the quality of care and elevate the appeal of the nursing profession.

In September 2023, the University introduced four new specialised Bachelors in Nursing Sciences, aimed at professionals who have already attained a degree in general nursing. The four programmes provide specialist training in either anaesthesia and resuscitation, surgical medical technical assistance, paediatrics, or psychiatry.

The programmes are part of a broader effort to gradually roll out a total of seven new Bachelor programmes in the health sector. After the launch of the first four specialisation programmes, three additional specialisation programmes will commence in 2024, focusing on general care, midwifery, and medical imaging.

All programmes will blend academic rigour with hands-on training in both inpatient and outpatient settings, using innovative and interactive teaching methods. Prof. Laurence Bernard and Prof. Marie Friedel, the study directors, emphasise the importance of interdisciplinary collaboration and research in nursing sciences to address future clinical challenges.

Additionally, the University has expanded its medical offerings with specialised programmes in general medicine, medical oncology, and neurology, catering to the evolving needs of the healthcare sector. ■

All these programmes make it possible to train more health professionals in Luxembourg to meet the growing demand of the country with regards to the sustainability of a qualitative and efficient health system.

Claude Meisch, then Minister of Higher Education and Research







## Bachelors in Nursing

- Bachelor en Sciences infirmières – Spécialité : Infirmier en anesthésie et réanimation
- Bachelor en Sciences infirmières – Spécialité : Assistant technique médical de chirurgie
- Bachelor en Sciences infirmières – Spécialité : Infirmier en pédiatrie
- Bachelor en Sciences infirmières – Spécialité : Infirmier psychiatrique

# New Master's degrees in Law and Sciences

Besides the Bachelor's programmes in Nursing, the University introduced several other new study programmes tailored to meet the evolving needs of today's world. Among these additions are the Master en Droit des fonds d'investissement, providing in-depth legal expertise in investment funds, and the Master in High Performance Computing, equipping students with advanced computational skills essential for research and industry applications.

Additionally, the Erasmus Mundus Joint Master in Cybersecurity offers a comprehensive interdisciplinary approach to addressing contemporary cybersecurity challenges. A new track within the existing Master in Mathematics, titled Mathematical Modelling and Computational Sciences, provides expertise in mathematical techniques essential for tackling complex real-world problems.

Furthermore, the EurIdentity Certificate programme provides students with a nuanced understanding of European identity and culture, enhancing their global perspective and intercultural competence. ■



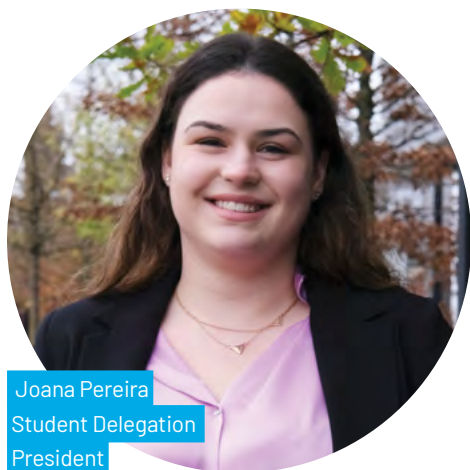


The background of the image shows a student with long blonde hair, seen from the back, sitting at a desk in a library or study area. A computer monitor is visible on the desk, displaying a website. The scene is dimly lit, with a bright light source coming from a window on the left, creating a strong contrast and casting shadows. The overall color palette is dominated by the blue of the student's hair and the purple/pinkish tones of the background.

# Student life

# Student life at the University of Luxembourg

Life beyond the classroom is just as important as what happens within it. That is why the University of Luxembourg supports initiatives aimed at helping students to embrace new experiences and make lifelong connections.



Joana Pereira  
Student Delegation  
President

## By students, for students: building a community

Information, action, protection – that’s how the University’s Student Delegation sum up their mission for their 2023–2024 mandate. One of their responsibilities is to contribute to student life – something which was top of their list in 2023: “Our focus has been to continue building a community. We want all students to feel like they truly belong here,” explains Joana Pereira, currently serving her second term as Student Delegation President. “We have supported many clubs and associations, for example the chess club, the volleyball club, and the Student Association for Campus Life SAUL who operate the student lounges on Belval and Kirchberg campuses.”

To spread the word about the work they do, the Student Delegation’s philosophy is to meet students where they are – out in the community. “If there’s an event going on, we’re there”, says Jinyuan Wang, PhD Student Delegate. “This way, students find out about us and then go and tell their friends. We also have office hours where students can drop by and see us.”

Luxembourgish student Kim Vasiljevic, 24, who is enrolled on the Master in Psychology – Psychological Intervention, is also an active contributor to life on campus. “Lots of Luxembourgish students go straight home once classes are over. I was maybe an exception because I really wanted to live my student life here,” she says. Kim became involved in several associations before teaming up with friends to set up the LGBT+ Students’ Association, which now has some 150 members.



Jinyuan Wang  
PhD Student Delegate

Espace Cultures, the University’s Cell for Culture Affairs, contributes to campus life through culture. Year-round, they organise a diverse range of cultural and intercultural events, aiming to expand perspectives and foster cross-cultural dialogue—a must when 60% of students hail from international backgrounds. In 2023, to name but a few initiatives, students and staff revealed their talents at regular open mic night The Stage is Yours, tinkered on the keys of the mobile piano, and attended cultural events throughout Luxembourg, with over 1,800 free tickets handed out to students in 2023. “It is a fantastic opportunity for students to discover institutions like the Philharmonie Luxembourg and the Grand Théâtre,” says Anouk Wies, the University’s Strategic Advisor for Cultural Affairs. ■





The Student Delegation 2023-2024: Mihajlo Miladinović (left), Guido Hoenig, Leonid Gnutov, Avery Joy Becker, Ulisse Saverio Bassi, Joana Pereira, Jinyuan Wang, Aswathy Kokkottil Sudevan

## Sustainability: for a greener university

To anchor sustainable development deeper into the University's activities, the University's Sustainability Office is focusing on six key areas: Communities Engagement, Energy Management, Fair Campuses, Responsible Procurement, Sustainable Mobility, and Waste Reduction. In 2023, many activities took place:

In line with Luxembourg's national strategy to reduce energy demand, the University took steps to reduce its consumption of natural gas, exceeding the target of 15% set by the Government. Moreover, the Sustainability Office and the Logistics Department expanded recycling efforts to include items such as electrical appliances, USB sticks and hard disks. To encourage sustainable transport, the Sustainability Office also worked with the Staff Delegation and the Infrastructure Department to continue promoting the car-pooling app Klaxit among employees as an alternative to single-occupancy car journeys. ■

Sustainability is not a fad that will go away. It is a huge societal challenge that must take into account climate change, the decline of biodiversity and the finiteness of our resources. As an institution of research and higher education, the University must advance understanding of these issues and train future decision-makers, experts and citizens.

Laurent Bétry,  
Sustainability Officer



## All we need is... gardeners

Homegrown veggies, wild flowers, grass to sit on... tucked away among Belval's modern infrastructure is Gaart Belval – a community garden open to anyone studying, working, or living in the neighbourhood. The vision behind the project, a non-profit association run by a group of volunteers, is to transform a previously unused space into a vibrant green pocket, bring people from the University and local community together, and offer workshops and events to educate the community on things like sustainable gardening practices, the importance of biodiversity, and the benefits of locally sourced produce. ■

# A record 200 PhD graduates

Doctoral candidates make an essential contribution towards the University's research mission. In 2023, a total of 207 graduates received their PhDs – exceeding the 200 mark for the first time in the University's history.

During the PhD graduation ceremony in December, Vice-Rector for Research Simone Niclou addressed the new graduates: "Doctoral candidates and their theses are the backbone of science. Your work strongly contributes to the University's research agenda and helps to make our country and our society fit for the future".

Rector Jens Kreisel added: "You succeeded. Your success is a source of great pride for all of us at the University". He emphasised that a doctorate is "a contact sport, not a spectator sport. It is about acquiring new knowledge

through research, pushing the boundaries of knowledge, destroying old certainties and testing new theories".

Luxembourg's Minister for Research and Higher Education Stéphanie Obertin congratulated the graduates for their "exceptional dedication to research and discovery" and thanked them for "contributing to the reputation of the scientific community of the University as well as of the country".

Dr. Pranjul Shah, manager of the University of Luxembourg Incubator, then introduced five Excellent Thesis awardees whose research made a particular contribution to bridging the gap between knowledge and society. The five graduates presented their theses, distilling their complex ideas into accessible and captivating messages for the audience. ■

## A total of 15 doctoral graduates were awarded the Excellent Thesis Award in 2023:

Name	Supervisor	Thesis title	Doctoral Programme	Doctoral School
Jordan Samhi	Prof. Jacques Klein	Analyzing the Unanalyzable: an Application to Android Apps	Computer Science and Computer Engineering	Doctoral School in Science and Engineering
Hao Cheng	Prof. Peter Y.A. Ryan	Efficient and Side-Channel Resistant Implementations of Next-Generation Cryptography	Computer Science and Computer Engineering	Doctoral School in Science and Engineering
Gabriel Tedgue Beltrão	Prof. Bhavani Mysore Rama Rao	Signal Processing Contributions to Contactless Monitoring of Vital Signs Using Radars	Computer Science and Computer Engineering	Doctoral School in Science and Engineering
Antoine Adjoud	Dr Pierre Verge	Design and synthesis of new lignin-based benzoxazine vitrimers	Physics and Material Sciences	Doctoral School in Science and Engineering
Daniele Proverbio	Prof. Jorge Goncalves	Classification and detection of critical transitions - from theory to data	Complex Systems Science	Doctoral School in Science and Engineering
Saurabh Deshpande	Prof. Stéphane Bordas	Data Driven Surrogate Frameworks for Computational Mechanics: Bayesian and Geometric Deep Learning Approaches	Complex Systems Science	Doctoral School in Science and Engineering



<b>Juntong Chen</b>	Prof. Yannick Baraud	Robust estimation in exponential families: from theory to practice	Mathematics and Applications	Doctoral School in Science and Engineering
<b>Alexej Simeth</b>	Prof. Slawomir Kedziora / Prof. Dr Peter Plapper	AI-based Computer Vision to Enable Robotic Automation in High Mix Low Volume Assembly	Engineering Sciences	Doctoral School in Science and Engineering
<b>Mina Tsenkova</b>	Prof. Elisabeth Letellier	Understanding the Role of Diet and Microbiome in Colorectal Cancer	Systems and Molecular Biomedicine	Doctoral School in Science and Engineering
<b>Mohaned Abd Moh Benzarti</b>	Dr Johannes Meiser	Elucidating the Metabolic Flexibility and Plasticity of One-Carbon Cycle in Cancer Cells within Stressful Metabolic Environments	Systems and Molecular Biomedicine	Doctoral School in Science and Engineering
<b>Moritz Rehm</b>	Prof. David Howarth	50 Years of Crises: the Development of the European Financial Assistance Regime	Social Sciences	Doctoral School in Humanities and Social Sciences
<b>Richa Maheshwari</b>	Dr Veronique Van Acker	Commuting satisfaction and subjective well-being: Linking life domains, workplace relocation, and working from home practices	Social Sciences	Doctoral School in Humanities and Social Sciences
<b>Morteza Ansarinia</b>	Prof. Pedro Cardoso Leite	Towards a Computational Model of General Cognitive Control Using Artificial Intelligence, Experimental Psychology and Cognitive Neuroscience	Psychology	Doctoral School in Humanities and Social Sciences
<b>Nicole Citeroni</b>	Prof. Stefan Braum	Systemic Economic Offences as a New Paradigm of International Crimes - Towards an Evolution or Revolution of International Criminal Law?	Law	Doctoral School in Law
<b>Aleksandr Ermakov</b>	Prof. Roberto Steri	Risk, Uncertainty and Valuation in Private Equity: a Multifaceted Approach via Investor Beliefs, Priors, Benchmarking and Fund Characteristics	Finance	Doctoral School in Economics, Finance and Management





# Teaching Awards: Shining the spotlight on pedagogy

A good teacher can make a lifelong impact –through the power of encouragement, igniting self-belief, or fostering a passion for learning that extends far beyond the classroom.

Through the University's annual Teaching Awards, students express their gratitude for teaching staff who they feel have genuinely enriched their learning journey. Every year, students from across all faculties cast their votes, acknowledging those teaching staff who stand out for excellent teaching skills and personal commitment.



**Prof. Markus Schäfer**

Full professor in structural engineering and composite structures

"Prof. Markus Schäfer is a great teacher because he cares about students' professional and academic development throughout their path" - Gabriel Frasson Nunes, a student on the Master in Civil Engineering.

Faculty of Science, Technology and Medicine

**Dr. Sri Sudha Vijay Keshav Kolla**

Postdoctoral researcher in manufacturing engineering

"Dr. Sri Kolla challenged me to always go the extra mile - not just to fulfil the requirements but to really do the best that I could" - Maximilian Amort, a student on the Master in Engineering - Sustainable Product Creation.

Faculty of Law, Economics and Finance

**Prof. Luca Ratti**

Associate professor of European and comparative labour law

"I started teaching because I wanted to learn. Bringing my own research into my lectures is a fantastic opportunity to exchange and further learn from students" - Prof. Luca Ratti.

**Prof. Thomas Kaspereit**

Associate professor in financial accounting

"I'm not surprised that Prof. Thomas Kaspereit won the Teaching Award. His passion for teaching is undeniable" - Andreia Ribeiro, a student on the Master in Accounting and Audit.

**Prof. Robert Kumsta**

Full professor of biopsychology

**Dr. Ineke Pit-ten Cate**

Research scientist in education

**Valentin Emslander**

Doctoral candidate in education

Dr. Ineke Pit-ten Cate and Valentin Emslander won a joint award for always pouring their motivation and passion into their course.

"They clearly showed a lot of experience with the topic, so we got a strong foundation of the theory as well as the application, which was valuable information" - Roxane Philips, a doctoral researcher at the Department of Behavioural and Cognitive Sciences.

Faculty of Humanities, Education and Social Sciences

**Advance HE Certificates**

Advance HE is a UK charity that works with institutions and higher education across the world to improve higher education for staff, students and society.

**The following colleagues obtained Advance HE Certificates in 2023:**

Veronika Lovrits, Dr. Alfredo Capozucca, Prof. Luis Leiva, Tarik Camo, Dr. Lorella Viola, Thomas Schroeder, Valentin Emslander, Hooman Eslami, Renan Lima Baima, Michael Philipp Adams, Maïte Franco, Shuai Mao, Dr. Asunción Bes Izuel, Salvador Rivas, Dr. Joella van Donkersgoed.

# Student Initiative Awards

## Roux magazine

If you've ever been on one of the University's campuses, you will have no doubt spotted an issue of **Roux**, the monthly magazine created "for students, by students". Their artfully illustrated issues, which focus on poetry, short stories and cultural events, have been bringing a splash of colour to the University since the magazine was founded in 2022.

Since then, the team have come a long way, collaborating with radio station RTL, the Contemporary Art Museum of Luxembourg (Mudam) and the cultural centre Rotondes – and it looks like that's only the beginning.



Fabio Conceição (left), Jennifer Jacquemin, Jason Billard, Zoltan Tajti, Sofia Miller, Kristina Shatokhina, Jo Yi Hoon, Valère Gaube, Eleni Mouzakiti, José Luis Fernandes Maia



Hooman Eslami (left), Rafieh Mosaheb, Samira Chaychi

## Iranian Student Association

The Iranian Student Association were awarded for their commitment to helping Iranian students to adapt to University life and integrate into Luxembourgish society. In March, fellow students got the chance to enjoy Iranian food, culture and music during the festivities for Nowruz, the Persian New Year.

## Honorary Mention

An Honorary Mention went to Ioanna Bagia for her work with her association Break the Cycle Luxembourg, which helps firefighters to respond to incidents of domestic violence. "Not many organisations are open to our topic – preventing family violence and child abuse," said Ioanna as she collected her award. "Thank you to the University and my Faculty for truly being open to the world and to this subject".





# Carving their own career path

"My first impression of Luxembourg was that it was very fairytale-like – especially the Grund, where my student accommodation was," recalls Ditta Bezdán, from Hungary, who graduated with a Master's in Entrepreneurship and Innovation in 2012 and has been in Luxembourg ever since. The 2-year programme provides students with the knowledge and skills to generate their own entrepreneurial solutions.

Ditta only planned to stay in Luxembourg for a year, but she built a strong network through her course, which helped her to become recognised on the Luxembourgish job market. "That's what led to me staying in the country. I love it here – it's very multi-cultural, diverse and welcoming."

Now, Ditta works for the European Investment Bank as an Application Manager and Banking Software Specialist. "I feel like I'm contributing to a greater goal while capitalising on my experience and background".

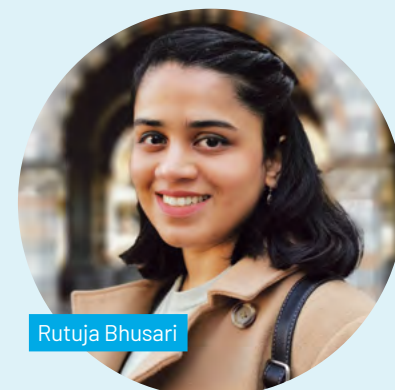


Ditta Bezdán

Rutuja Bhusari, now a Junior Research and Technology Associate in the Structural Composites team at the Luxembourg Institute of Science & Technology (LIST), first learned about the University of Luxembourg following a stint at one of India's most prestigious research institutions, the Bhabha Atomic Research Centre. "I heard about an opportunity to do a PhD in gas sensors through some senior alumni. The research project was exciting and the funding structure was very impressive".

One aspect Rutuja highlights about her time at the University was the chance to put her own stamp on things. "What I liked about the University of Luxembourg is that it's still young, so it is very open to feedback. There's such a mix of different cultures – it makes integration easier as people are very open to sharing".

As far as integration goes, you could say that Rutuja has done rather well – she met her partner during her studies and is now proud to be a Luxembourgish citizen.



Rutuja Bhusari

Filip Westerlund, originally from Sweden, is living proof that it's often worth straying from the beaten path. "I wanted to find my own niche, and the University allowed me to do that."

While finalising his Master's in Psychology in 2021, Filip was hard at work setting up a sustainable footwear company, Our Choice, that operates on a circular supply chain. "I looked down at my shoes and thought – why am I wearing plastic? I felt the urge to find a solution – so I started cold-calling factories," he explains.

With a business model that's all about inspiring positive changes in society, Filip's background in psychology proves useful: "I apply it every day. I'm fascinated by consumer behaviour and behavioural change," he explains. "I found my course very stimulating and got a lot of support."

Despite the success of his business, Filip isn't turning his back on the University anytime soon. "I'm still in touch with my professors – I still shoot them questions. I might go back and do research someday – I'll never close that door".



Filip Westerlund





A photograph of a modern building's interior, featuring a dark, industrial-style ceiling with exposed metal beams and three white cylindrical pendant lights. Below the ceiling, a blue semi-transparent overlay covers the middle section of the image. The background shows a multi-level atrium with glass railings and people on an upper floor. The foreground shows a grey carpeted area with a black metal railing.

# A Partner to Society

# Innovation in Luxembourg, for Luxembourg

Given Luxembourg's ambition to foster an entrepreneurial spirit, it only makes sense that the University has given birth to some of the country's most exciting startups and spin-offs.

Some ventures created at the University of Luxembourg during the year include WeConnect, which offers intergenerational coliving in Luxembourg, and MoveMe, which is developing a web application to simplify student relocation.

The University's research has also led to the creation of several spin-offs, 11 of which are currently active, and one of which was granted Societal impact company (SIS) status in 2023. A spin-off is a new company based on science, technical skills and assets (generally intellectual property – IP), created from the University's research activities.

One example of a successful University spin-off is LetzMath, which offers an individualised mathematics programme called Magrid for three- to nine-year-olds with special education needs. Another spin-off, OrganoTherapeutics,

uses innovative technologies for the discovery and development of effective drug candidates targeting Parkinson's disease.

The University also supports entrepreneurship and innovation within its student body through services like the Entrepreneurship Programme, which gives members of the University community the opportunity to participate in the Ideation Camp, an intense hackathon-like event where they can acquire business skills. The Entrepreneurship Programme also works closely with the University of Luxembourg Incubator, where ventures can continue their development while receiving mentorship and advice.

In 2023, the University of Luxembourg Incubator and the Entrepreneurship Programme supported over 40 ventures. One of the best-known is GoldenMe, which aims to get older people involved in the digital world. In June 2023, GoldenMe was awarded the 2023 Digital Inclusion Award from the Ministry for Digitalisation in the presence of His Royal Highness the Grand Duke. ■

The team behind E-mpact Pharma celebrate winning the 10<sup>th</sup> edition of the Ideation Camp organised by the University of Luxembourg Incubator and Entrepreneurship Programme. From left: Utkirbek Ruzmatov, Naghmeh Rahimi, Queen Lenya, Pedro Castilho, Nicolas Wiscour-Conter, Dilmurat Nurakhmetov





# "We want to shape good citizens for tomorrow"

A brighter future for children living in Luxembourg. That was one of the final wishes of André Losch, the businessman behind Luxembourgish car import giant Losch 48, who passed away in 2016 with no children of his own. His legacy endures through the André Losch Foundation, a steadfast supporter of the University of Luxembourg since its creation in 2009.

The collaboration between the Foundation and the University began in 2015 when Losch was still alive. He was personally involved in the first initiative – a project by Prof. Paul Wilmes at the Luxembourg Centre for Systems Biomedicine that investigated the influence of the gut microbiome on children's health.

Health is just one of the three areas that the André Losch Foundation focuses on, along with social inclusion and – perhaps most pertinently for the University – education.

"Education is the basis of a democratic society," affirms Daniela Ragni, the Foundation's Director since 2019. "Our focus in the field of education is to support critical thinking and initiative-taking among young people in the fields of science and sustainability. Through this, we want to create good citizens for tomorrow."

Among the Foundation's educational ventures in 2023 was a research project into gender in secondary school textbooks, which found that female characters were underrepresented.

Another project that the Foundation supports is Way2ESD, a PhD project that aims to anchor education for sustainable development more strongly in Luxembourgish primary schools. "Sustainability is essential for our future, so we have to start teaching children about it when they are young – it's never too early."

Daniela Ragni describes working with the University as a joy: "They take the time to understand what the Foundation's goals and interests are. When they approach us, the success rate is usually very high, because they understand what we like."

It would seem, then, that the University's projects must be producing results, as Daniela Ragni emphasises: "It is important for us to continue to support the University – education is essential."

"Ultimately," Daniela Ragni sums up, "by working together, we create more connections between academia and the rest of society". ■



Daniela Ragni

Working with the University is very enriching for both sides. We both contribute. Every time we take part in a project, we learn new ideas that we can then use in future initiatives.

Daniela Ragni



# LUCET and SCRIPT: working together for better schools

Luxembourg's education system is a complex one, with a superdiverse population and high demands on language learning. And it's changing fast. To effectively drive innovation in schools, the country's educational decision-makers need solid data.

Since as far back as 2007, the Luxembourg Centre for Educational Testing (LUCET) at the University of Luxembourg and the Department for the Coordination of Educational and Technological Research and Innovation (SCRIPT) – a department of the Ministry of Education – have collaborated in running the *Épreuves Standardisées* (ÉpStan). ÉpStan is a school monitoring programme that aims to provide evidence-based decision making in national education. They also work together on reporting on the Programme for International Student Assessment (PISA) and publishing the three-yearly *Bildungsbericht* education report.

Luc Weis, Director of the SCRIPT, Dr. Sonja Ugen, Head of LUCET, and Prof. Antoine Fischbach, Vice-Dean of the Faculty of Humanities, Education and Social Sciences and LUCET's former Head, reflect on their collaboration.

## *What is the shared goal of LUCET's and the SCRIPT's collaboration?*

**Luc Weis:** The one resource we have to meet the challenges of the 21<sup>st</sup> century is brainpower. But there needs to be transformation in the school system. To achieve that, we need to make research explainable so that we can bring teachers on board, because we cannot do anything without them.

**Prof. Antoine Fischbach:** If we want the system to change, we need to make people aware that the way things are functioning currently is not the right way. Through data, we have changed the educational dialogue from an opinion-based one to a fact-based one.

## *In July 2023, LUCET and the SCRIPT jointly published the European Public Schools (EPS) Report. What do the results tell us?*

**Luc Weis:** The results point in the direction that students at EPS perform better in mathematics, perhaps because the language of instruction is closer to their own language. Another observation that stands out is that EPS are not able to attract the people that we want



them to, suggesting that we need better communication with parents.

**Dr. Sonja Ugen:** It is very important to put the results into context. The data is preliminary and the samples are very small. One tentative finding was that primary school children at EPS tend to perform better in maths than those at Luxembourgish schools. A potential explanation could be that EPS allow students to choose the main language of instruction, helping them and their parents to better understand the content.

To reduce inequalities, EPS could be encouraged to target a more diverse population. Also, Luxembourgish schools could give more choice in the main teaching language. This is already happening through the French literacy acquisition pilot project currently running in some schools.

#### *What obstacles do you face in your collaboration?*

**LW:** We sometimes have different perspectives, because LUCET are coming from an academic point of view and we are looking at things on a policy level. We are looking for evidence we can use to change policy now so that it will have an effect in, say, 10 years' time. However, we must be careful not to take shortcuts, so we work very hard to ensure that LUCET retains its academic freedom.

**SU:** We are scientists so we are very cautious. Of course, we are happy to see changes in the educational system, but we

We exchange – and it can be in a critical way – in order to find solutions.

”

Dr. Sonja Ugen

work with data. We don't just produce the results that people want to see. It's important for us to remain credible and scientific.

#### *Both LUCET and the SCRIPT say that the collaboration works very well. Why is that?*

**LW:** We know and trust each other. We have also had a lot of continuity in the people working at LUCET. Dr. Ugen and Prof. Fischbach know they can call me at any time and vice versa.

**SU:** We talk to each other. It might sound very basic, but we exchange – and it can be a critical way – in order to find solutions.

**AF:** I think it is a model example of how such a collaboration should ideally function. We meet at eye level and with mutual respect. We each have our own limitations, but ultimately, we are both doing it for the cause. ■



Luc Weis



Prof. Antoine Fischbach



Dr. Sonja Ugen

# "A win-win-win: for the University, for the company and for Luxembourg"

## Prof. Bradley Ladewig on the Paul Wurth Chair in Energy Process Engineering

In 2021, the University of Luxembourg and Paul Wurth S.A., a Luxembourgish industrial engineering company founded more than 150 years ago, signed an agreement creating the Paul Wurth Chair in Energy Process Engineering.

Through the Chair, the two entities contribute to teaching and research activities in the area of green hydrogen and strengthen the pipeline of engineering talent available for the market in Luxembourg.

Prof. Bradley Ladewig, Vice-Dean of the Faculty of Science, Technology and Medicine, was appointed holder of the

Chair in 2022. In this interview, he looks back on his first full year in the position.

### *Why is research into hydrogen so important?*

Highly polluting carbon-intensive industries need to transition to cleaner, sustainable industries that bring wealth and jobs to Europe. The role of hydrogen in that is that some key sectors cannot decarbonise – they cannot become sustainable in any other way.

Cement and steel, the two most important structural materials on Earth, will both require huge quantities of green hydrogen in the future. These are two of the most obvious examples, but there are many other manufacturing and mobility applications where we will need green hydrogen to transition. Without it, we simply will not be able to, which means we'll keep polluting.

Cement and steel, the two most important structural materials on Earth, will both require huge quantities of green hydrogen in the future.

”



Prof. Bradley Ladewig







Green hydrogen is what makes transition possible. Without green hydrogen, it's a cliff. You'll keep polluting.

We want to learn from that and say look, let's not just let entire industries fail because we didn't support them strategically to make a transition onto a sustainable footing.

*What were your highlights from the Paul Wurth Chair in 2023?*

In November, our first very large externally funded project, Luxembourg Hydrogen Valley, commenced. The project consortium is led by the University and has 17 members, with the key industrial partners being Luxembourgish companies.

My second highlight would be our growing team. We now have three doctoral researchers and one project manager and have recruited one postdoctoral researcher. We've supervised one Master's thesis, are about to begin supervising a Bachelor's thesis, and I've completed two semesters of teaching. We also provided a new course in hydrogen systems at the Master's level in engineering. The course is exclusively about hydrogen, so it matches very nicely with the profile of the Chair.

*How does Paul Wurth S.A. support the Chair, and what makes its support so valuable?*

The most significant way they support us is through direct participation in projects. For example, Paul Wurth is one of the key industrial partners in Luxembourg Hydrogen Valley,

Green hydrogen  
is what makes  
transition  
possible. Without  
green hydrogen, it's a cliff.  
You'll keep polluting.



which has received 8 million euros in funding from Brussels. This funding will be spent almost entirely in Luxembourg.

The company also supports us through making connections and helping to build the professional network that allows the Chair to enter new projects.

Paul Wurth also helps the University to steer the strategic direction of the Chair. Twice a year, they send senior representatives to sit on the steering committee where they meet with University colleagues, evaluate the progress so far and set the future directions for the Chair.

*What are your ambitions for the Chair going forward?*

In 2024, we will reach the halfway mark through the initial five-year sponsorship term. It's my ambition to make this first five years a "win-win-win" – for the University, for Paul Wurth and for Luxembourg society. ■





## Our honorary professors

The title of honorary professor is an important symbolic designation which is given in recognition of a person's special contribution to the subject areas associated with the faculty's academic activities. The University of Luxembourg is proud to have 10 honorary professors in its midst.

Name	Initial entity	Faculty	Department
<b>Guy Berchem</b>	CHL	FSTM*	Life Sciences and Medicine
<b>Nico Haas</b>	General practitioner	FSTM	Life Sciences and Medicine
<b>Patrick Kinsch</b>	Barreau de Luxembourg	FDEF*	Law
<b>David Naccache</b>	Ecole normale supérieure, Paris	FSTM	Computer Science
<b>Bettina Peters</b>	Zentrum für Europäische Wirtschaftsforschung (ZEW), Mannheim	FDEF	Economics and Management
<b>Gaston Reinesch</b>	Banque centrale du Luxembourg	FDEF	Economics and Management
<b>Jean-Louis Schiltz</b>	Barreau de Luxembourg	FDEF	Law
<b>Hilmar Schneider</b>	Forschungsinstitut zur Zukunft der Arbeit (IZA)	FDEF	Economics and Management
<b>Marc Schlessler</b>	Hôpitaux Robert Schuman	FSTM	Life Sciences and Medicine
<b>Christian Wagner</b>	Universität des Saarlandes	FSTM	Physics and Materials Science

## Our affiliated professors

The title of affiliated professor is attributed to academics of a high professional skill for making a significant contribution to the educational missions of the university and its activities. The full list of affiliated professors at the University of Luxembourg for the year 2023 can be found below.

Name	Initial entity	Faculty	Department
<b>Jordi Cabot</b>	LIST	SnT*	Computer Science
<b>Martin Dijst</b>	LISER	FHSE	Geography and Spatial Planning
<b>Gunnar Dittmar</b>	LIH	FSTM	Life Sciences and Medicine
<b>Frédéric Docquier</b>	LISER	FDEF	Economics and Management
<b>Christina Gathmann</b>	LISER	FDEF	Economics and Management
<b>Kathryn Hadler</b>	LIST	SnT	Spatial Sciences
<b>Jorge Íñiguez</b>	LIST	FSTM	Physics and Materials Science
<b>Barbara Klink</b>	LNS	FSTM	Life Sciences and Medicine

\* FDEF: Faculty of Law, Economics and Finance; FSTM: Faculty of Science, Technology and Medicine; FHSE: Faculty of Humanities, Education and Social Sciences, LCSB: Luxembourg Centre for Systems Biomedicine; SnT: Interdisciplinary Centre for Security, Reliability and Trust

Name	Initial entity	Faculty	Department
Aline Muller	LISER	FDEF	Finance
Eugenio Peluso	LISER	FDEF	Economics and Management
Aline Muller	LISER	FDEF	Finance
Eugenio Peluso	LISER	FDEF	Economic Science and Business Administration
Pedro Rodriguez	LIST	SnT	Engineering Sciences
Romain Seil	CHL	FSTM	Life Sciences and Medicine
Marc Suhrcke	LISER	FDEF	Economics and Management
Lucien Hoffmann	LIST	FSTM	Life Sciences and Medicine
Ulf Nehrbass	LIH	FSTM	Life Sciences and Medicine
Michel Mittelbronn	LNS	LCSB	Medicine (Neuropathology)
Laurent Pfister	LIST	FSTM	Engineering

## Our visiting professors

A visiting professor is a professor at a university who is invited to teach at another university for a short period such as one term or one year. In 2023, University of Luxembourg was proud to host the following visiting professors.

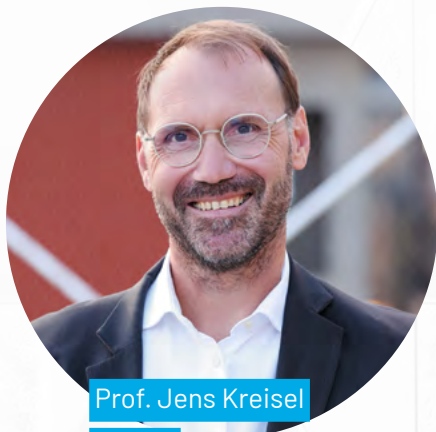
Name	Initial entity	Faculty	Department
David Baker	Pennsylvania State University	FHSE	Education and Social Work
Andrew Clark	Paris School of Economics	FHSE	Behavioural and Cognitive Sciences
Carine de Beaufort	CHL	FSTM	Life Sciences and Medicine
El-Ghazali Talbi	Université de Lille	FSTM	Computer Science
Dave Holmes	University of Ottawa	FSTM	Life Sciences and Medicine
Pierre Hurt	Barreau de Luxembourg	FDEF	Law
Carole Schmit	Administration des Bâtiments Publics	FHSE	Geography and Spatial Planning
Thomas Sigler	University of Queensland	FHSE	Geography and Spatial Planning
Pascal Stammet	CGDIS	FSTM	Life Sciences and Medicine
Guillaume Vogin	Centre François Baclesse, Esch-sur-Alzette	FSTM	Life Sciences and Medicine





# Governance Bodies 2023

## The Rectorate



Prof. Jens Kreisel  
Rector



Prof. Simone P. Niclou  
Vice-Rector for Research



Prof. Catherine Léglu  
Vice-Rector for Academic Affairs



Marie-Hélène Jobin  
Vice-Rector for Partnerships  
and International Relations

## Director of Administration and Finance



Marc Grabowski

## Board of Governors



Massimo Malvetti  
Secretary-General



Anne Christophe  
Deputy Secretary-General



## Deans of Faculties and Directors of Interdisciplinary Centres



**Prof. Pascal Bouvry**  
Dean of the Faculty of Science,  
Technology and Medicine



**Prof. Katalin Ligeti**  
Dean of the Faculty of Law,  
Economics and Finance



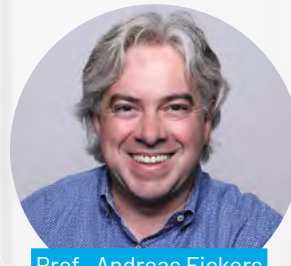
**Prof. Robert Harmsen**  
Dean of the Faculty of Humanities,  
Education and Social Sciences



**Prof. Yves Le Traon**  
Director of the Interdisciplinary  
Centre for Security, Reliability  
and Trust



**Prof. Michael Heneka**  
Director of the Luxembourg  
Centre for Systems Biomedicine



**Prof. Andreas Fickers**  
Director of the Luxembourg  
Centre for Contemporary  
and Digital History



**Prof. Pierre-Henri Conac**  
Acting Director of the  
Luxembourg Centre for  
European Law

## University Council

The University Council assists the Rectorate in the development of the multi-year development plan and deliberates on the pedagogical and scientific affairs of the University. The University Council is composed of 40 members as follows:

**President of the  
University council**  
Prof. Georg Mein

### Voting members

Georg Mein, Conchita D'Ambrosio, Dominic Harion, Johannes Pause, Nicolas Jonard, Diane Pierret, Laura Aade, Imen Derouiche, Luis Leiva, Ludger Wirtz, Elisabeth Schaffner-Reckinger, Guendalina Palmirotta, Raphaël Frank, Jacques Klein, Elena Danescu, Praveen Naidu Vummadisetty, Adolfo Sommaribas, Laura Spadon, Ulisse Saverio Bassi, Avery Joy Becker, Guido Hoenig, Aswathy Kokkotil Sudevan, Mihajlo Miladinović, Jinyuan Wang.

### Non-voting members

Jens Kreisel, Marie-Hélène Jobin, Catherine Léglu, Simone Niclou, Marc Grabowski, Massimo Malvetti, Pascal Bouvry, Katalin Ligeti, Robert Harmsen, Andreas Fickers, Michael Heneka, Yves Le Traon, Jörg Gerkrath, Joanna West, Skerdilajda Zanaj, Pierre-Henri Conac.

**Administrator** Nathalie Klopfenstein

# Grants and chairs

## European Research Council (ERC)

The ERC, set up by the European Union in 2007, is the premier European funding organisation for excellent frontier research. It funds creative researchers of any nationality and age, to run projects based across Europe with the mission to encourage the highest quality research in Europe through competitive funding and to support investigator-driven frontier research across all fields, based on scientific excellence.

The ERC offers 5 main grant schemes: Starting Grants, Consolidator Grants, Advanced Grants, Synergy Grants and Proof of Concept Grants.

### Current grant holders and chairs

- |  |  |
|--|--|
| ▶ Prof. Björn Ottersten<br>(Advanced Grant)      | ▶ Prof. Paul Wilmes<br>(Consolidator Grant)              |
| ▶ Prof. Jean-Sébastien Coron<br>(Advanced Grant) | ▶ Prof. Tegawendé Bissyande<br>(Starting Grant)          |
| ▶ Prof. Daniele Brida<br>(Consolidator Grant)    | ▶ Prof. Alexander Tkatchenko<br>(Advanced Grant)         |
| ▶ Prof. Anja Leist<br>(Starting Grant)           | ▶ Prof. Alexander Tkatchenko<br>(Proof of Concept Grant) |
| ▶ Prof. Mark Podolskij<br>(Consolidator Grant)   | ▶ Prof. Jan Lagerwall<br>(Proof of Concept Grant)        |



## FNR PEARL Chairs

With the PEARL programme, the FNR offers Luxembourg research institutions attractive funding to enable them to draw established and internationally recognised researchers to Luxembourg.

PayPal-FNR PEARL Chair in Digital Financial Services (FinTech)	Prof. Gilbert Fridgen
Chair in Digital History Advanced Research Projects Accelerator (DHARPA)	Prof. Sean Takats
Chair in Digital Medicine (dHealthPD)	Prof. Jochen Klucken
Chair in Alzheimer's Disease Research (MINIALZ)	Prof. Michel Heneka



## FNR ATTRACT Fellows

The FNR ATTRACT programme is designed for researchers not yet established in Luxembourg, who demonstrate the potential to become leaders in their field of research. The scheme offers promising junior researchers the opportunity to set up their own research team within one of the country's research institutions.

Modelling idiopathic Parkinson's disease-associated somatic variation in dopaminergic neurons (Model IPD)	Prof. Anne Grünewald (ATTRACT Starting Grant)
Scientifically validated digital learning environments (DIGILEARN)	Prof. Pedro Cardoso-Leite (ATTRACT Consolidator Grant)
Surface and interface science on photovoltaic materials (SUNSPOT)	Prof. Alex Redinger (ATTRACT Consolidator Grant)
Microbial Biophysics of Rapid Adaptation in Changing Environments (MBRACE)	Prof. Anupam Sengupta (ATTRACT Starting Grant)
Environmental Cheminformatics to Identify Unknown Chemicals and their Effects (ECHIDNA)	Prof. Emma Schymanski (ATTRACT Consolidator Grant)
Involving public history as a new participatory model for interpreting the past Law	Prof. Thomas Cauvin (ATTRACT Consolidator Grant)
Statistical Mechanics of Active Matter (SMAC)	Prof. Etienne Fodor (ATTRACT Starting Grant)
PRO-Active Policymaking for Equal Lives (PROPEL)	Prof. Lindsay Flynn (ATTRACT Consolidator Grant)
Quantum dynamics and control	Prof. Aurélia Chenu (ATTRACT Consolidator Grant)

## ERA Chairs

The European Research Area (ERA) Chair increases research capacity by attracting high-level researchers to a widening university or research centre and supports excellent scientists and their teams to become game changers in their field.

ERA Chair in Mathematical Statistics and Data Science (SANDAL)

Prof. Yannick Baraud



## Endowed Chairs

Endowed Chairs — Professorships funded by a private or public external Partner — act as a strategic accelerator for academic and research excellence and socio-economic impact. They are an important feature of the University of Luxembourg in its continued development as a leading international research university.

## Public Chairs

Research Chair in Parliamentary Studies	Prof. Philippe Poirier
Chair in Urban Development Research for Esch-sur-Alzette	Prof. Markus Miessen
ADA Chair in Financial Law (Inclusive Finance)	Prof. Dirk Andreas Zetzsche
Chair in Sustainable Finance	Prof. Michael Halling
Chair in Cyber Policy	Prof. Niovi Vavoula
Arendt and Elvinger Hoss Prussen Chair in Investment Fund Law	Prof. Isabelle Riassetto

## Industrial Chairs

ATOZ Chair for European and International Taxation	Prof. Werner Haslehner
ArcelorMittal Chair of Steel Construction	Prof. Christoph Odenbreit
Chair in Capital Markets and Post-Trade	Pending recruitment
SES Chair in Satellite Communications and Media Law	Prof. Mahulena Hofmann
Chair in Entrepreneurship and Innovation	Prof. Mickaël Géraudel
Paul Wurth Chair of Energy Process Engineering	Prof. Bradley Ladewig

## Public-Private Chairs

Chair in Digital Procurement	Prof. Nils Löhndorf
PayPal-FNR PEARL Chair in Digital Financial Services	Prof. Gilbert Fridgen

## Horizon Europe (2021-2027) Projects

Horizon Europe is the EU's key funding programme for research and innovation. The programme tackles climate change, helps to achieve the UN's Sustainable Development Goals and boosts the EU's competitiveness and growth.



EU funding awarded in 2023:

**€12m\***

\* rounded to the nearest million

See the full list  
of accepted  
projects:





## FNR Projects

The Luxembourg National Research Fund (FNR) is the main funder of research activities in Luxembourg. They invest public funds and private donations into research projects in various branches of science and the humanities, with the mission to set up a sustainable world-class research system in Luxembourg that will generate societal and economic impact in key strategic areas.



# 124

Projects accepted  
in 2023

See the full list of  
accepted projects:



Total FNR funding in 2023:

# €39m\*

\* rounded to the nearest million

# University of Luxembourg funding schemes

Total University of Luxembourg funding awarded in 2023: **€1m\***

\* rounded to the nearest million

## RISE 2.0

The Rapid Incentive Scheme (RISE2.0) provides support to researchers to help them produce successful Horizon Europe applications. By offering a grant of up to €20,000, it maximises the quality of proposals submitted under all Horizon Europe programmes, especially European Research Council and Marie Skłodowska-Curie Actions candidates.

**29**

Projects accepted  
in 2023

## Institute for Advanced Studies funding instruments

The University's Institute for Advanced Studies (IAS) was established in 2020 with the aim of overcoming boundaries between disciplines and sectors and making interdisciplinarity a central part of the University's and Luxembourg's international research and innovation development.

**2**

Projects  
accepted  
in 2023

### Audacity

Audacious high-risk projects and new ideas

**1**

Project  
accepted  
in 2023

### Brainstorm

Small brainstorm meetings on new horizons

**1**

Project  
accepted  
in 2023

### Distinguished

Small brainstorm meetings on new horizons

















