

UM Magazine

February 2023

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Maastricht University



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Designing solidarity



EU immigration and asylum law are plagued by disharmony and dysfunction. **Lilian Tsoardi**, assistant professor of International and European Law, is investigating how to improve the situation. How have we reached the status quo? What would be a better approach? And what role could solidarity play?

Alum Lea Vink

After several rocky years, Maastricht University alum **Lea Vink** has found her feet in Vienna. Professionally, she is taking new steps at the crossroads of aviation and organisational psychology. And on a personal level, luck has smiled on her since her transition from man to woman.

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For the cover image, photographer **Sem Shayne** was inspired by the interview with endowed professor Gera Nagelhout on the impact of poverty on health.

www.semshayne.com

Foreword

Maastricht University
Executive Board
Rianne Letschert, Pamela Habibović and Nick Bos

At the time of writing it is 2022. When you read this, we'll be well and truly into 2023. We'll all have made our New Year resolutions. Some of us, confronted with the challenges of everyday reality, will already have broken them.

There may seem to be something artificial, arbitrary almost, about envisaging the changes you'd like to see your life at the end of a given calendar year. But at the same time, it's a nice tradition—something we could do more often throughout the year. It means taking a moment, on a regular basis, to pause and reflect on what's truly important. After all, we only have this one life; we ought to make the most of it.

How can we balance our work and our home lives, especially now the two are more intertwined than ever? How to find the balance between indulging in tasty food and staying healthy? Between giving and taking? Taking care of ourselves and taking care of others? Running and standing still? Admittedly: as members of the Executive Board, we ourselves don't always set the best example. We too sometimes swing too far one way or the other. We too make mistakes. Have the occasional regret. That's life. And there's nothing wrong with that, as long as you dare to learn from your mistakes.

What worries us at times is an apparently growing lack of resilience and compassion in society. Also within our university, emotions occasionally run high among employees and students alike. Instead of asking

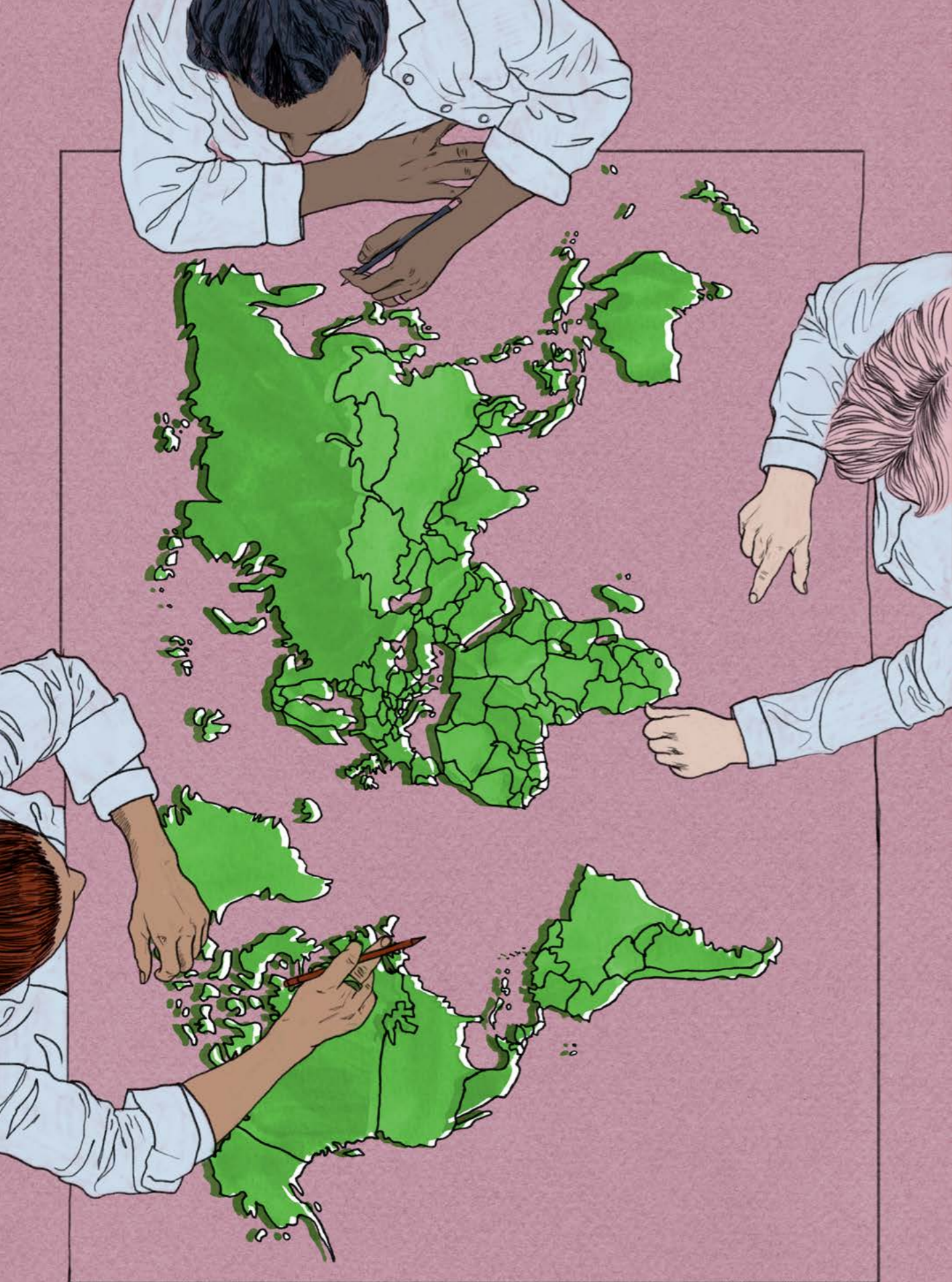
Photography
Hugo Thomassen

Failing forward

questions, we make value judgements. People are angry, aggrieved, frustrated. As a result, we become less constructive in how we approach and address one another. When we replace questions with judgement, understanding with prejudice, listening with shouting, the chance of a positive outcome becomes ever smaller.

We at UM have an important role to play here. As an educational institution, one of our responsibilities is to prepare students for the rest of their lives, including the setbacks they may encounter along the way. One way to do this is to “let them slip up in a dignified way,” as a UM physics lecturer once put it—then help them up again with love. Failing forward is perhaps the most accurate description of life. Let this be an enlightening year.





Broad international classroom offers added value



The number of foreign students arriving at Dutch universities will not be restricted, at least for the time being. This is a good thing, according to ongoing research by [Carla Haelermans](#) from the School of Business and Economics (SBE) and [Patrick Bijsmans](#) from the Faculty of Arts and Social Sciences (FASoS). “Students, including Dutch ones, perform exceptionally well in tutorial groups with a mix of nationalities. And internationalisation is the future. You can’t put restrictions on that.”

Just this morning, UM president Rianne Letschert lashed out in the regional newspaper at Robbert Dijkgraaf. The education minister hinted that he wants to impose a measure that would limit the influx of foreign students. They are alleged to squeeze out Dutch students, cost the state money, fuel the Anglicisation of higher education and exacerbate the housing problem. But none of these arguments hold water, in Letschert’s view—including at Maastricht University, where over 12,500 out of 22,000 students hold a foreign passport. The minister will soon change his mind on the matter, though it remains unclear whether the last word has been said.

land on their feet in society, I can only be positive. They learn so much from one another. The more diverse their backgrounds the better.”

International classroom

The question is whether an international classroom is demonstrably better than a programme with students who all share the same national background. To find out, Bijsmans and Haelermans initiated a new research project in early 2020. “Some earlier studies on international classrooms identified certain challenges, while others emphasised the positive outcomes of international groups,” says Bijsmans, who is mainly involved in the qualitative side of the research. “We published our own study in 2021 on the international classroom at FASoS, in which we concluded that students generally benefit from the interaction with fellow students of different nationalities—provided there’s a good balance in the group. Now we’re taking an even more rigorous approach. We’ve collected much more data, and this time we’re also observing groups and talking to both students and tutors.”

For researcher Patrick Bijsmans, the discussion is hardly new. “It flares up again every few years. Personally, I wouldn’t think it wise to put a brake on the arrival of foreign students. Maastricht is an international university. Students choose consciously for our international degree programmes as well as Problem-Based Learning. I find the broad input of different nationalities in the tutorials very valuable. And isn’t this exactly what we want—an inclusive society in which we break down borders?”

Optimum

“One thing we want to know is whether there’s an optimum number of nationalities in a tutorial group,” says Haelermans, who focuses on the quantitative

According to Carla Haelermans, professor of Education Economics, UM’s international character is indisputable. “When I look at our students’ results and how they

Education

Text
Jos Cortenraad

Illustrations
Ted Struwer

side. “We’re also looking beyond FASoS. The study includes 12 English-taught bachelor’s programmes across all faculties except the Faculty of Health, Medicine and Life Sciences, where the main language of instruction is Dutch.” Data on students’ nationalities, prior education, previous grades and more are being collected and analysed; the tutorials observed and video recorded. “And we’re interviewing students from these groups as well as their tutors. This should give us a well-rounded picture of the effectiveness of the international classroom.”

Group dynamic

Ideally, the research would have been completed already. Instead it was delayed by covid. “Many tutorials were cancelled and replaced by online meetings, whereas we really need to see the group dynamics in action,” Bijsmans explains. “How do young people function in a group of up to eight nationalities? Does proficiency in English play a role? Does having a particular national background influence the discussions? How does the tutor deal with diverse nationalities?”

Conclusions

The findings should be available by the summer of 2023. Reluctantly, the researchers hint at some of their conclusions, but are keen to stress their preliminary nature. “What we’re seeing is that the current composition of the tutorial groups works very well,” Haelermans says. “Whether four or eight nationalities are represented, the study results and personal experiences—for the Dutch and international students alike—barely deviate from the usual picture. This also undermines the idea that some international students benefit disproportionately from English as the language of instruction, or that Dutch students are being pushed out. It doesn’t matter.”



→ **Carla Haelermans** is professor of Education Economics at SBE and chair of the UM Learning & Innovation Taskforce. She is also national coordinator of the Netherlands Cohort Study on Education (NCO). Haelermans studied economics in Maastricht, where she obtained her PhD for her research on educational productivity and efficiency.



Personality

“We do see a slightly negative effect if only two or three nationalities are represented in the group,” Bijsmans adds. “It’s actually more beneficial to have more nationalities in the classroom. From this we can cautiously conclude that a diverse international classroom offers added value. The analyses and interviews also show that for the students it doesn’t matter where someone comes from. They’re more interested in one another’s opinions and visions, in their personalities, rather than nationalities. I like that: it’s about personality, diversity, content, not about background.”

Publications

The research should lead to several publications in international journals. “We worked with strict protocols to ensure objectivity. We see this research as a validation of our education system, but also as a contribution to the internationalisation of education. Society is becoming increasingly global and complex. That calls for a broad, cross-border approach to education.”



↓ **Patrick Bijsmans** is associate professor of Teaching & Learning European Studies and vice dean of education at FASoS. He conducts research on Problem-Based Learning and curriculum design in European Studies, as well as on EU democracy, media and Euroscepticism. Bijsmans is a member of the university’s Learning & Innovation Taskforce and the editorial board of the Journal of Political Science Education.



People just want to be treated like People



Endowed professor of Health and Wellbeing of People with a Lower Socioeconomic Position
Gera Nagelhout

Research and society

Text

Jolien Linssen

Photography

Sem Shayne

Gera Nagelhout is, in many respects, not a typical professor. She was the first in her family to attend university, and at the age of 34 was appointed endowed professor of Health and Wellbeing of People with a Lower Socioeconomic Position. Working within the confines of the ivory tower is alien to her. “People often say this target group is hard to reach. That’s just not true.” She talks here about the impact of poverty on health.



Gera Nagelhout studied Communication Science at Radboud University Nijmegen and the University of Twente. In 2012 she obtained her PhD cum laude at Maastricht University for her research into the impact of smoking bans on smokers. In 2019 she was appointed endowed professor of Health and Wellbeing of People with a Lower Socioeconomic Position at UM. She combines her professorship with the position of Chief Science Officer at the lifestyle and addiction research institute IVO.

Between the energy crisis and inflation, poverty is on the rise in the Netherlands. From her base at the Care and Public Health Research Institute (CAPHRI), Gera Nagelhout finds herself flooded with requests for interviews and invitations for lectures. While she enjoys talking to journalists, she also has mixed feelings about the sudden interest. “Poverty is hardly new. It’s just that middle-class people who used to be relatively financially secure are now struggling too. We should have found poverty appalling even when it ‘only’ affected other groups.”

Unhealthy environment

Those other groups are the people at the centre of her research: people who, due to debts, poor literacy or low education levels, have wound up in a vulnerable position. This makes it harder for them to live a healthy life, Nagelhout explains. Chronic stress resulting from financial worries can lead to physical and psychological problems. Stress hampers your capacity to plan and prioritise, so you have difficulty making sensible, healthy choices. And people with a lower socioeconomic status often live in poorly insulated houses, with few parks or green spaces around but an overabundance of takeaway food. “Their ability to choose a healthy lifestyle is challenged from every direction,” Nagelhout says.

Financial incentive

Yet, precisely those people who are already struggling can benefit most from a nudge in the right direction. Legislation to make healthy products cheaper and unhealthy products more expensive would help. So too would outright financial rewards for healthy choices. Nagelhout and her team found that the latter can be effective when it comes to quitting smoking. In their research, participants who managed to stop smoking with the help of counselling received a €350 reward after a year. “For people on a low income, that’s a lot of money. A reward like that works well with this group in particular.”

Naghelout, who lost her own father to smoking, strives to ensure broad dissemination of her findings. “I’ve always wanted to do research that’s relevant to society, so it would be strange to then publish the results only in scientific journals. That’s why we write blogs and opinion pieces, make videos and are active on social media. We find it important to communicate what we’ve learnt to our target group in understandable language—something that doesn’t always happen.”

Reaching the target group

She also points out a more fundamental problem: academics involved in health promotion rarely involve people of lower socioeconomic status in their research. Nagelhout regularly sees PhD research, for example, that fails to include people with lower education levels. “That just shouldn’t be allowed. It’s often said that this target group is hard to reach, but they’re just people you can talk to.” Her message to fellow researchers: get out from behind your desk to recruit participants actively and in person.

Naghelout herself works with an advisory group of Maastricht residents with lower incomes. “It’s a way to get feedback at every stage of the research process from the people our results are most relevant to,” she says. “And they in turn seem to enjoy being able to share their experiences with one another.” What has she herself learnt from these encounters? “People just want to be treated like people, free of judgement about how they live or ended up in a certain situation. Only if we help make their circumstances less precarious will they be able to take steps towards a healthier life.”

Impact

More than three years after her appointment as professor—“it happened quickly and took some getting used to”—Naghelout now feels at home in her role. She attributes her lightning-fast rise to a combination of hard work, talent and luck. “I never aspired to become a professor; I just didn’t have the role models. But when I was asked, I realised I was actually already doing it; supervising PhD candidates, talking about our research during lectures or in the media, writing grant applications. It’s nice to be able to do what you find important.”

She and her team regularly carry out research commissioned by municipalities and ministries, where their findings are immediately applied in practice. “Which is not to say I control the political decision making,” she adds. “Both the money problems and the health problems these people face are intergenerational; they’re passed down from parent to child. It’s actually a relatively small group that needs very targeted help. And providing it could ultimately save us a great deal of money. In that sense, the fact that poverty still exists in the Netherlands is a choice.”



47th Dies Natalis

On Friday 27 January Maastricht University celebrated its 47th Dies Natalis in the Sint Janskerk in Maastricht. The guests were treated to inspiring speeches and musical interludes by jazz and pop singer Wouter Hamel and guitarist Rory Ronde. The honorary doctorate, the Wynand Wijnen Education Prize, the Dissertation Prize and the Master's Student Prizes were awarded. The Bachelor's Student Prizes were presented earlier that day.

The outgoing mayor of Maastricht, **Annemarie Penn-te Strake (1)**, was presented with the Tans Medal, UM's highest distinction. This year's Dies Natalis was her last official academic ceremony as mayor.

This year's theme was 'Bold yet prudent: technological innovation and society.' The rector, Professor Pamela Habibović, kicked off the celebrations with a speech on the importance of interdisciplinarity in science and technological innovation. "We stand on the event horizon of world-changing technological innovations—and we can't afford to be naïve," she said. "We have to think through the potential threats and implications at the design stage. Interdisciplinarity is a key to this."

Professor Robert S. Langer (2) is the living proof. A chemical engineer and entrepreneur at the Massachusetts Institute of Technology, he is known for his discoveries in tissue engineering and drug delivery. Professor Langer was awarded an honorary doctorate for his exceptional interdisciplinary work. He spoke about his difficult early years and stressed the importance of never giving up.

Professor Cyrus Mody of the Faculty of Arts and Social Sciences addressed the importance of technological innovation in his keynote lecture 'The Four Sciences.' "The university can make a distinctive contribution to knowledge and innovation, but only if we work in healthy cooperation and sometimes healthy contestation with other sides."

Wynand Wijnen Education Prize 2022

This year's Wynand Wijnen Education Prize was presented to our entire community of educators in recognition of their tireless efforts during the covid years. **Donna Carroll** and **Martijn Bousse** accepted the award on behalf of all colleagues. The prize money was donated to the Emergency Fund for Students.

Dissertation Prize 2022

The annual Dissertation Prize went to **Marie Labussière (3)** of the Faculty of Arts and Social Sciences for her PhD thesis 'Native-born but not yet citizen: Citizenship and educational outcomes of children of immigrants in the Netherlands.'

Student Prizes 2022

Every year, the best master's and bachelor's theses by UM students are recognised during the Dies celebration. The prize winners receive €500, a certificate and a small gift from the rector.

Nineteen bachelor's students completed a thesis in 2022 deemed 'excellent' by their faculty: **Laura Birkhölzer, Luc Feron, Fleur Bendermacher, Khanh Hoang, Chiara Piraino, Vittoria Bottinelli, Lars Quaedvlieg, Panos Barlampas, Nuria List, Stefani Konstantinesku, Anne-Sophie Oppor, Linda Hamid, Ivana Meurs, Ioana-Daria Baltag, Jona Schebesta, Sasha Verrijt, Jil Bartholmy, Eva Godina and Lidy Prins.**

Nine master's students (4) received top marks for their final thesis: **Lara Stoffels, Razvan Brinzea, Sabina Dörner, Julie Hindryckx, Steffen Friedrichs, Alexandra Werdich, Mark Steijns, Zina Piper and Merlin Tieleman.** <



Portrait

Head of laboratory
SCRUM
Cengiz Akbulut

Text
Annelotte Huiskes

Photography
Sem Shayne

Flying career start for a swing-dancing academic



He was born and raised in a multicultural part of London. It was only when Cengiz Akbulut moved to Aberdeen to study biochemistry, he found himself in a ‘very white’ environment for the first time. “From a young age I realised I was sometimes seen and treated as ‘different’. There’s no one single formula for inclusivity. It takes time, effort and is a never-ending dialogue.” In September Akbulut was made head of the laboratory of the new Stem Cell Research University Maastricht (SCRUM). Here he discusses multiculturalism, the origin of life and his love of swing dancing.



“When my father went off to work at night, he never knew if he’d make £5 or £50, so he often worked six or seven days a week. I was reminded of that when I was spending long days and nights in the lab during my PhD research. The thought of it gave me strength.” Cengiz Akbulut’s keen sense of political awareness developed at an early age. His mother is a Turkish Cypriot, and his family was directly affected by the attempted genocide of Turkish Cypriots—a minority community in Cyprus—in events that followed Christmas of 1963. “Some of my grandfather’s family and friends were murdered and ended up in mass graves. That’s a part of my history that you don’t find much about in history books. There were many casualties on both sides, but history is subjective. What became the official version is the sanitised version of actual events, it’s not our version.”

Formative years

Shortly before decolonisation in 1960, his grandfather, who worked as a police officer for the British, left for England with his wife and children. He was given two days to make the decision and they left the country secretly under escort. His mother grew up in north London. “After studying economics and accountancy in London in the 1970s, she wanted to get in touch with her roots. Cyprus wasn’t an option at the time; it was too violent. Instead, she went to Istanbul, where she met my father. They married and initially lived together there, but before they had children they moved to England. They wanted their children to have a British education, and benefit with all that entailed.

At first, life in England wasn’t easy. His father’s diplomas were not recognised, and there was the language barrier to contend with. “Eventually he became a taxi driver, and my mother a post fixtures supervisor in a shipping company. She worked during the day, my father at night. I had a good childhood; my parents always bought books both second hand and new, they encouraged us to read. As a five-year-old, I loved atlases. I remember the town of Genk in Belgium catching my eye because it resembled my brother’s name, Cenk. I now have been there to watch football with a colleague.”

Karate kids

As a child, he mainly read nonfiction. “I loved encyclopaedias. And all four of us did karate. That was convenient for my parents; they only had to drop us off at one place. You learnt not only the movements, but also a philosophy. That combination of discipline and respect was good for me. Take off your shoes when you enter the room, bow when you arrive and leave. But I stopped when I was 14 and went through a rebellious period, going out a lot, occasionally being brought home by the police. I had to repeat a year at school. My parents had their hands full with me, I was the most difficult of the four. But pushing boundaries is part of growing up, right?”

High school was an instructive period. Akbulut attended a multicultural all boys’ school in North London, with students from all walks of life. “There were boys from wealthy backgrounds who were handed everything on a silver platter, and boys who didn’t finish school. I liked it there, felt completely at home. It wasn’t until I went to university in Aberdeen that I was in a place with a ‘white’ majority. And now, being away from home on mainland Europe, I notice that I feel more British, Turkish, Turkish Cypriot and Muslim than when I lived in London.”

Empathy for the minority

During his studies, but also here in Maastricht, certain interactions and sideways remarks occasionally give him a sense of unease. Akbulut endorses UM’s commitment to inclusivity. “Some people just aren’t aware of the marginalising effect of their behaviour. For example, a speech was made at the department Christmas party, and a member of staff said the names of Dutch and Belgian colleagues correctly, before making a joke at mine. They perceived it as a friendly joke, and though it wasn’t meant to be negative or racist, it hurt. Fortunately, we’ve since resolved things. It may seem like a small example, but there are so many of them. There’s no one clear-cut formula for inclusivity. It’s about respect and accepting people as they are, which calls for constant and never-ending dialogue.”



And so, we arrive at his hobby: swing dancing, which he stumbled across by chance during his studies. “Swing dancing is an umbrella term for the various dances you can do to jazz music. It’s an African-American dance form that originated in the 1920s, one of the first true art forms that came from formerly enslaved peoples post-emancipation. Harlem became a real hub of Black culture, which was permitted for the first time and swing dance was born from this. I’m not African American, but I empathise with the fact that it was a minority dance and part of a minority culture, also I recognise that it has been white-washed and many people do not know that jazz was invented by African Americans. As a dance, the Lindy Hop, is a combination of older American folk dances including, tap and Charleston. The nice thing is that it’s a very social dance, you’re constantly changing partners. When you dance with one person, you learn to dance with that person; when you dance with the whole room it’s a party. Through it I got to know all kinds of different people from outside my studies and social environment—it was very enriching. Here in Maastricht, I dance every Wednesday. There is a good jazz-music culture here.”

The origin of life

Studying biochemistry was an obvious choice for Akbulut. “I’ve always been interested in the question: why is there life? Not only in a religious and philosophical sense, but also in a physical sense. Physics, the galaxy, the Big Bang, the universe. I knew early on that understanding some of these concepts would involve a lot of maths, but also looking through a telescope, it all still felt very distant. That’s why I chose biochemistry, which literally means the chemistry of life.” During his PhD at UM, he specialised in developing cardiovascular cells from stem cells—you can’t get much closer to the origin of human life than that. He literally worked day and night in the lab, which led to his current position as what may well be the youngest head of a stem-cell laboratory in the Netherlands. As such, he feels very privileged.

“It allows me to keep on doing what I did during my PhD research: developing protocols for the creation of stem cells. The protocols I developed then turned out to be successful, and I’m now building on that. For me, UM is the right place at the right time. The centre was established mainly because the university is young and still working on its profile. That means a flying career start for me, and I’m very grateful for that. Since working for Maastricht University, I don’t have to wonder if I’ll have enough money next month and this position means I don’t worry about where I’ll be next year. That’s worth a lot. As Einstein said: “I never think of the future. It comes soon enough.” <



↑ Cengiz Akbulut holds a bachelor’s in Biochemistry from the University of Aberdeen and a master’s in Regenerative Medicine from Queen Mary University of London. After his master’s, he spent a year working as a research assistant at the William Harvey Heart Centre in London. From 2017 to 2022 he conducted his PhD research at CARIM as part of the EU-funded Marie Skłodowska-Curie programme INTRICARE (International Network for Training on Risks of Vascular Intimal Calcification and Roads to Regression of Cardiovascular Disease). Akbulut was appointed head of the laboratory of the Stem Cell Research University Maastricht (SCRUM) at the Faculty of Health, Medicine and Life Sciences.

Detect bacteria while



Region

Text
Hans van Vinkenveen

Photography
Philip Driessen

It all started with an unexpected discovery. Bart van Grinsven, associate professor of Sensor Engineering, figured out how to detect micro-particles—bacteria, toxins and proteins—in a liquid using a rapid testing method based on heat transfer. Through the startup Sensip-dx, Jaap Drenth is now turning ‘Bart’s technology’ into a commercially viable product. The testing device will be made available this year to the food industry.

you wait

The discovery was more of a slow burn than a classic Eureka! moment. “It was more like, that’s odd, what’s going on here?” Bart van Grinsven explains. “I sort of stumbled across it. It was only after ten months of removing measurement errors but getting the same result that I finally realised this is completely new.” In essence, he had found that by measuring heat transfer, he could detect when small particles attached themselves to a surface. At first this worked with DNA, then with cells and later with even larger entities, such as bacteria.

The technology’s strength lies not in the highest possible degree of detection. “Perfection is often the enemy of the good,” he says. In other words, we should not shy away from a solid improvement in the quest for something optimal. “We never achieve the precision of a PCR test, but we don’t have to. You could compare it with the rapid test for covid. Our technology delivers good results quickly, cheaply and reliably, and for many applications is unbeatable. All you need is two thermometers and a power resistor, which is unprecedented.”

Golden opportunity

When Jaap Drenth appeared on the scene, plans for the establishment of the startup Sensip-dx were already underway. “Through the valorisation department of the Brightlands Health Campus, which commercialises new technologies, I came across this patent-protected invention with vast possibilities,” he explains. “In principle, it can be used wherever contamination can occur: in blood, urine, water, food. It’s a big improvement on existing techniques and really makes a difference. To succeed in this space, you have to offer an affordable solution to a problem that’s keeping someone awake at night.”

This turned out to be the case in the food industry, which has long struggled with the time-consuming nature of existing techniques for detecting live bacteria. “Usually you have to culture samples and wait up to three days for the results,” Drenth says. “Our technology lets you do this in 15 minutes, so you can assess whether harmful bacteria are creeping in during the production process.” In addition, a golden opportunity presented itself. Drenth learnt that existing testing methods cannot distinguish between live and dead bacteria. “This complicates things with products like pasteurised milk, which always contain fragments of dead bacteria and thus yield positive test results. Our technique can actually tell the difference—a unique selling point that has the entire food industry excited.” >



Frankenstein prototype

The next step is to convert the technology into a practical device. The large machines employed in the laboratory are not suitable for commercial use. "They make investors run for the hills. And you have to be able to produce large numbers of the device in a short time," Van Grinsven says. They now have a working model, but according to Drenth, "It's still a kind of Frankenstein prototype, large and clumsy. We're working on developing a more convenient device that you can just toss a few millilitres into, press a button and get a result after 15 minutes." This year, they will move into batch production and, ultimately, the commercial launch of the device.

A drawn-out certification process is certainly on the cards, but Drenth sees no reason to twiddle his thumbs in the meantime. "You can spend that time looking for killer applications—problems that clients are currently experiencing, which Sensip-dx can solve with no regulatory burden." Take the testing of fermentation products and probiotics. Probiotics are live, good bacteria that are sometimes added to food, but the amount of bacteria in a product is difficult to determine. "Applications like that make customers happy. Plus you generate income and can develop more generative applications while complying with the rules for certification."

The invention could one day even transcend planet Earth.

Springboard

If the rapid testing method is successful, the food industry will form a good springboard for other business cases. The testing method lends itself to use on vitamins, toxins, viruses and proteins. It could detect Legionella in water pipes or toxic substances in polluted water, Drenth says. The technology could also be used for medical purposes, such as detecting proteins in urine. "But that's a conservative world; you're dealing with big, influential players, and that equates to money. To create something new in that world you first have to succeed in another sector."

Both see benefits of the technology for society at large—not least in poorer countries and remote regions. "The test may be able to detect parasites quickly and easily in blood, drinking water or faeces," Van Grinsven says. "That could be valuable in the case of malaria, where it's crucial to determine at an early stage whether a parasite is involved. In the future, I'd like to conduct fundamental research on this application." The invention could one day even transcend planet Earth—a company affiliated with NASA has already inquired about the technological possibilities for future space missions to Mars. <



Jaap Drenth is CEO and co-founder of the startup Sensip-dx, which is developing and commercialising the technology. He holds a master's in Business Economics and Information Sciences from Tilburg University and completed the Register Controller professional master's at Maastricht University.



Bart van Grinsven is associate professor in Sensor Engineering at the Faculty of Science and Engineering at Maastricht University. He holds a master's in Bioelectronics and Nanotechnology from Hasselt University and a PhD in Biosensor Research. He specialises in the development of electrochemical and heat-transfer-based sensors.



News



New direction required to tackle organised crime

The fight against organised crime focuses too heavily on drug-related crime at the expense of other issues—such as human smuggling, environmental crime and financial fraud—that also harm society in major but often invisible ways. This is a key conclusion of the report *Koers Bepalen* by Maastricht University and the Erasmus School of Law. The report was commissioned by the Research and Documentation Centre (WODC), the knowledge institute of the Ministry of Justice and Security.

The researchers also call for a reconsideration of the structure of criminal investigations and of the relationships between the police, the Royal Netherlands Marechaussee and four special investigative services. These organisations are supposed to work alongside one another, yet their fields of operation increasingly overlap. The Public Prosecution Service should take on a more visible role in combating organised crime, not only directing the investigative process, but also fostering public debate on the balance between promoting security and protecting the rights of individual citizens.

Finally, working for the government should be made more attractive. This will assist in the recruitment and retention of experts in data analysis, intelligence, finance and leadership increasingly needed to tackle organised crime. <

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Metabolism-based personalised diet better for health

Scientific evidence now shows for the first time that a personalised diet based on an individual's metabolic profile leads to better health. This is an important step towards more effective nutritional interventions aimed at improving health and preventing chronic diseases.

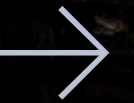
The conclusion is based on years of research in a large-scale public-private partnership in the *Top Institute for Food and Nutrition* (TiFN), in which Maastricht UMC+ and Wageningen University & Research joined forces with knowledge institutions and companies in the food industry. The research was headed by UM professor of Human Biology Ellen Blaak. The results were recently published in the leading scientific journal *Cell Metabolism*.

Metabolic functioning differs from person to person. The research participants were therefore divided into two groups based on their metabolic profile; specifically, on how well insulin does its job in the liver and muscles. When insulin functions are impaired, cells are less able or unable to control sugar levels in the blood, which can eventually lead to type 2 diabetes and cardiovascular disease. Participants were then randomly assigned a personalised nutrition programme. Those who were less sensitive to the functioning of insulin in the muscles were found to benefit more from foods relatively high in protein (e.g. dairy and nuts) and dietary fibre (e.g. wholegrain products and vegetables) and low in fat. Participants with impaired insulin functioning in the liver benefited more from a diet high in monounsaturated fatty acids (e.g. olive oil and nuts). <



Why do humans act the way they do? To answer this complex question, Hannes Rusch has to be a bit of everything: economist, biologist, philosopher, mathematician. He recently received a €1.5 million ERC Starting Grant to develop and empirically validate an interdisciplinary theoretical framework for describing exploitative relationships. The aim is to identify policy measures that will reduce incentives for exploitation.

Exploitative relationships are everywhere



*Associate professor
of Economics*
Hannes Rusch

Grants

Text
Florian Raith

Photography
Paul van der Veer

—
People owe it to themselves to make conscious decisions based on good information.

“It took me about two months full time and another year of planning,” Hannes Rusch says of the grant-writing process. Applications for ERC (European Research Council) funding have a success rate of just 10%. “I’d already received a Marie Curie fellowship. It has a similarly low success rate and I had to try twice, so I was used to putting in the work while not being particularly hopeful.”

The €1.5 million over five years will cover his own salary as well as that of two PhD candidates and a postdoctoral researcher. “I feel honoured and privileged, and I’m really grateful to all the colleagues who provided feedback and helped me prepare for the interviews.” Rusch understands the necessity for competitive grants—but, he says, “it’s unfortunate that so many people lose so much time constantly applying instead of doing interesting research.”

Interdisciplinary yet focused

While currently at home in economics, Rusch embraces interdisciplinarity. “The ideal approach to understanding something can’t be found in any one discipline. I wouldn’t want to choose. I think you have to tackle questions from multiple perspectives and then see if you can get convergent answers.” This was one of his motivations for moving to UM from Germany in 2019. “It really suits me. Many of my colleagues here also work in an interdisciplinary way and are open to different perspectives.”

Rusch happily admits to having a rather ‘exotic’ profile. He studied mathematics and philosophy, and earned a PhD in biology before taking a sidestep into economics, where he then earned a second PhD. But the through line in his research interests has remained constant: “Why people do what they do is one of the most interesting and relevant questions you can ask.” Rusch has always been interested in the evolutionary foundations of human behaviour. During his research in biology, he used game theory to make sense of human behaviour. “I really liked it as a tool, and economics was the right field to explore it in greater detail.”

Why are we nice to one another?

“Why are people nice to each other? Why does altruism exist?” According to the prevailing theory, altruistic groups will cooperate better than others and thus outperform—in warfare or otherwise—those with less mutual trust among group members. This is said to explain why we became altruistic towards those within our group and hostile to those outside of it.

Rusch used lab experiments, archival data and models to make the case that humans behave altruistically when defending their group. Contrary to the received wisdom, however, he argues that altruism is rarer (and less necessary) when we are on the offensive. “The question I’m turning to now is why groups show aggressive behaviour towards others.”

Historically, many wars were fought with the aim of enslaving people. “Understanding these patterns and incentive structures is extremely relevant because exploitative relationships are everywhere, including between individuals.” Based on game-theoretical analyses of incentive structures, Rusch and his team will develop a series of models and test their predictive powers using lab experiments but also historical datasets.

Sliding scale of exploitation

Of course, what counts as exploitation has long varied wildly. “Exploitation is a politically laden term. But for the purposes of my research, I don’t need to define exactly when fair labour conditions turn into exploitative ones. Instead, we look at it as a continuum and ask: which external variations in the interaction between two or more parties will gradually incentivise more or less exploitative behaviour?”

These incentive structures are complex, from the economic and legal to the political and psychological. Take care workers, for example. “They have relatively clear employment contracts but also a sense of responsibility, tenderness or guilt towards the people they care for. An exploitative employer could leverage that to make them work more hours.”

Rusch does not consider himself an activist. “I’m a scientist; I want to understand how things work and think through different approaches. As a researcher, all I can do is lay that out. Personally, I have a strong preference for being honest with myself. I would hope that if you empower people to understand the consequences of their choices, they’ll do the right thing.” He tries to understand, for example, what goes into the products he buys. “There’s an online tool to calculate your slavery footprint based on your consumption. It’s not very precise, but it gives you an idea of how much suffering you’re supporting. Ultimately, people owe it to themselves to make conscious decisions based on good information. But I’m also aware that not everyone is financially in a position to choose the less damaging alternative.” <



Hannes Rusch is an associate professor of Economics at UM’s School of Business and Economics. After studying mathematics and philosophy at Technische Universität Braunschweig, he earned a PhD in biology from the University of Giessen and a PhD in economics from the Technical University of Munich. He completed his *Habilitation* in economics at the University of Marburg and joined UM in 2019.



Additional housing for Maastricht students

UM is committed to helping students find affordable housing. Although students are ultimately responsible for organising their own accommodation, UM is happy to contribute to housing projects for students. On the Sorbonnelaan in Maastricht-Randwyck, 600 additional student rooms were recently completed. The residential units are complemented by common areas and sports facilities.

Spread

Photography
Harry Heutz



Professor - student

Text
Ludo Diels

Photography
Paul van der Veer

Some feelings can never be fully captured in words—but this hasn't put Karlién Strijbosch off from trying. Her PhD research focuses on Senegalese migrants who were forced to return home after a stay in Europe. Doing justice to such stories is no easy feat, especially when you come up against walls of silence, distrust and shame. Strijbosch and her supervisor Valentina Mazzucato discuss a research project that yields important insights, exposes raw emotions and occasionally spirals out of control.

At the heart of academia lies sheer curiosity. Growing up in the Limburg village of Horst, Karlién Strijbosch was always interested in people and cultures from all over the world. "As a child I wanted to become a professional tennis player or a journalist. I was drawn to the combination of writing and travelling, interests that eventually drove me in the direction of anthropology. But they were sparked in the first instance by my grandmother. She had a very open mind, though she herself hadn't been allowed to study and couldn't travel much. She had to work in her father's café, and ended up having seven children.

Challenging journey

"I was 16 when I first went to Senegal, in West Africa. That was with Plan International, a development organisation that campaigns for children's rights. I never imagined that I'd later become so immersed in the country. After University College here in Maastricht, I went on to study cultural anthropology. Next year I hope to complete my PhD at UM. I've covered a lot of distance for it, both mentally and physically."

How do involuntarily returned migrants fare in Senegal?

Strijbosch started her PhD in 2017. It was Professor Valentina Mazzucato, head of the Globalisation, Transnationalism and Development research programme, who recognised the junior lecturer's potential. "As a professor you're looking for people who are not just interested in the topic, but also have the right attitude and a good CV," Mazzucato says. "We had a cup of tea and talked at length. I wanted to look her in the eye and feel her motivation, her drive. Applying for this grant was no walk in the park. It was an open competition." She laughs. "And I'm glad we won it."

Failed adventure

The project shows how returned migrants position themselves in Senegal and how society perceives those who did not manage to stay in Europe. "Men who return earlier than planned are often seen as losers who forfeit their social prestige. They, and their families, often keep quiet about their failed adventure," Strijbosch says. "You also come across success stories of men who've made it in Europe. They're now high >



Professor of Globalisation
and Development
Valentina Mazzucato

PhD researcher
Karlién Strijbosch

on the social ladder and support important projects in Senegal, whereas those who didn't manage to keep their heads above water in Europe are often ashamed. They have to deal with their own disappointment but also of their surroundings who counted on them."

Various programmes have been established to assist with the reintegration of returned migrants, for example by helping them set up businesses. "I spoke to those organisations too, but the focus was on the stories of the migrants themselves."

Culture of shame

Mazzucato has lived and worked in West Africa for some 25 years in total, and considers it her 'home away from home.' "Karlien's research shows that there is a fine line between voluntary and involuntary returnees. It's important for us to understand this better. Bodies like the IOM [International Organization for Migration] help migrants who return voluntarily, but the political sensitivities around involuntary returnees mean they can't do as much for them, yet both can suffer from the social consequences of return." Strijbosch concurs. "I now have a much better understanding of the struggles many migrants face. The migration issue is incredibly complex; I'm just trying to map out part of that puzzle."

Mazzucato points out that her PhD candidate didn't have an easy time of it herself. "Covid made travel difficult. You really saw the extent of Eurocentrism, because although the situation in that part of Africa was far less serious, rules for travel there were stricter than those applied in Europe, which meant Karlien



Valentina Mazzucato studied at Williams College and Michigan State University in the USA. She lived in Africa for over 20 years, working for international development organisations in the field of agricultural development. She obtained her PhD from Wageningen University in 2000. She is now professor of Globalisation and Development at the Faculty of Arts and Social Sciences, where she leads international research projects on migration between Africa and Europe.

couldn't travel. To her credit, she found a solution in Germany by following the connections of returning migrants there. And later she went back for the last remaining fieldwork. Now there's writing to be done—a lot of writing." She laughs. "And I have to give feedback on all of that. The plan is for Karlien to complete her PhD before I start my sabbatical in September 2023."

Final sprint

Both characterise their collaboration as constructive. Strijbosch: "Valentina is an enthusiastic coach with a huge global network and academic expertise." They never travelled together, but they did enjoy a concert that Karlien organised with the Senegalese band Sahad and the Nataal Patchwork. Mazzucato: "The music was fantastic and the atmosphere swinging!"

Strijbosch intends to stay in academia after completing her PhD. "I want to keep doing migration research. There's still so much we don't know. Knowing more makes the world bigger, that's what I've found. But first I have to pull off this final sprint." <



Karlien Strijbosch attended University College Maastricht and subsequently obtained a research master's in Cultural Anthropology: Sociocultural Transformation at Utrecht University. She has been conducting PhD research on the situation of involuntarily returned migrants in Senegal since 2017.



Machines
that
can
improve

Professor of Machine Reasoning
Mark Winands

Sciences

Text
Hans van Vinkeveen

Photography
Arjen Schmitz

Computers are already capable of making independent decisions in familiar situations. But can they also apply knowledge to new facts? Mark Winands, the new professor of Machine Reasoning at the Department of Advanced Computing Sciences, develops computer programs that behave as rational agents. This means they can independently think through the consequences of a decision—yet another leap forward in artificial intelligence (AI). But Winands has no time for doomsday predictions on how AI is set to outstrip humans. “Generic reasoning systems are laughably bad.”

Computers are already capable of making independent decisions in familiar situations. But can they also apply knowledge to new facts? Mark Winands, the new professor of Machine Reasoning at the Department of Advanced Computing Sciences, develops computer programs that behave as rational agents. This means they can independently think through the consequences of a decision—yet another leap forward in artificial intelligence (AI). But Winands has no time for doomsday predictions on how AI is set to outstrip humans. “Generic reasoning systems are laughably bad.”

In conversation, it is immediately evident that he is accustomed to explaining complex issues. What he wants computers to learn is similar to what people usually do, Winands says. Suppose you have to respond to an unforeseen circumstance with unknown consequences. How do you make the right decision and take an adequate course of action? We humans improvise. “My intuition suggests a, but I’m not sure. Let’s think about that for a moment; maybe alternatives b or c have more acceptable consequences. So you’re thinking about possible follow-up moves and what counteractions you can expect.”

Winands points to a pilot’s emergency landing on the Hudson River as a good example of an intuitive decision. Faced with an unfamiliar situation, the pilot had limited information and 30 seconds in which to weigh up myriad considerations. With the benefit of hindsight, one can always question whether it was the optimal decision. Under the circumstances, however, it was more than adequate. “Neither people nor computers have the capacity to consider every possible angle and reason everything out in advance. The point is to find an acceptable solution as quickly as possible, with limited information and computing power.” This is the crux of the field of machine reasoning.

Board games

How do you teach a machine to improvise? Faced with a particularly thorny question, Winands will turn

to his computer to play board games like chess or Risk. Not because he’s a gamer, but because they serve as a testing ground. “I focus on techniques to make better and faster decisions. Can I come up with a plan that’s better or faster than other AI systems or humans?” Machine reasoning is a challenge even in the context of board games, which are played in a controlled environment. “You can think a few moves ahead, but then the game explodes into a vast number of possibilities. The opponent knows more than you, the role of randomness and chance increases. Try coming up with solid reasoning then.” The board games are puzzles—as are planning and automation problems.

However hard it may be, machines that can make reasoned decisions are already in operation. One example, developed at Maastricht University, is an intelligent computer system involved in the production of shower heads and water taps in a factory. Winands sketches on a whiteboard how the system keeps several production lines running and adjusts the production plan to changing circumstances. Another successful ‘Maastricht’ example is the use of machine reasoning in the design of building layouts. “The AI system can calculate many scenarios based on a user’s wishes. Where do I place load-bearing walls and supports? What different layouts are possible while maintaining building safety? The design is completely automated.”

Child benefits scandal

How could the recent benefits scandal—in which the Dutch tax office wrongly accused thousands of Dutch parents of making fraudulent benefit claims—have turned out differently? In Winands’s view, a machine-reasoning method could have prevented a great deal of misery. Benefit claims were assessed using machine learning. The AI system was trained to recognise certain patterns as fraud, so when it encountered new, comparable cases, it naturally labelled them as fraud too. “If the system also had the capacity for reasoning, things could have been different. Hold on, this may look like a fraud pattern,



→ **Mark Winands** is professor of Machine Reasoning at the Department of Advanced Computing Sciences (DACS) at Maastricht University. His research focuses on machine reasoning and automated decision-making processes. He is best known for his contribution to the development of the Monte Carlo Tree Search reasoning method. He has been head of DACS since 2021.



but on second thoughts, it could also be something else. Machine reasoning offers a better way of justifying why one person receives a benefit and another is labelled a fraudster.” He emphasises the ethical aspects of AI. “It’s essential to develop systems that take account of our norms and values.”

Generic reasoning methods

A key challenge for the future is the development of generic or non-specific AI systems that can solve multiple types of problems. These systems would have the science-fiction-like capacity to learn and perform optimally any intellectual task a human can perform. We’re not there yet, Winands says. “AI systems can usually only do one thing well: translate a text, make a diagnosis. Ideally, you want a system that can also be used outside a specialised domain. But even something as simple as a system that plays several board games well is extremely difficult to develop. A generic AI system that can do many things at once will always perform less well—just as people do.”

Absolute limit

Reassuringly, Winands has his doubts that AI will ever surpass human intelligence. “What occasionally irritates me is the idea that AI can do everything. It can beat us at chess, translate texts, scan pictures, make diagnoses, you name it. People seem to think it’s an improvement of the human intellect. But a generic system that can play various board games does so laughably badly. Appalling, really. Perhaps human intelligence is an absolute limit that AI can never surpass. That’s the positive message I like to convey.” <



Assistant Professor
of International and
European Law
Lilian Tsourdi

Europe

Text
Florian Raith

Photography
Arjen Schmitz

Designing

EU immigration and asylum law are plagued by disharmony and dysfunction. Lilian Tsourdi, assistant professor of International and European Law, is investigating how to improve the situation. How have we reached the status quo? What would be a better approach? And what role could solidarity play?

“I almost dropped out of law school,” she recalls, “until I took a module on human rights. It spoke to my innate sense of justice. It made me wonder what the most pressing human rights issue in Greece, my home country, was—clearly migration and asylum!” Before her PhD, Lilian Tsourdi worked as a legal trainee for the Greek Council for Refugees in Athens and as an adviser to policy NGOs in Brussels. She continues to advise European institutions and nonprofits, and, with the UN Refugee Agency, co-chairs the European Academic Refugee Interdisciplinary Network. EARIN is a regional network seeking to implement the UN Global Compact on Refugees through research, teaching and solidarity with displaced scholars and students. “These experiences have informed my research questions and methods,” she says. “They gave me a rich understanding of the different perspectives: policymakers’ processes and limitations, but also the struggles, despair and ingenuity of refugees.”

For Tsourdi, it’s important to translate her findings into practical policy recommendations. The media’s focus on immigration intensified with the large-scale arrival of people fleeing the Syrian armed conflict in 2015. “But even before that, there had been issues with how the EU regulated its common asylum system. The number of arrivals isn’t the problem. It’s a crisis of values and governance, meaning the legal design and implementation of the system for processing asylum seekers on an EU level.”

No real system

Until 1999, each EU member state had its own asylum system. Some in fact had none. As a result, EU-wide harmonisation started from an uneven field in terms of economic and institutional capacity. Between 1999 and 2013, legislation and standards around the reception and processing of asylum seekers were harmonised, but without pooling resources to finance the implementation. “It was up to each member state to either revamp their system or create one from scratch, using their national budget.” There was—and still is—no mechanism for distributing responsibility according to capacity.

Instead responsibility is assigned through the ‘Dublin system’, whereby the member state of first irregular entry processes the application. “Most arrivals are ‘irregular,’” Tsourdi points out. “All refugee-producing countries are subject to strict visa obligations, making it almost impossible to legally arrive by plane. That leaves only routes across the Mediterranean or through the Eastern border.” >

solidarity



Lilian Tsourdi is an assistant professor at the Faculty of Law. She has (co-)developed and teaches modules on migration for graduate students at the law faculty and undergraduates of the BSc in Global Studies. Previously, she was a lecturer at the University of Oxford and a Max Weber Fellow at the European University Institute in Florence. She holds a PhD from the Université Libre de Bruxelles and received a Marie Skłodowska-Curie Individual Fellowship. Her current research is supported by Veni and Hestia grants from the Dutch Research Council (NWO).

Political deadlock

“On the political level, it can be difficult to disentangle unwillingness from an inability to implement obligations. During the Syrian crisis, about 1.5 million people arrived via Greece. A country of 10 million struggling with considerable economic hardship would have had to receive and process all these people. That makes no sense. Objective indicators, like size of the country and institutional and financial capacities, should be taken into account.”

Even after Syria, she says, no structural redesign was forthcoming. “In 2016 the European Commission proposed legal instruments to reform the system, but there was no agreement on how to distribute responsibility, allow free movement for recognised beneficiaries of international protection, or share financial and institutional resources.” Countries deemed undesirable or difficult to reach for refugees had an entrenched interest in maintaining the status quo.

“After four years of deadlocked negotiations between the European Parliament and the Council, in 2020 the Commission presented new proposals under the banner of a new pact on migration and asylum. Those proposals are still under negotiation.” Instead, efforts intensified to externalise protection obligations to

We need a better designed legal and policy framework.

third countries. “That’s EU jargon for co-opting non-EU countries into stopping migrants from arriving at EU borders in exchange for financial incentives and increased mobility for their own nationals. This strategy runs the risk of delegitimising the obligation to protect refugees.”

Thanks to sheer urgency and the pressure of public opinion, the Ukrainian crisis was handled more pragmatically. The Temporary Protection Directive was invoked. Registration was swift and protection seekers were distributed organically. “People could choose their own destinations, usually based on existing family ties or networks. It shows that a different way is possible and that creating obstacles is, to an extent, a policy choice.”

Broader rethink

Using legal analysis and semi-structured interviews with representatives of civil society, policymakers and government officials in Greece, the Netherlands and the EU, Tsourdi aims to shed light on the influence of EU funding on implementation. “In Greece, it has created a certain leverage when it comes to respecting EU standards, but there are limits to operationalising solidarity through funding. Even significant structural funding wouldn’t make it acceptable for one member state to bear the entire operational burden.”

With colleagues from Odysseus, a network of EU academics, Tsourdi recently presented a report on legal migration to the European Parliament. The report also focused on policy design and the effectiveness of ‘talent partnerships.’ “We look at existing policies, but also point out the importance of a broader collaboration framework between the EU and third countries. This includes co-development, foreign relations and trade possibilities, increased labour movement, training and so forth.”

“There are many problems with funding and implementation,” she concludes, “but more than anything, we need a better designed legal and policy framework. Globally and within the EU, we need to rethink solidarity.” <

Soul kitchen

A peek inside the kitchens of UM employees

Text
Annelotte Huiskes

Photography
Philip Driessen



Associate professor of Data Analytics and Digitalisation
Burak Can



I enjoy feeding people

It was a busy day, so he's had no time to prepare. During the conversation he dices the carrots and onions and smothers them with spices and paprika paste. Can most enjoys cooking for his children; they're always excited about what he's making. "Noah, the eldest, likes lots of herbs and spices, Ayla is a real carnivore, just like me. I was born and raised in Adana, where people eat a lot of meat. The Adana kebab is famous. Minced lamb, seasoned and grilled on a skewer, served with just a grilled bell pepper, green chilli and lettuce, tomato and cucumber. No sauce, no fuss. My recipe for Adana kebab was included in the 'Turkse kookbijbel' (Turkish Food Bible), a cookbook that was recently published," he says proudly. "It was written by a friend of mine from Turkey. It focuses on simple, everyday recipes, categorised by region. In Turkey people eat out much more often, alone or with friends, in restaurants that serve home-style cooking. I miss that in the Netherlands. It's either fine dining or McDonald's here."

Long hot summers

Adana is on the southern coast of Turkey, a large city of one and a half million people. "The summers are hot and the winters mild. As a child I had three months of summer break, which we spent in our holiday cottage by the sea. My mother always did the cooking. And she's a good cook, so when I went to study in Istanbul at 18, I couldn't cook at all. But I discovered that, like her, I enjoy cooking for others. She cooks with love, that's what it's all about."

One Adana specialty is sheep intestine filled with rice, minced meat and spices. "So good. Sheep intestines from all over Turkey are sent to Adana to be used in this recipe. They also use the fat from the sheep's tail. It's not healthy, but delicious. My favourite dish, içli köfte—couscous balls filled with minced meat, walnuts and herbs—takes days to prepare. They're a kind of bitterbal, but boiled instead of fried." Ingrid adds, smiling: "When I went to meet his parents, I ate so many that I can't stomach them anymore." To his dismay, Can too will have to avoid them for a while: he gave up bread and pasta a month ago due to high cholesterol, liver and blood-sugar levels. "Genetic, I'm afraid. That's why I bought an air fryer for my parents—less fat, and tastier. I put almost everything in the air fryer. Grilled bell peppers taste so much better, in that way they dry out a bit too. I rarely use the oven anymore."

Love of his life

Can was keen to pursue his PhD abroad mainly because doing so is well-regarded in Turkey. "I was a happy bachelor in Istanbul and didn't particularly want to leave. I chose Maastricht for its expertise in game theory, and I could do my PhD here in three years and then go straight back. I was due to start in September 2007, so in April I went to the site to see who else would be doing a PhD here. I saw this blonde girl and

Things are bustling around the kitchen table of **Burak Can**, associate professor of Data Analytics and Digitalisation. A mix of Turkish, English and Dutch can be heard. "I speak Turkish with my children, my wife Ingrid speaks Dutch with them, and we speak English with each other." On the menu is one of the children's favourite dishes: a Turkish lentil stew. At least, that's what they think.

said to a friend: 'I'm gonna get this one.' It was just a joke! Then I bumped into her on my first day; she was looking for test subjects for her experimental behavioural research. Of course I participated. We had our first date on 4 November, and she moved in with me in December. In the very first week I wrote to my supervisor in Istanbul that I'd found the love of my life. He laughed so hard, because he knew my past relationships had never lasted more than six months. We've been together for 15 years now."

What's their secret? "Certainly not her cooking style," he laughs as he walks to the stove. "On our first date, I asked her if she could cook. 'Sure,' she said, full of confidence. Turns out she was bluffing. She was still living with her parents and her mother cooked for her. In our first year together she tried to cook more often, but I'd be standing there impatiently and didn't really give her the space to try things out on her own. When she got the hang of it she was off like a train. Now she cooks really well, but she prefers not to have me around. She follows recipes, whereas I cook by intuition. Maybe that's also a typically Dutch thing."

As a surprise, the box of Turkish delight from Turkey, intended for Christmas, is opened after dinner to loud cheers from the children. And amid all the bustle, nobody noticed that Can had accidentally used buckwheat instead of lentils. <

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Burak Can is associate professor of Data Analytics and Digitalisation at the Maastricht University School of Business and Economics. He studied economics at Boğaziçi University in Istanbul and obtained his PhD at UM in 2012.



It's either fine dining or McDonald's here.

Soft landing in Vienna



After several rocky years, Maastricht University alum [Lea Vink](#) has found her feet in Vienna. Professionally, she is taking new steps at the crossroads of aviation and organisational psychology. And on a personal level, luck has smiled on her since her transition from man to woman. Here she discusses unconscious mistakes, the importance of applied psychology and being 'normal.'

She hopes people see her first and foremost as a good person, then as a researcher, and only then as transgender. "I've always been Lea, after all. Growing up in Singapore and New Zealand, I knew from a young age that I wanted to be a girl. But I was raised in a fairly conservative environment and was afraid to come out. My parents thought a stint in the army would do me good. I hid my feelings for years."

Until she found herself in Vienna for her work, that is. "My current employer is very empathetic and really prioritises employees' wellbeing. That's not the case everywhere, unfortunately. It was the first time I felt I didn't have to pretend to be something I wasn't. During the corona lockdowns everything just came out and I decided to transition. The relief was sensational."

A safer airspace

Vink is head of Human Performance Management and Human Factors at Austro Control, an organisation that monitors Austrian airspace. "I focus on how air-traffic controllers can do their work as well, safely and enjoyably as possible," she says. A large part of her job is devoted to research on organisational psychology. Vink is investigating whether it is possible to predict how tired air-traffic controllers are without asking them personally. She also wants to know when people start making unconscious mistakes due to fatigue. "People tend to overestimate themselves and work too long without a break. This can be dangerous, especially as an air-traffic controller. We hope this research will help to optimise HR planning in the air-traffic control tower and promote sustainable employability. That's not only safer but also makes everyone happier."

Getting into air-traffic controllers' heads doesn't require complicated brain experiments. "My team and I use applied psychological research. We compare existing algorithms and predictions with the results of our own observations and psychological tests, then check to what extent these data match."

Maastricht roots

The foundation for Vink's career in organisational psychology was partly laid at UM's Faculty of Psychology and Neuroscience (FPN). How did she end up there from faraway New Zealand? "The faculty has a good reputation worldwide, and the pragmatic nature of Problem-Based Learning really appealed to me. Besides, I have Maastricht roots. I've always wanted to know where my ancestors came from. I had a great time in Maastricht; the city was so lively and warm."

Just 'normal'

The bond with Maastricht remains, though she lives in Vienna: Vink is now teaching and doing her PhD at the FPN. "I want to show today's students the

value of applied psychology. Some academics look down on it because it's 'practical.' But it's everywhere: in self-driving cars, in spaceships bound for Mars—and in the air-traffic control tower."

Vink has no plans to move back to Maastricht; she feels at home in Vienna. "I have a really amazing girlfriend. And my impression is that people here are more open and liberal than in the Netherlands. Vienna has a large and growing LGBTQ community. That said, even here many young people struggle with their sexual orientation, which is why I make a point of being open about my experiences. I want to show that trans people are just 'normal' people too."

Conference in heels

Unfortunately, not everybody responds well to transgender people. Particularly at conferences abroad, Vink has found herself having to convince people she really is the intended speaker. But the response is usually positive. "I gave a presentation during a conference of the European Association of Aviation Psychology, and for many former colleagues it was the first time they saw me as Lea, in heels. They responded so well, with so much understanding—just like my current colleagues at Austro Control."

Be honest with yourself

What's the best thing about being Lea? "I now have more self-confidence and human insight. Having experienced it myself has given me a better understanding of the unequal treatment of women and minorities, for example." Her message to other UM alumni is "maybe a bit cheesy, but sincere," she says. "Let's all be a little kinder to ourselves and the world. It's unbelievable how many mistakes we make unconsciously, so don't be too harsh and don't rush to judgement. I realise it's not possible everywhere in the world, but really try to be yourself and be honest about it. It's the most rewarding thing you can do." <



Lea Vink was born in New Zealand and studied clinical psychology and philosophy at Auckland University. After her master's in Work and Organisational Psychology at Maastricht University, she worked for the UK's National Air Traffic Services. She is now head of Human Performance Management and Human Factors at Austro Control and a PhD candidate at UM. Vink also has her own consultancy firm and is writing a book titled *The neuroscience of being normal*. She chairs the CANSO Human Performance working group.

As a student of Business Administration at Maastricht University, Alberic Pater had no clear-cut career plans. The penny dropped when he was studying in Pretoria, South Africa. “Seeing the vast inequality and environmental pollution there was the trigger for me to focus on sustainability, to really make a positive impact in the business world.” After various positions at Triodos Bank and elsewhere, he is now helping to shape IKEA’s approach to sustainability and corporate social responsibility.

With our scale, we can really make a difference

→ Alberic Pater in front of an IKEA billboard promoting vegan ‘meat’ balls.

Alumni
meeting
minds

Text
Jos Cortenraad

Photography
Alberic Pater

IKEA, sustainable? It’s not the first word that comes to mind when one thinks of the largest home-furnishing store in the world. “The company doesn’t have that image,” Alberic Pater is quick to acknowledge. “People still think we sell furniture and homewares with a short lifespan that soon end up on the rubbish heap. But that’s a distorted image. IKEA is investing massively in the transition to full circularity. By 2030 we want to sell only products made from renewable or recycled materials, and all the energy we use will come from renewable sources. And that’s not just PR or marketing spin.”

Sustainability

Are these lofty ambitions feasible? “All our stores are obliged to achieve the sustainability objectives; they’re definitely not voluntary. Nor is the goal of becoming fully circular. Procurement is centrally managed from the head office in Sweden, which increasingly requires the manufacturers and suppliers of our 10,000 different products to work with sustainable raw materials. Some 99% of the wood is already recycled or FSC certified, and 100% of our cotton has been ‘Better Cotton’ certified since 2015. Naturally, we still have a long way to go. It’s hard to find an alternative to petroleum foam, for example.”

RetourMatras

But it is possible. “Definitely! Nice example. Through Ingka Investments, we invested in the Dutch mattress recycler RetourMatras. Together with IKEA’s mattress producer, RetourMatras has developed a process using chemical recycling to turn foam from old mattresses back into a raw material for new foam. Soon we’ll be able to replace the foam in sofas and mattresses with recycled materials. It’s precisely large



← Alberic Pater studied Business Administration in Maastricht and Development Studies in Nijmegen. He has worked at Triodos, A.S. Watson Group, Nyenrode and IKEA Netherlands. Since May 2022 he has been Business Development Manager of the circular investments team at Ingka Investments, the investment arm of the Ingka Group.

It’s precisely large companies like IKEA that can make a difference.

companies like IKEA that can make a difference. The stores in the Ingka Group, IKEA’s largest franchisee, welcome 650 million customers a year; last year’s annual turnover was €42 billion. With our scale, any improvement is bound to be substantial.”

Pilots

Pater joined Ingka Investments last spring; before that he spent five years at IKEA Netherlands as Sustainability Manager and subsequently as Business Development & Transformation Manager. “We started with sofa upholstery from used jeans. We also conducted a trial with furniture rental to maximise its lifespan; the internal processes at IKEA weren’t yet set up for this, but I still see opportunities. The younger generations are no longer so attached to property. They’re more aware of the future, more concerned with climate change and know that things need to change. The industry understands this too. At Ingka Investments, we’re investing in recycling companies and helping them to professionalise and become suppliers to IKEA. We’re linking different parts of the value chain with one another.”

Pretoria

Pater aims, in his own words, to devote his working life to making the world a little better. “I’ve always been socially engaged, but in my day the Business Administration programme didn’t pay much attention to social issues. I chose Maastricht anyway for its Problem-Based Learning. Only after my stint in Pretoria did I really understand that companies have to make a difference and commit to a better world.”

After graduating, Pater spent another year studying psychology in Maastricht. “The programme fit well with my thesis, in which I studied how people in organisations make ethical decisions. Also, I just felt at home in Maastricht. Such a great city, we still spend a weekend there now and then.”

Triodos

The next step was the bachelor’s in Development Studies at Radboud University Nijmegen, combined with a part-time research job at the Centre for Sustainability at Nyenrode Business University. “I was offered a PhD position there, but I decided I want to do something more concrete.”

Five years of consultancy at Triodos followed, after which the Hong Kong-based A.S. Watson Group, the world’s largest drugstore chain, came knocking. “It’s the parent company of Kruidvat and Trepleister, among other companies. I was in charge of developing a sustainability policy for the Benelux branch and ensuring it was implemented. Very concrete and different from the work for Triodos, where I mainly advised microcredit organisations in developing countries. I had the opportunity to make hundreds of stores more energy efficient, to steer them towards sustainable procurement. It wasn’t easy. At that time everyone wanted ‘something’ with sustainability. The focus was on costs and payback periods. We laid a solid foundation for corporate social responsibility. The first CSR annual report was presented at my farewell in 2017—I’m still proud of that.”

Impact

Pater joined IKEA shortly thereafter. “I wanted to make an impact, and that was possible at IKEA, as it is at Ingka Investments now. The will to become more sustainable is there. IKEA now has electrified home delivery in Amsterdam, which is scheduled to be rolled out across the country by 2025. More than 50,000 solar panels have been installed on the roofs, facades and parking spaces. And I’m personally now more involved in the road to circularity. The range is gradually becoming greener and more sustainable, and that with the consumer barely noticing. My belief is that in this space you have to be ahead of the consumer in making decisions.” <



Text
Anouk van den Brink

Photography
SWOL

At the heart of Maastricht University's mission lies the desire to foster inclusivity and help students from all over the world develop into active, globally oriented citizens and critical thinkers. To this end, the University Fund Limburg offers scholarships to young people for whom studying is not a given. One of our 17 scholarship students is Paula Sultanof. She takes us along on her journey from Verviers to Maastricht, with a detour to Azerbaijan.



The more languages you know, the more people you become

If there is one piece of advice Paula takes to heart, it is to be curious about everything. Wise words from her Azerbaijani grandfather, who encouraged her to study and continually learn new things. Thanks to a Jo Ritzen Scholarship aimed at first-generation students, she is now pursuing her dreams: last September she started the bachelor's programme at UM's European Law School.

"One day I was going through some boxes at my parents' house, looking for an interesting book, when I came across an old Russian–French dictionary. My grandfather had given it to my parents before I was born, for them to give to me when I was older. He'd written a quote inside in Russian, since he was born under the Soviet regime: The more languages you know, the more people you become." He encouraged her to learn languages and acquire as much knowledge as possible. "Because every time you learn something new, you become a different person."

Her grandfather also encouraged her to be independent; a very open-minded view for a man of his time and background. "I wish I could tell him about my life now. I'm sure he'd be proud." Paula not only takes inspiration from the quote written inside, but also still uses the dictionary itself; she is currently taking Russian classes. "It's quite magical how things seem to come together and spiral back like that."

Everyone deserves an equal chance to study. Supporting young talent in their professional development is very important to me. It's great to see the students grow during their time at UM. We often stay in contact, so I can still lend them a helping hand at the start of their careers.

—
Prof. Jo Ritzen
former UM president



←
In the background you can see Lady Justice. She always reminds me of the many reasons I wanted to study law.

↑
Prof. Jo Ritzen presents the scholarship to Paula Sultanof. Thaïs Gautry, left, is a second-year law student and fellow recipient of a Jo Ritzen scholarship.

Paula speaks seven languages: French, Azerbaijani, English, Italian, Turkish, Russian and Dutch. Improving her Dutch was one reason she wanted to study in the Netherlands. She chose UM in particular to pursue two other interests: (geo)political history and law. The Jo Ritzen scholarship allows her to study and live in Maastricht, the city where the Treaty on European Union was signed—a dream in itself. "In my application letter I wrote about my thirst for knowledge, my view on languages and how I want to learn something new every day. Maybe that enthusiasm helped me get selected."

Paula's initial dream was to work at the Ministry of Foreign Affairs on matters like human rights and globalisation. "I was born in Belgium and don't consider myself a migrant, but I feel connected to the topic of migration through my parents, who moved to Belgium from Azerbaijan almost 20 years ago." Since she started at the university, however, more paths have opened up for her. Recently she joined the European Youth Parliament, which offers an educational programme covering a wide range of topics. "I'm curious to see what I'll learn there."

So far Paula has enjoyed herself here, amid a level of diversity she had not experienced before. "Apart from feeling a bit homesick at the beginning, it's been great. I meet people from all over the world, from different cultures, religions and environments, each with their own unique life story. I've even met a few Azerbaijani students." Not only her classes, but also the interactions with other students and teachers bring with them myriad new insights. "It turns me into a different person every day, as my grandfather taught me."

Equity and Inclusion Programme

The University Fund Limburg recently launched its new Equity and Inclusion Programme. Together with private partners, the programme supports UM projects on inclusion and provides scholarships for students, who often face financial and social barriers to pursuing a university education. The scholarships are aimed, in the first instance, at young people from the Limburg region.

Every year, the University Fund Limburg asks the UM community to contribute to four unique projects under the umbrella of the For Each Other campaign. The Equity and Inclusion Programme is one of the projects highlighted in the campaign, For Each Other: towards an equal society. With the donations, the UM community, including alumni all over the world, supports equal educational opportunities for young people from the Limburg region. You can read more about this and other projects on umcrowd.nl.





Fewer laboratory animals needed for research on heart failure

At present, animal testing remains indispensable in research into the onset of heart failure. But thanks to improved techniques, half as many animals are now needed to study the metabolism of heart cells in the development of this disease. Agnieszka Brouns-Strzelecka, a technician at the Department of Genetics and Cell Biology, was recently awarded the Alternatives to Animal Testing prize by the Minister of Agriculture, Nature and Food Quality, for her work to reduce the number of laboratory animals.

In recent years, Brouns-Strzelecka has been gradually improving the technique used to isolate heart cells in laboratory animals. "Previously, we could extract 2.5 to 3 million cells from one heart. Now we can use an average of 5.5 million cells per heart for research, requiring half as many laboratory animals." To further reduce that number, she continues to work on optimising the technique. "Sometimes there are outliers of 12 million cells per heart. We want to make that the standard." <



JOINclusion: developing children's soft skills through a collaborative app

How do you teach children empathy? The new international research consortium JOINclusion aims to increase social inclusion among children aged 7 to 12. The consortium has received European funding to develop an app with games that help children understand one another's perspectives.

JOINclusion focuses on inclusion in multi-cultural environments, such as in international schools and classrooms with refugee children. The app will offer ready-made scenarios for these situations. It will be designed such that language barriers play little to no role during the learning experience.

Comprising schools, universities and non-profit partners, the consortium brings together psychologists, schoolteachers and experts in technology-enhanced learning to develop and test the game scenarios in the app. Maastricht University is coordinating the project and will contribute to the development of AI-based solutions. <



University guide 2023 awards six UM bachelor's programmes top-rated status

Eight of the 23 Maastricht University bachelor's programmes assessed have been voted the best in the country. A total of 17 are among the top three within their discipline. Additionally, 6 UM programmes have been awarded 'Top-rated Programme' status. The rankings were published recently in the university guide Keuzegids Universiteiten 2023.

Two of our three Liberal Arts colleges – University College Maastricht and University College Venlo – have again been ranked among the best in the country, and retain their Top-rated Programme quality labels. The other four programmes awarded top-rated status are Econometrics, Medicine, the interdisciplinary Global Studies programme and the new Circular Engineering programme.

The Keuzegids Universiteiten assesses a variety of educational aspects. UM is still ranked the most international university in the Netherlands, and the lecturers' level of English is rated the highest. UM programmes also score particularly well in preparing students for their future careers. <

Profile

Education and research at Maastricht University is organised primarily on the basis of faculties, schools and institutes.

Faculty of Arts and Social Sciences

- Politics and Culture in Europe
- Science, Technology and Society
- Arts, Media and Culture
- Globalisation, Transnationalism and Development

Faculty of Health, Medicine and Life Sciences

- School of Nutrition and Translational Research in Metabolism (NUTRIM)
- School for Cardiovascular Diseases (CARIM)
- School for Public Health and Primary Care (CAPHRI)
- School for Mental Health and Neuroscience (MHeNS)
- School for Oncology and Developmental Biology (GROW)
- School of Health Professions Education (SHE)

Faculty of Science and Engineering

- University College Maastricht (UCM)
- University College Venlo (UCV)
- Maastricht Science Programme (MSP)
- Department of Advanced Computing Sciences
- Aachen-Maastricht Institute for Biobased Materials (AMIBM)
- Brightlands Institute for Smart Society (BISS)
- Brightlands Future of Farming Institute (BFFI)
- Department of Circular Chemical Engineering (CCE)
- Department of Molecular Genetics (DMG)
- Department of Sensor Engineering (SE)
- Gravitational Waves and Fundamental Physics (GWFP)

Faculty of Law

- Institute for Globalisation and International Regulation (IGIR)
- Institute for Transnational Legal Research (METRO)
- Institute for Corporate Law, Governance and Innovation Policies (ICGI)
- Maastricht Centre for European Law (MCEL)
- Maastricht Centre for Human Rights
- Maastricht Centre for Taxation (MCT)
- Maastricht European Private Law Institute (MEPLI)
- Maastricht Graduate School of Law
- Montesquieu Institute Maastricht

Faculty of Psychology and Neuroscience

- Graduate School of Psychology and Neuroscience (GSPN)
- Clinical Psychological Science (CPS)
- Cognitive Neuroscience (CN)
- Experimental Psychopathology (EPP)
- Neuropsychology & Psychopharmacology (NP&PP)
- Work & Social Psychology (WSP)
- Maastricht Brain Imaging Centre (M-BIC)
- Section Teaching and Innovation of Learning (STILL)

School of Business and Economics

- Graduate School of Business and Economics (GSBE)
- Research Centre for Education and the Labour Market (ROA)
- Network Social Innovation (NSI)
- Limburg Institute of Financial Economics (LIFE)
- The Maastricht Academic Centre for Research in Services (MAXX)
- Accounting, Auditing & Information Management Research Centre (MARC)
- European Centre for Corporate Engagement (ECCE)
- United Nations University – Maastricht Economic Research Institute on Innovation and Technology (UNU-MERIT)
- Social Innovation for Competitiveness, Organisational Performance and human Excellence (NSCOPE)
- Marketing-Finance Research Lab
- Service Science Factory (SSF)
- Maastricht Sustainability Institute (MSI)
- UMIO - executive branch of SBE
- Education Institute

Interfaculty institutes

- The Maastricht Forensic Institute (tMFI)
- MERLN Institute for Technology-Inspired Regenerative Medicine
- The Maastricht Centre for Citizenship, Migration and Development (MACIMIDE)
- Maastricht MultiModal Molecular Imaging Institute (M4I)
- Maastricht Centre for Systems Biology (MaCSBio)
- Maastricht Centre for Arts and Culture, Conservation and Heritage (MACCH)
- Centre for European Research in Maastricht (CERIM)
- Institute for Transnational and Euregional cross border cooperation and Mobility (ITEM)
- Institute of Data Science (IDS)
- Centre for Integrative Neuroscience (CIN)
- Maastricht Science in Court (MSiC)

Colophon

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