SUSTAINABLE LIFE OF BRECHJE MARÉCHAL

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This is the eighth edition of Campus Magazine that you receive from the University of Twente. The magazine first came out in May 2020, which caused quite a few headaches back then because we were in full lockdown.

Yet Campus was also very welcome at that time - when we all worked and studied remotely - because the magazine is made to inform and connect. By writing stories about education, research, entrepreneurship, student life and alumni, we bring different members of the UT community together.

This underlying principle is very important to us.

Sometimes we add a bit here and there. Such as more diversity in the subjects, but also in the people we interview. The content of Campus should speak to everyone; students, academic staff, support staff, alumni, but also the business community and external relations. Of course that means that one edition might be more successful than the other.

After eight issues, we are very curious about your experiences with Campus Magazine. That is why a reader survey will take place at the beginning of January, among a pre-selected group of readers who will receive the survey by email.

We especially want to know what you value the most. This leads to questions such as: do you read everything or just a certain section? And what about the different categories - do you have a favorite, or not at all? But also: does Campus make you curious? Does it call you to action? My personal favorite question: What would you change or improve if you were editor-in-chief of Campus Magazine? Don’t be shy!

We will publish the results in the next edition. If you have not received an invitation to participate in the survey, but would still like to say something about Campus, please send an email to utoday@utwente.nl. We look forward to your opinion, so that we can make even better versions of this magazine in the future!
The job market is tight. Many companies and institutions are struggling to fill vacancies. CBS recently calculated that there are only 100 job-seekers for every 133 vacancies. Things are no different in Twente. In two years’ time, the number of vacancies at Twente employers doubled to around 11,300, according to the latest Twente labour market monitor. For several organisations, the shortages lead to stagnation: companies are cutting back production despite market demand for their products, the hospitality industry is reducing its opening hours and in the educational sector, the structural shortage of teachers leads to increasingly full classrooms.

Van Asselt says that technology, including the use of robotics, will play an important role in reducing the staff shortage. ‘But with technology everywhere, there will be challenges ahead: both for the technicians who develop it, but also for everyone who has to work with it. That is why we are concentrating our efforts across a very broad range of areas: from better embedding IT and technology in education, starting from primary school, to retraining and upskilling people already on the labour market.’

The COVID-19 crisis has had a major impact on the job market, as did the period of economic recovery that followed.’, Linda van Asselt points out. She is a UT alumna and programme manager at the Twente Board, a partnership between the educational institutions, government and entrepreneurs of Twente. ‘The staff shortage is by no means a temporary or new problem, but it’s now become very apparent. The population has been ageing for quite some time and will continue to do so for several decades. This makes demographic development an important factor – if not the most important one – in the growing labour market shortages. This is true for Twente, but certainly on a broader scale as well.

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DISTANT FUTURE

But where are we today? Will we see robots teaching in classrooms or working at hospitals in the near future? According to Suzanne Janssen, assistant professor of Organisational Communication, such a future is still very distant. In 2018, she was awarded a Veni grant for her research on ‘robots as colleagues’. The current use and impact of social robots in particular is still limited, Janssen argues. ‘The capabilities of social robots are mostly seen in a laboratory setting. The role of such technology in an organisational context, as a company or institution, is very minor.’ For now, these kinds of robots are mainly used as support or gadgetry. ‘To say: look at us being innovative. So far, industrial robots have had the biggest impact in the automotive industry. But I find this technology less interesting for my own research, as these robots hardly interact with humans.’

It is very unlikely that the future vision of a robot taking over all human tasks will be realised in the short term, the assistant professor continues. In reality, robots often learn only one or a handful of very specific tasks. Moreover, it by no means makes sense to automate everything. ‘The use of a robot can be much more expensive than employing low-cost workers. As a result, introducing a robot does not always make good business sense either. In addition, there are all kinds of ethical questions to consider, take healthcare for example. And would you want to fly in a plane that has no human pilot on board, only a robot?’

Janssen says most people continue to rely on human labour for the time being. Therefore, a less holistic view of robotic use is more valuable, the assistant professor argues. ‘Above all, we should look at the different tasks a robot can perform. Distributing medication in a nursing home could be a perfect job for a robot, but we might want to leave the actual care of patients to nurses.’

People will stay in control

Sarthak Misra, UT professor of Surgical Robotics, is an expert on robots in healthcare, in minimally invasive surgery in particular. Together with his team, he runs the Surgical Robotics Laboratory, which has laboratory facilities at both the UT and the University Medical Center Groningen (UMCG). The aim of the laboratory is to develop new robots and techniques to access difficult-to-reach places within the human body. ‘We’re developing microrobots as well as larger snake-like robots. Our technology allows us to make procedures less invasive, more accurate and faster. Much of the hardcone research and engineering work is done at the UT, while clinical testing of prototypes takes place in our lab at UMCG.’

As to whether his robots will solve the staff shortage in the future, the professor does not say. But according to Misra, a clinician will be better able to concentrate on the procedure, thanks to a robot taking over simple tasks. As a result, fewer assistants will be needed in the future. Robots can also help in training new clinicians, the professor adds. ‘A relatively young surgeon can perform complicated interventions sooner with the help of a robot, because many tasks will be automated. This allows us to...
train clinicians faster, which in turn helps solve the staff shortage.’ During surgery, the clinician stays in control, the professor stresses. ‘A doctor will always be the one making the crucial medical decisions; a robot is not capable of making a series of complex analyses – the technology is not quite there yet. But when it comes to very precise and repeatable tasks and recognising patterns, a surgical robot can be of immense help.’

Above all, robots allow for better patient care, Misra argues. And better healthcare ultimately leads to fewer patients and fewer support staff needed to care for patients. This reduces pressure on the healthcare system, thus being possibly the most important contribution made by robots in solving the staff shortage. ‘Take open-heart surgery, for example. After such an operation, the patient faces a long recovery. Surgical robots allow us to make the procedure less invasive, reducing the amount of time a patient has to stay in hospital. That means less nursing care and lower costs.’

Misra’s microrobots should also lead to better, personalised care. In addition, the microrobots can be put to good use in prevention and early diagnosis, making people less likely to end up in the hospital for long periods of time. ‘Using microrobots is basically like swallowing the doctor,’ the professor explains. ‘Our micro-robots can have sensors and medications for on-site diagnosis and deliver drugs precisely at the diseased area within the body. This can be done without causing damage to healthy tissue.’ However, Misra emphasises, the technology is not yet ready to be applied in everyday clinical practice. ‘We’re still far removed from having fully autonomous microrobots performing interventions in our bodies. Hopefully, this will become a reality in the future – maybe in my son’s lifetime. That’s my dream.’

INTELLIGENCE

In short, the full robotisation of healthcare is still some way off. In fact, care personnel will remain indispensable. But what about the manufacturing industry, a sector that traditionally leads the way in introducing new technology? Ian Gibson is a professor of Industrial Design Engineering at the UT, and is also scientific director of the Fraunhofer Innovation Platform for Advanced Manufacturing (FIP-AM@UT). Among companies, he has noticed a growing interest in robotics as a solution to the tight labour market. ‘Remarkably, this mainly concerns sectors that employ a relatively large number of highly skilled personnel, where it would take a lot of time to fully train a machine operator, for example. Companies are concerned that if these people leave, productivity will drop and it will be difficult to find suitable replacements.’
According to Gibson, robots are expected to become prevalent in the workplace soon. They also developed some strategies for industrial manufacturing at FIP-AMRUT, which allow companies to see very concrete possibilities for the near future. However, Gibson also makes a critical observation. ‘If we take a look at the impressive machines made by Boston Robotics, the world-leading mobile robotics company, or the developments in autonomous vehicles, you’d think we’re almost there, and that’s just a matter of developing the applications. But that’s something I’ve been expecting for 30 years now. Apparently, things are never quite as simple as they seem.’

Gibson argues that the biggest robotic developments in the manufacturing industry are those in the field of intelligence. ‘In the early days of industrial robotics, the automated task was separated from the human environment to minimise the risk to humans. Sensors were developed primarily for performing the robotic task and not for monitoring other things in the immediate environment. Nowadays, there are more and more robots that can monitor other things in addition to their primary task, in order to adapt to disturbances in the workspace. I have the impression that we’re getting pretty close to robots with limited decision-making capabilities that can function alongside human operators in an industrial environment.’

CULTURE

It is precisely this continued development of intelligence that may lead to robots working increasingly with rather than alongside humans in the future. Such collaboration will change the culture within an organisation, as was the case with the introduction of the Da Vinci robot. That’s when the culture of an organisation really changes.”

For most companies and institutions, this is not yet on the horizon, argues the assistant professor. ‘Every profession consists of a tremendous number of small tasks and activities. Take the US company Amazon as an example. They use robots in logistics to move orders around a warehouse, but the packing of a parcel – a fairly simple task – is still done by humans. So far, robots have mainly been used to alleviate workload. It’s incredibly difficult to replace people with robots, wouldn’t we already have done so on a much larger scale?’

Perhaps expectations are too high. As the UT experts’ stories show, robots are not going to solve the staff shortage anytime soon. New technology provides alleviation and support, but when it comes to performing a multitude of complex tasks... humans remain irreplaceable.

‘My research group consisted of cleaning staff, who were provided with a robot vacuum cleaner. However, the introduction turned out to have little effect on mutual relationships and cooperation. Things only really get interesting when new technology permanently affects an organisation, as was the case with the introduction of the Da Vinci robot. That’s when the culture of an organisation really changes.’

ROBIRD is perhaps one of Twente’s most well-known robots. It is the result of research by Stefano Stramigoli’s UT department for Robotics and Mechatronics. This robotic falcon was initially developed to chase away real birds at airports. It was first deployed at an airport in 2017. The robotic bird can also be used in agriculture or as a surveillance robot in the security sector.

RAVI THE ROBOT, a creation by UT researcher Edwin Dertien, is currently starring in a theatre production. The robot – which still has to be operated by Edwin behind the scenes – plays one of the leading roles in a musical family show.

PIRATE, that is the name of the snake-like robot UT researchers have been working on for many years. The robot should facilitate the inspection of complex tubing systems by doing it both faster and more accurately than a human could.

In 2017, UT researchers introduced STORMRAM 4, which at the time was the smallest and most accurate 3D-printed biopsy robot in the world, according to its creators. Because Stormram 4 is made of plastic, the robot can be used in an MRI scanner. Taking a biopsy during breast cancer examinations in an MRI significantly increases accuracy.

Opening Story

In 2013, FROG (Fun Robotic Outdoor Guide) made its first appearance as a tour guide at the Royal Palace in Seville, Spain. The robot’s role was more than that of a mobile audio guide, using augmented reality to project information and adjusting its tour based on the emotions that could be read off visitors’ faces. Frog was part of a European research project involving UT professor Vanessa Evers and her team.

Say goodbye to dirty windows thanks to the window-cleaning robot developed by UT spin-off KITE Robotics. Using a clever algorithm, the robot can find its own way across large surfaces of glass. KITE is doing well and has already established a substantial customer base.

University of Twente has bundled its expertise in robotics into the Robotics Centre, which will officially launch this spring.

More information: www.utwente.nl/robotics
Peter-Paul Verbeek, New Rector of UvA

After thirty-five years, university professor Peter-Paul Verbeek bade farewell to the UT. As of October 2022, the Philosophy professor serves as the new rector magnificus of the University of Amsterdam (UvA). ‘It almost feels like disloyalty to leave a place where you’ve been treated so well for 35 years’, said Verbeek. ‘I love it here in Twente and I’m definitely not leaving out of discontent. I have absolutely nothing negative to say about the UT. But the position of rector at the UvA was simply an offer you can’t refuse.’

Rising Energy Prices

Increasingly higher energy prices are also affecting UT students and employees. The human resources (HR) department is coming up with a support package for UT employees who are in or at risk of distress due to the inflation and increased energy prices. The most notable tool is an anonymous helpline, which people can use to confidentially discuss their financial troubles. HR also hopes to rapidly launch a survey on the extent and nature of the problem among employees.

Housing corporation De Veste has informed campus residents that gas prices for the last three months of 2022 will increase enormously. The price will be roughly ten times more expensive, resulting in a hefty surcharge for students in 2023.

Predator Esports lounge has been officially opened at the University of Twente. Serving as the centre for all gaming and esports enthusiasts, the lounge is located in The Bastille, in a space formerly occupied by restaurant De Stek. It offers gaming booths, a large bar and many fast computers. Thanks to this project initiated by Student Union, Blauwhel Esports and Esports Team Twente, the UT is now the first university in the Netherlands with its own gaming lounge.

The renovation of Citadel is almost complete. After months of work, the building has changed beyond recognition, with more light and an improved climate system. The renovation started in the summer of 2021. Several renovation scenarios were reviewed during the planning process in 2020, and the final decision was to partially strip the building. The outer wall, window frames and cable ducts have not changed. Inside, on the other hand, everything has been renewed, including all the glass, roofing, ceilings and insulation. ‘Everything was upgraded to today’s new-build requirements. That way, the building can be used for many years to come,’ says project leader Stel Migchelbrink.

UT researcher Florence Metz co-authored an article published in Science Magazine this autumn. The piece analyses why countries react so differently to energy crises, such as the one caused by the war in Ukraine. ‘I’m a political scientist, so it is rather exceptional for me to have a publication in Science’, says Metz. She is an Assistant Professor of Governance Resilience at the University of Twente. She has a background in political science and public policy and her research focuses on the policies that governments adopt and why they do so.

UT Researcher Publishes in Science Magazine

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FIVE QUESTIONS

I encourage people to arrive at answers themselves. So, I prefer to ask questions rather than give answers. That way, try to create mutual understanding within the organisation. In doing so, I try to ensure at all levels that issues, dossiers and processes progress in the right way. That means switching gears a lot, coordinating, giving direction and above all, offering advice. I do this not only for the Executive Board, but also for all kinds of committees and bodies, including the Supervisory Board. In addition to my role as UT’s Secretary, I’m also Director of General Affairs. This service includes the Internal Audit department, the Ombuds officer, the Diversity, Equity & Inclusion team and our Integral Safety Manager, each with their own role at UT.

WHAT DOES YOUR ROLE ENTAIL?

A popular misconception is that people see me as the fourth member of the Executive Board. That is emphatically not the case. As Secretary, my role within the university is directing and connecting, especially behind the scenes. I try to ensure at all levels that issues, dossiers and processes progress in the right way. That means switching gears a lot, coordinating, giving direction and above all, offering advice. I do this not only for the Executive Board, but also for all kinds of committees and bodies, including the Supervisory Board.

WHAT APPROACH WAS TAKEN?

‘Strengthening our support structure. We’ve had study advisers, HR advisers, confidential advisers and a complaints committee for many years, but no Ombuds officer, Diversity, Equity & Inclusion team or Integral Safety Manager yet. Now, the task is to further bring together and coordinate the support structure we’ve built up. However, we explicitly do not opt for a single point of contact for everything concerning social safety, except for acute emergencies. In my opinion, that would only raise the threshold for people who are primarily looking for a sympathetic ear. We do ask ourselves within the support structure whether we see common threads, whether people are able to find their way to the help they need and whether they are actually getting help. And what’s important is that we continue to talk to each other, with trust and credibility as a basis.’

WHAT IS THE HUMAN SIDE OF THE JOB THAT DRIVES ME?

‘Very well. All three of them are very interested in each other’s dossiers. Another thing that strikes me is that there is not much managerial distance with this board — less so than with previous boards. They’re right at the centre of the organization; they offer a sympathetic ear and are accessible, approachable and prepared to place themselves in a vulnerable position. If things are not going well, it is brought up. As a result, others also abandon their diﬀerence and speak their minds.’

WHAT ARE THE MOST VALUABLE ASPECTS OF BEING SECRETARY FOR YOU?

‘Among others, diversity, equity & inclusion, social safety, a student well-being program and recognition & rewards. These are themes that are somewhat overarching in nature and run like a common thread through other topics and processes within the university. This is particularly true of social safety, a topic that seems more socially urgent than ever this year. As a university, you follow along with that.’

WHICH DOSSIERS ARE YOU SPECIFICALLY WORKING ON AT THE MOMENT?

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T he relatively new research chair links health and disease in space and time, studying where and when diseases occur, and helping us understand why they may be prevalent, who may be affected and how to address the problem. ‘It applies to human diseases, but also to plant and animal disease,’ clarifies professor Blanford. ‘It allows us to look at the given issue across different temporal and spatial scales, and to figure out what the drivers are and how to minimize the risks.’

‘Geo-health is very important, because having things ‘on the map’ makes it much easier to keep track of what is happening,’ continues Blanford. ‘Just think of the COVID-19 pandemic. Thanks to geo-spatial technologies, there were already tools in place that allowed us to capture how the disease was spreading.’ Ultimately, scientists can produce knowledge that decision makers can also apply for prevention. ‘It’s not only about mapping diseases,’ says the professor. ‘We have also done studies on access to healthcare and water. Having access to facilities makes it much easier for people to participate in prevention. For example, we looked at accessibility to COVID-19 vaccine centres in the Netherlands by bicycle, and how this might change once the centres started shutting down.’

Another coronavirus related study looked at how we could use wastewater surveillance to predict outbreaks at a municipal level. ‘We conducted a study using data on COVID-19 infections and viral load of coronavirus in wastewater, analysing their associations in space and time,’ says Carmen Anthonj, Assistant Professor of Water, Health and Decisions at ITC. ‘We concluded that wastewater surveillance can indeed serve as a very suitable tool to predict future outbreaks, indicating in advance where there might be high numbers of patients. This is a nice example of how we can use geo-health data and analysis to inform public health-related decision making and targeted interventions.’

WATER AND HEALTH
Anthonj’s Tenure Track chair focuses on the links between water and health issues, and the use of related data to inform decisions. ‘I mainly look at topics that are connected with the United Nations Sustainable Development Goal (SDG) #6: access to water and sanitation for all, and SDG #3: good health and well-being for all at all ages. I look at how water, sanitation and hygiene (WASH) infrastructure and behaviors can promote human health and how they can impair human health,’ explains the scientist. ‘I look at how WASH can prevent water-related infectious diseases. I study how the situation differs in different regions and among different populations in low-, middle- and high-income countries. Likewise, I look at water and health from a broader perspective, in order to understand implications of flooding on WASH and health infrastructure.’
“This theme always sounds easier than it is,” stresses Anthonj. “Access to water – sounds so simple, but WASH marries so many different topics: access to water, quality of the water, type and state of sanitation facilities, waste management infrastructure, personal hygiene and, related to all of these, people’s risk perceptions and resulting healthy or unhealthy behavior. WASH combines information about physical infrastructure, but also social sciences. Even if the infrastructure is great, people need to know how to use it.”

“It is quite complex,” says Carmen Anthonj repeatedly. “The need for research and solutions to the challenges is, however, very straightforward – it all comes down to this,” states the scientist. “In 2019, according to the Joint Monitoring Programme of UNICEF and WHO, there were 2,2 billion people on this planet lacking access to safe drinking water. Half of global population lacked access to safe sanitation. There were 3 billion people lacking access to handwashing facilities with soap. And more than 670 million people who practiced open defecation, meaning they had no access to restrooms. This is all connected to disease exposure, and ill-health. Every day, more than 700 children under the age of 5 die due to diseases resulting from the lack of WASH services. WASH to us might sound like nothing to worry about; but it is a major cause of death worldwide.”

And access to WASH differs across space – and time, adds the assistant professor. “If decision-makers have the right information, they can improve access to WASH to prevent diseases, and promote health when and where needed. Our job as researchers is to make sure that there is data, that the data is understandable, and that it reaches those who have the means to improve the situation.”

WASH IN SCHOOLS

“Access to WASH is a human right,” says Kasandra Mingoti Poague, PhD candidate working with Carmen Anthonj. “I work with WASH from the social perspective focusing on minorities living in vulnerable situations.” Her PhD research focuses on WASH and its connection to COVID-19 in schools in Brazil. She aims to see if students and pupils, it also impacts their cognitive development, which is why we need to consider the situation in schools.”

“I have a background as an environmental engineer, and I see a huge value in geo-health,” adds the doctoral candidate. “Engineering is often separated from medical expertise and public health knowledge, but we need to combine everything in order to properly assess how WASH links to diseases.”

HEATWAVES

“Geo-health has a huge potential. Looking at a problem in a spatial way is very important for understanding and visualising the patterns,” agrees Carolina Pereira Marghidan, UT Master’s student who has been researching heatwaves and its impact on human health. “We know that heatwaves are increasing on a global scale; and we know that heat has impact on health. The well-known example shows that the 2003 heatwave in Europe caused over 70,000 deaths. We know this, but there is a lack of research and data on the connection of heatwaves and health in low- and middle-income countries, and especially African countries.”

Marghidan’s research has focused on Mozambique, one of the poorest countries in the world – and one of the countries prone to many climate risks such as cyclones, floods, and droughts. “The risk of heatwaves is not on the radar in Mozambique,” says the student. “My goal was to increase our understanding around heatwaves and their impact on health. I started by looking into when, where and how heatwaves occurred in Mozambique in the past thirty years, using a newly developed high-resolution temperature dataset. I wanted to see if they were forming a pattern, if they were getting longer or stronger, and more common.”

“In geo-health, it’s important to not only to do research country-wide, but also to zoom in on smaller areas, to see where the problems are the strongest,” adds Marghidan. Her research concentrated on Maputo, the capital city of Mozambique, for which she created a vulnerability map. “Which worries me a lot. Only the full picture can serve the most vulnerable people. Heatwaves are a silent disaster. You can’t see the damage directly with your own eyes, and so it is harder for people to understand the risk. That is why the impact of heatwaves are always underestimated, especially in low-income countries. Recognising the link between climate and health is still very recent and the knowledge that heat causes health problems is very low in Mozambique. It’s a hot country, and so the local people don’t necessarily recognize the climate is changing, that the temperatures are rising, and that they are becoming more vulnerable. Local doctors might not even recognize that certain health problems are caused by heat. We need to urgently know the full gravity of the situation so that we can take appropriate action.”

LABOUR SHORTAGE

Indeed, there seems to be no limit on topics that could be explored within geo-health – as evidenced by the variety of research at the UT alone. The scientific field has a lot to offer, but sometimes its potential isn’t realized. “Unfortunately, geo-spatial sciences is still missing from a lot of epidemiology and public health curricula, and so it is not being used to its full potential in different fields,” says Justine Blanford. “We are trying to change that at the UT. Last year, we launched a geo-health course to bridge the gap. It allows public health professionals and epidemiologists to learn about geo-spatial tools and how they can be used for different aspects of health. Geo-health can bring a lot to the table. To address different health risks you need spatial and temporal data so that we can start to understand the full picture.”
KISHORE SIVAKUMAR

‘TEACHERS PRACTICALLY HAVE TO BE IT EXPERTS’

WHAT MAKES A GOOD TEACHER? WHERE DOES SOMEONE GET THE PASSION AND INSPIRATION TO PRESENT SOMETIMEs DRY MATERIAL IN AN EQUALLY FASCINATING AND UNDERSTANDABLE MANNER? IN THE ‘MEET THE TEACHER’ SERIES, WE INTRODUCE YOU TO UT STAFF MEMBERS WHO ARE TRULY DEDICATED TO EDUCATION AND HAVE A STUDENT TELL YOU ABOUT THEM. IN THIS EPISODE, STUDENT MILAN GOMES IN CONVERSATION WITH KISHORE SIVAKUMAR (29).

As Sivakumar talks about and reflects upon his classroom performance, Milan Gomes nods along during moments of recognition. The 21-year-old University College ATLAS student has attended numerous of Sivakumar’s classes and shares the outlines of his vision on education. He recalls a particular lecture by Sivakumar on brainwaves. Complicated subject matter that he could not really relate to. But as a teacher, Kishore is very good at taking difficult subject matter back to basics, so that everyone has a proper understanding of the content, and then delving deeper into the topic with the students. If you have that skill as a teacher, you really make a difference. ’This puts a contented smile on his teacher’s face. ‘Thanks, Milan.’

LEARNING COACH

Both share the view that the role of teachers - especially those at university institutions - is changing, although they both have finer points to add. According to Sivakumar, it is not so much that the role is changing, but that today’s teacher has to be more versatile than ever before. He believes that just imparting knowledge is not enough. They must also assume a leading role and provide more depth. According to Gomes, it’s not just about being more versatile; above all, the teacher’s role has become more complex. This is something he has also noticed with his mother, who is a teacher at an educational institution. The teacher’s primary task - imparting knowledge - is also her main concern, he says, but he believes that qualities such as responsibility and coaching competences are increasingly important. ‘And think of all the systems teachers have to manage and keep updated. They practically have to be IT experts.’

Sivakumar has been employed at the UT for over two years and has been buzzing around campus like a busy bee since his very first day at work. The diligent researcher - born and raised in India - is not just an avid teacher - both at ATLAS and the BMS faculty - he is also almost halfway through his PhD studies. His research focuses on the development of new pedagogical designs and tools at the intersection of educational sciences, engineering education and philosophy of science.

INSPIRATION

Sivakumar has put a lot of thought into the question of what makes a good teacher. According to him, it is very important for a teacher to know when they are making a difference. Inspiration plays a central role in this regard. Not just in traditional teaching, but especially in contact with students. He draws this conclusion based on his own experiences as a student. When he was a young student, he had many teachers who were able to explain things in a clear way, but did not connect with him the way other teachers could. So where lies the difference? In their inspiration. According to Sivakumar, you can only inspire others as a teacher if the subject matter you are explaining also greatly interests you personally. Only then can you be deeply passionate.

He believes that inspiration and passion are also the core values that make the difference between a good and an even better teacher. Being transparent. What do I want to take? According to Sivakumar - who previously studied in Madras and Paris - every teacher makes a difference in their own way. But in terms of his own measure of success, he only feels useful when he can ‘make a little impact’ on society through a student.

Expression

Leading, inspiring, engaging. Sivakumar feels that the qualities by which he tries to stand out are best conveyed through non-verbal communication. As a result, online teaching was extremely difficult for him - especially during the lockdowns. And it still is. He considers himself a teacher of interaction and expression. Suddenly, all that was no longer possible. He recalls one final class of a semester when he finally got to teach his class face-to-face again. Gomes - who nods affirmatively and smiles - was also part of this class. It was only then that he realised the importance of expression. Because that particular class was unlike any previous one, he says, even though the subject matter hardly differed.

Striving towards innovation, enthusing students with new concepts and information, or even experimenting with emerging forms of instruction, such as blended learning. These are things that make Gomes happy as a student. And what Sivakumar enjoys most - even though he knows it is a huge cliché - is when a student has a Eureka moment. When someone gets a twinkle in their eye, or starts smiling when the penny finally drops. Playing a small role in students’ acquisition of knowledge, that’s what I do it for.

‘Kishore is very good at taking difficult subject matter back to basics’
There wasn’t one specific reason as to why Maréchal became interested in sustainability. But there was a moment. A moment when a teenager in Brabant decided to stand up for the environment. ‘When I was about sixteen years old, a teacher at school attempted to make a joke about throwing waste in nature,’ she says. ‘It made me angry and I told him that it wasn’t cool, that you should take care of the environment, not destroy it. In my memory, the entire class turned around when the teacher asked me to repeat what I had said. I considered just being quiet, but in the end I dared to stand up for what I believed in. And I have never stopped since.’

Evidence would suggest this to be true. When offered a coffee in Starbucks during the interview, Brechje Maréchal first checks if the beverage can be served in a ceramic cup. The answer, sadly, is no. No ceramic cups are available. ‘Then I’ll stick with my water,’ responds the Policy Officer. She also doesn’t own a car, prefers to cycle everywhere, has been a vegetarian for almost thirty years, and shops locally at the open-air market to minimize the use of plastic packaging. ‘All this is quite easy for me. Making environmentally friendly choices doesn’t mean getting less, it just means being conscious.’ This is a lesson that can be applied anywhere, as Maréchal knows from her very diverse life experiences.

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I’ve lived in many different places. We moved around a lot mainly due to my husband’s work — he is professor in Spatial Agriculture and Food Security. I worked in many different areas – community development, teaching, research and outreach. I got my Master’s degree in the Philippines, where I also worked at a research institute on sustainability in the rice value chain. It’s so valuable to have these experiences,’ says Mariéchal. ’It’s so important for young people, students, to be exposed to different cultures. At the same time, at the UT we encourage people to be conscious of how they travel. A lot of the CO2 footprint of the UT comes from people’s commute and from business or study travel. If you can, choose the option with the least environmental impact. Take the train within the 800 km radius. We ask people to consider alternatives, but we also try to facilitate these alternative options. We want to make it easier for people to make the more environmentally friendly choice. All the effort shouldn’t just be coming from the employees, we need to facilitate this. Yet, everyone can make choices that make it easier to be more sustainable. For example, if you are organizing a conference, don’t organize it near an airport, organize it near a train station. And offer hybrid attendance.’

FROM POLICY TO ACTION
In her role at the UT, Mariéchal is the programme manager of the Sustainability, Energy and Environment (SEE) programme which was set up mid-2018 to structurally work on improving the SEE performance of the university. Based at the Campus and Facility Management department, she also manages the environmental permit and works to meet all requirements associated with it. She jointly coordinated the working group on sustainability for the new UT strategy Shaping 2030, participated in the Shaping Expert Group on sustainability and developed the sustainability policy for operational management.

When someone from my running group shared this vacancy at the UT, I thought this job was written for me. I had a lot of ideas. In my position I focus on making plans to meet the sustainability ambition of the university, collecting information and providing transparent reporting. A large part of my job is to kick-start sustainability projects. I drafted the sustainability policy using a lot of input from many colleagues and students. Sustainability is now on the agenda at the UT, but it needs to be integrated throughout the organization. To make real changes, we need support and input from the faculties and departments. As the sustainability team, people sometimes expect that we know everything and can be involved in everything, but we can’t be everywhere.

‘If you can, choose the option with the least environmental impact’

 EVERYONE NEEDS TO CONSIDER SUSTAINABILITY ASPECTS WHEN THEY TAKE DECISIONS OR PLAN PROJECTS

’I feel that a lot has changed at the UT since 2018, when I started working here,’ says Mariéchal. ’We have achieved a lot in making sustainability visible. The next step after policy making was developing implementation plans. We needed to translate our goals in to action. We have set our ambitions and now we focus on making progress. With the current high energy prices, there is even more incentive to be conscious of our energy consumption. Becoming a sustainable organisation is not a straight path. We try, fail, try again and succeed. The last thing we want to do is greenwashing. We want real progress but sometimes we can only take small steps, because the organization isn’t ready yet for big steps. I find that very hard. Yes, we focus on where we can make the most impact – energy and mobility – but besides impact you need support in the UT community. And for that, you also need to focus on visible measures that may look like small steps. For example, work lunches recently became vegetarian as default. Continuing to take many small steps leads to large steps being realised.’

TIME AND COMMITMENT
Overall, Mariéchal is happy with her decision to settle down in Twente. ’I had a bit of a reverse culture shock when we moved here. People assume that because you are Dutch, you know how to arrange everything, but I didn’t even know how to rent a house. I was overwhelmed by all the choices in the supermarket. I wasn’t used to shopping like that anymore. But I like living here. You can cycle everywhere and it’s very easy to reach nature.’ Being in nature is something she’d like to do more of these days. ’I’m very driven, but I’m also demanding – also with myself. I am working too hard. I am trying to make the UT more sustainable, but I should not forget to be sustainable for myself. I was also a board member of the GreenLinks party for a long time, but I stopped. I realize I have to take more care of myself. I try to take more time for sports, reading books – in summer in a hammock in the garden -, growing a few vegetables and enjoying life.’

When it comes to her wishes for the future, Mariéchal wants to see the UT realize its sustainability ambitions. ’And I want to contribute to that, but I also want to make sure that I deal with myself in a sustainable way. I want to find more balance. The state of the world is affecting me. I need to appreciate all the small steps that are being made. I believe that change is still possible. I know that many people in the sustainability field struggle with the same feelings. People have so many worries and priorities nowadays. How can we put sustainability on the top of their agenda? You need to make sure that they have time – physical time - but also just time to think. We need to allow people at the UT to commit time to sustainability. Because we can’t just cut or lower our ambitions, not with the current state of the world. We are a university. If we can’t do it, who can? Let’s take a leading role.’
With an actual circus on campus, students and former members of Cnødde celebrated their 50th anniversary in October. Ever since the 1970s, the College, as the members refer to their club, has been the ideal sanctuary for young gentlemen who don’t just come to Enschede to study. The aim of the yellow-sweatered members is to excel in everything student life has to offer. To the outside world, it might seem a little loud and boastful— but hey... what do they know? Run any former Cnøddian through Google’s search engine and you will find a glorious LinkedIn page that frequently lists ‘CEO’ as a job title. For the past 50 years, Cnøddians have been rising above themselves. They’re true high-flyers, aiming for the sky. It is only in their own circus tent, when the Cirque de Cnødde reaches its peak, that they have to accept one lady soaring above them. But judging by the looks on their faces, they don’t seem to mind at all.
The next morning, at 6 am, from Schiphol Airport.

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the daily struggle and uncertainty. The fact that entrepreneurship
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sure you enjoy the journey.’ •

Say no to everything, suggests Kamerman. ‘It’s important not to
say yes to everything. It’s easy to think that you’re too small to
make a difference. I always consider the consequences of what I do.
If you throw your resources at everything, you won’t make any
impact. You have to focus on what matters most to you.’

SAgrada Familia

Whether Clairify’s approach bears fruit remains to be seen. ‘Sales cycles in real estate are long. This makes validation difficult
as well; we have to be patient.’ But for Kamerman, that is what
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FRESH AIR IN EVERY OFFICE SPACE. THAT IS HOW START-UP CLAIRIFY AIMS
TO CONQUER THE WORLD. UT ALUMNUS WIM KAMERMAN, ONE OF THE
FOUNDERS, TALKS ABOUT THE COMPANY’S JOURNEY. ‘BECAUSE OF COVID-19,
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CLAIRIFY CLEARS AWAY
THE SMOG IN OUR BRAIN

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ation ceremony of his Business Information Technology programme.

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Clairify’s founding trio found each other in an Airbnb in the

Portuguese capital. They cracked down on an ‘invisible problem’,
says Kamerman. ‘When we consider the comfort of our indoor

spaces, we basically look at four factors: temperature, acoustics,
light and air quality.’ And this latter factor in particular has always

been overlooked, Kamerman argues. ‘In spite of the fact that air

quality has a demonstrably negative effect on a person’s cognitive
ability. Surely everyone has experienced that dull feeling, those
moments when you feel like there’s smog in your brain. These
moments don’t just come out of nowhere.’

COVID-19

With that proposition in mind, the young entrepreneurs set to
work. The sensor they built looks like a flying saucer and is capable
of measuring all kinds of things in an indoor space: from CO2 to
perceived temperature, particulate matter and aerosols. This sensor is
connected to analysis software and building management systems.

And then, suddenly, there was the COVID-19 crisis. ‘Because of the

coronavirus, awareness of the problem’s magnitude grew enormously.
Soon, air quality was at the top of potential customers’ lists and they
started to flock towards Clairify. Maybe not for the reason why we
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For instance, CBRE, the world’s largest real estate consultancy,
approached Clairify for a pilot project. A’DAM Tower, Doctors Without
Borders and the University of Amsterdam are also amongst Clairify’s
clients, and earlier this year, investors OostNL and Rockstart provided
a financial boost. The company grew from three founders to a team of
nine employees, with a head office and manufacturing environment
in Enschede and a sales office in Amsterdam.

As a starting entrepreneur, you’re also, in a sense, building while
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SAYING NO

So everything seems to be running smoothly. Still, Kamerman
takes a critical look at the company’s developments. ‘We’re no longer
in the phase where it’s just three guys with a good idea. If you want
to continue growing, you won’t survive on sympathy alone. You want
customers to come to you for rational reasons, because you offer
a proven product that brings added value. There are other – more
commercial – laws that apply here. For us, 2022 was the year

to learn how to add the most value to the market. That means
developing an extremely solid and scalable value proposition,
through which we want to achieve global impact.’

In doing so, the most important lesson is to make choices.
‘The biggest danger is saying yes to everything. We prefer to do
one thing incredibly well,’ says the UT alumnus. For instance, the
company made a conscious decision not to make a consumer product
for a web shop; instead, Clairify is specifically focused on owners of
office buildings. Kamerman explains why. ‘In the past, there might
have been a split incentive; why would a property owner be overly
concerned about their tenants’ employees zoning out? However,
we believe the spirit of our times and the market are changing.
Four walls and a ceiling are no longer good enough for tenants.
Therefore, owners have to work on a future-proof property
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SagradA Familia

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SAGRA DA FAMI轮流

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Before joining FC Twente, I played three seasons in the Eredivisie for PSV. I combined that with studying International Business Administration at Tilburg University. I was still living with my parents in Veldhoven at the time, but in addition to my football career, I was studying full-time. That was tough in the long run. Keeping those two balls in the air was too much for me. I constantly had to be at my best and that came at the expense of my rest. I would think about school during training and vice versa.

Wanting to take a step forward in terms of my athletic career, I transferred to FC Twente a year and a half ago. I never considered giving up my studies. There are players who focus solely on football, but I find it important to intellectually exercise myself, and I enjoy it too. I need that stimulus. I want to be able to completely immerse myself in something other than football.

I made a deliberate choice to spread my one-year master’s programme over the course of two years. I train seven times a week, plus one or two matches. All training sessions are during the day, so I miss practically all of my classes. Every now and then, I can squeeze in an afternoon class or the occasional evening class, but I often have to make up for missed school hours in the evening. It’s a shame that it’s almost impossible to watch recorded lectures these days. That was an upside to the days of the pandemic: teachers made all lectures available online, which made it easier to understand everything. Now I often have to make do with the slides, but I miss the explanations.The top-level sports scheme offers me flexibility. In May, my preparations for the European Championships with the national team coincided with my exams. Fortunately, I was allowed to reschedule them. What’s important in this regard is that the teacher is flexible and willing to cooperate. For example, I can sometimes do a substitute assignment if I can’t be present. The responsibility to arrange everything lies with the athlete, so that requires pro-activity on my part. It would be helpful to have a top-level sports coordinator at the UT. Tilburg did have one, but I must say that here, things are at least as well-organised as in Tilburg.

I want to get my master’s because I have to think about my life after football. If you can keep playing football until the age of 35, you’ve done very well. I hope to graduate while playing for FC Twente and have already been in contact with technical director Jan Streuer. There is plenty to do there in terms of management and innovation. Working in the football industry seems like an interesting prospect, be it in the policy sector or as a football agent. I believe it’s still difficult for a woman to work in the male-dominated world of football. As a woman, you’re more likely to be criticised. Nevertheless, that world does interest me.

My contract with FC Twente runs until the summer. What I will do after that remains to be seen; that also depends on my performance. I’m quite happy here at FC Twente. It’s a very welcoming club that performs well and plays to win. I might stay in the Netherlands for a while longer, but I definitely have the ambition to play football abroad.

In February 2022, I was first selected to play for the Dutch national team and next summer is the World Cup in Australia and New Zealand. I really want to be there. I know I have a lot more potential, so I want to keep moving forward. I will focus on that, and the results will naturally follow.
EMILIE VAN EPS (20)
Creative Technology student and top sailor

‘My father is a sailing enthusiast. He used to take us sailing from a young age. Although I was brought up on sailing, I only started to grow really passionate about it when I boarded a catamaran for the first time at the age of sixteen. I thought that was really cool. From that moment on, I actively searched out all the sailing camps and races. I was actually kind of a late bloomer: most top sailors start in primary school.

The past few years, I sailed a Naarza 15, a catamaran for competitive sailors. I’ve now switched to a larger boat, the Formula 18. The great thing about a catamaran is the speed and adrenaline. The boat often lifts out of the water and it’s almost as if you’re flying. Catamarans are real high-performance boats, quite different from a simple Optimist dinghy. Is it a dangerous sport? If you stay alert, it’s not very dangerous. But there are no deaths.

I have a regular sailing partner. He handles the sails and I’m at the helm. In races, it mainly comes down to tactics. It’s important not to get stressed at such moments, and above all, not to be too shy. If we have the right to a certain position, I will not waste time, so I have time for fun things in the evening.

Last summer, we finished second in the Under 21 European Championships. It took place in Italy, in beautiful surroundings. That was quite the experience. Next summer, we’re going to the World Championships in Germany. My dream is to sail in the SailGP league, which is a sort of like Formula 1 for sailboats. And of course, I would love to go to the Olympics. But finding a good job for later is just as important. My studies are very interesting and technology has always fascinated me. I also plan to work with technology in the future.’

JELMER VIS (25)
Mechanical Engineering student and top glider pilot

‘As is often the case with top-level athletes, I was introduced to my favourite hobby by my father: gliding, in my case. What also helped is that I was born practically next to Hoogeveen airport. Gliding means flying without an engine. There are several different types of gliding, but what I do is fly a very streamlined plane with long wings, gliding from cloud to cloud as to stay in the air for as long as possible.

I use a plane from the club, but also have a machine of my own. An old model that I fixed up myself. In competitions, the competitors are launched into the air by a tow-plane and then we disconnect and are free to glide. Experience is key in this sport. You’re at your peak around the age of 40. The longer you glide, the better you get at reading the sky. The sport doesn’t require much in the way of physical effort. Your heart rate is constantly elevated while in the air, so it’s tiring, but not physically demanding.

‘I enjoy my studies and sport too much’

During competitions, you can make a difference while in the air by using thermals as effectively as possible. The goal is to fly in currents of rising air. That’s because thermals make you gain altitude, so you basically glide from thermal to thermal. The ideal weather is sunshine with lots of cirrus clouds. How do you know how to glide?

Mainly by feel and by looking outside. After all, everything in the cockpit is mechanical. I don’t have thousands of buttons or complex navigational equipment on board. On the other hand, unlike professional pilots, I don’t have an autopilot system on board. What makes the sport tricky? In running, you have a general idea of how fast you can go, but if I miss just a single thermal, I’m through. I’ll have to land in a meadow or field somewhere. That’s all part of it. Sometimes you read in the newspaper that a plane has crashed, or someone might urgently call an ambulance, even though it was a controlled landing.

As of next year, I will move up to the senior division. The problem is that I won’t rank among the national top anymore. In the junior division, I competed in three world championships and several European championships. It will be quite a challenge to beat the competition in the senior division. And if I make it to the World Championships next year: it will be held in Australia. Getting my plane there is almost financially impossible. A DUG loan is not going to cut it.

In the winter season, I mainly train on the simulator. That is easy to combine with my studies, but when I participate in competitions, I will often be gone for one or two weeks. That’s why the top-level athlete status is so important to me. The flexibility and financial support it offers are very welcome. It’s a constant puzzle to fit everything into my schedule, but it’s doable. Especially because I enjoy my studies and sport too much to give either of them up.

Strange enough, the consequences of the pandemic have been a blessing to me. Digital learning allows me to do a lot of work from Drenthe so I hardly have to be in Enschede. That leaves plenty of room in my schedule for training. My focus is now on graduation and setting new goals for myself in gliding. From the very start of my studies in Twente, my goal was to avoid borrowing and to finish my studies without delay. So far, it’s going according to plan, thanks to the top-level sports scheme.’
If you want to understand UT alumnus Tim van de Rijdt, just search for the ‘Shirtless Dancing Guy’ video on YouTube. The video shows a man dancing at a festival, a bit silly and all by himself. Until, after a few awkward seconds, a second festival-goer starts dancing along. He then calls his friends over to join them and before long, a whole crowd is partying to the music. But how is this translated into the business world? In this case, the ‘Shirtless Dancing Guy’ is an entrepreneur or inventor with a plan that— at first glance— seems insane, until someone else comes along who believes in the story and starts ‘dancing along’.

Van de Rijdt does not think of himself as the first shirtless festival-goer, but rather as the second dancer. This is exactly the role he fulfils at Dutch company Mosa Meat. In 2013, professor Mark Post and food expert Peter Verstrate succeeded in creating the first cultured meat burger. Food critics who got to taste the burger live on television found it quite tasty, but a bit dry (because the meat does not contain much fat yet). When Van de Rijdt heard about the project, he was immediately enthusiastic. ‘I offered to help. I did so for a year and a half, from the train and in the evenings, alongside my regular job.’

CULTURED MEAT
Van de Rijdt has now been working at Mosa Meat for many years. The Limburg-based company uses one minuscule piece of meat from a live cow to make a hamburger via cell multiplication. This means it is real meat, but no animals have to be slaughtered to make it. In recent years, an entire industry has emerged in this ‘cellular agriculture’, producing meat, fish and leather. Currently, the main challenge is to produce high-quality meat, on a large scale and at a reasonable price, explains the alumnus. Mind you, the cost of the first piece of cultured meat in 2013 was 250 thousand euros.

On top of that, Mosa Meat’s product should have the smallest possible ecological footprint, because that is potentially the greatest advantage of ‘cellular agriculture’ compared to traditional animal husbandry. ‘There are negative climate consequences associated with our current animal husbandry,’ Van de Rijdt points out. ‘We might start eating less meat in the Netherlands because of plant-based alternatives, but worldwide meat consumption is still growing. This is because meat consumption is directly correlated with wealth increase.’

PETRI DISH
Compared to slaughtered beef, cultured beef requires 95 percent less agricultural land, generates 93 percent less air pollution and uses 78 percent less water, figures from research firm CE Delft show. An additional benefit: consumers can continue to eat meat. ‘With our technology, we’re not counting on any mass consumer behavioural change; not everyone will become vegan of their own free will. That’s why Mosa Meat makes the same meat, but in a sustainable way.’

But how to turn this into a commercial success? Therein lies a major task for CMO (Chief Marketing Officer) Van de Rijdt. His job is threefold. ‘First, I look at where we can offer our meat. At this stage, we’re not allowed to sell our burgers just anywhere; even tasting them is a sensitive issue in the Netherlands. I also maintain contact...’
with potential buyers, such as supermarket chains or restaurant chefs, i.e. ‘the sales side’. Finally, I try to draw attention to the product and define the image. Of course, we want to present our meat in such a way that it makes your mouth water. The image of a professor cultivating meat in a petri dish in some obscure laboratory somewhere is not accurate. The place where we produce the meat is more like a brewery.’

TWENTE

Van de Rijdt learnt his first skills in communication and marketing in Enschede. In 2000, he arrived at the Twente campus to study Applied Communication Science (TCW). ‘I’m a true generalist at heart and was thrilled to have found a broad programme in TCW. Plus, the campus was great; a kind of Center Parcs where I could also study.’ Van de Rijdt was, in his own words, an ‘academic late bloomer’. ‘It was only at the end of my studies that I realised that science allows you to add something to what we already know. That’s when the penny dropped for me.’

Even more important was his meeting with Neil van der Veer, founder of Newcom. The research company was part of the TCW programme back then, and specialised in online research, rather than paper surveys. Many TCW students were able to find work at the thriving Newcom. ‘After my studies, I spent a few years as a student focused on consumer marketing. ‘The people who make it are the core of the company. I found it interesting to form a bridge between the market’s needs and the engineers. When it comes to product requirements, there are major differences between countries. A good example is the situation in the Netherlands, where people place great value on public transport and cycling. Other countries are more car-oriented. We were the first country in the world to be able to incorporate all current public transport information on departure and arrival times in Google Maps, to meet the specific needs of the Dutch market.’

The UT alumni felt right at home working at Google, but as time passed, he felt the urge to pay more attention to ‘what the world needs’. Van de Rijdt firmly believes in using technological solutions to tackle major social problems, such as climate change. With Mosa Meat, it is all about sustainable meat. ‘But the movement is much broader than that. Consumer behaviour is not changing fast enough and governments are slow to act. This new movement, call it ‘hacking capitalism’, is aimed at solving problems independent of the authorities and consumer behaviour by means of technology. This development is desperately needed, which is why I started dancing along at Mosa Meat.’

GOOGLE

Although Van de Rijdt was not looking for another job, a new opportunity presented itself in 2008. ‘It actually started at the UT, which had one of the fastest networks in the world during my years as a student. As a result, I developed an interest in everything digital. Purely out of interest, I searched for some information on Google’s data centres around 2008. I found out that Google has a commercial office in Amsterdam. Because of my fascination with the company, I decided to apply there. All I could do was hope for the best, but after a seven-month application process, in the middle of the credit crisis, I got the job.’

Van de Rijdt took on various roles within Google, eventually focusing on consumer marketing. ‘The people who make it are the core of the company. I found it interesting to form a bridge between the market’s needs and the engineers. When it comes to product requirements, there are major differences between countries. A good example is the situation in the Netherlands, where people place great value on public transport and cycling. Other countries are more car-oriented. We were the first country in the world to be able to incorporate all current public transport information on departure and arrival times in Google Maps, to meet the specific needs of the Dutch market.’

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My final project as a student focused on Pieter Jelles Troelstra’s student days. He later became known as a lawyer for the poor and as a socialist politician. He was one of the founders of the precursor of the Dutch Labour Party PvdA, in 1919, a year after the Russian Revolution, he called for a socialist revolution in the Netherlands. But our country wasn’t ready for that.

Troelstra studied law in Groningen from 1882 to 1888 and was a member of Vindicat, the student association. About a century and a half ago, joining that association was the most normal thing in the world; in fact, it would’ve been bizarre not to. You would’ve been branded a nihilist. Troelstra was known for speaking his mind, which is probably why he was put through hell during his hazing. It was so bad that his father and sister urged him to stop putting up with the brutal humiliation and leave the association. He didn’t. A month later, the hazing had come to an end. Troelstra, as president of the new pledges, made a speech during the inauguration. He joined as many as ten associations, three of them were literary. He showed himself as a true generalist, i.e. ‘the sales side’. Finally, I try to draw attention to the product and define the image. Of course, we want to present our meat in such a way that it makes your mouth water. The image of a professor cultivating meat in a petri dish in some obscure laboratory somewhere is not accurate. The place where we produce the meat is more like a brewery.’

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So his student days were carefree? No, in newspapers I found there was an entirely different side to him. He wrote critical articles on poverty, hunger, unemployment and the wide gap between the rich and the poor. He endorsed a strike by Enschede textile workers. Under the presidency of Piet van Heuvel, a carpenter in Leeuwarden, he published a fortnightly column in the Friesche Courant for three years. In those columns, he became increasingly political. Where at first, he would still write about his beautiful nieces or an exciting handball match, over time, he started advocating universal suffrage so that poor people would also get a say in the national administration. So I discovered that even as a student, Troelstra was deeply engaged in the debate about society’s injustices.

Meanwhile, he seamlessly combined this seriousness with fun during his student days. In 1908 – during the tense period before World War II when crises were piling up, just as they are now – historian Johan Huizinga published the book Homo Ludens: man the player. In it, he argues that play is a prerequisite for our culture. Our civilization will break down if people deprive themselves of the freedom to put things into other perspectives, to colour outside the lines, to explore different paths. And perhaps that ability to play is all the more crucial in these dark times. The greatest wisdom of all is knowing when you can or should alternate the serious with the playful. Some situations call for utter seriousness. Think of war, poverty, climate and a hundred thousand other forms of misery. But sometimes, you’re allowed to play.

Hiska Bakker
Historian, journalist and presenter at Studium Generale

CAMPUS
‘I ENJOY ACTIVISM VERY MUCH. MAYBE TOO MUCH’

Students or researchers? PhD candidates fall into a category of their own. What is it like to navigate the sometimes lonely road towards a doctoral degree? In this series, we put young academics of the University of Twente in the spotlight. This episode gives the stage to Roberto Cruz Martinez, an Information Specialist, a University Council member and PhD candidate at the UT.

WHY I’M HERE
I came to the Netherlands in 2016 to study a Master’s programme in Psychology. I was looking for a quiet and calm place to fit my lifestyle and focus on my studies. I chose the UT solely because of the programme. I’d never been to the Netherlands before and I had no idea what Enschede was like, but from the start I came here with the plan to stay long-term.

The choice to study psychology was always clear to me. I never doubted it. It was the only option. I’ve always been very interested in humans, in what drives us, in what impacts us as a community. I guess that also explains my former activities as a board member of P-NUT (PhD Network of the University of Twente) and now as a member of the University Council. I like reaching out to people.

I’ve always been very proactive and vocal. Since September 2022, I’ve been a University Council member and PhD candidate at the UT.

WHY I'M HERE
I feel that I should try and help wherever I can. After all, it will be up to my generation to be in charge soon.’

I’m a member of the University Council. I enjoy activism very much. ‘Maybe too much.’ I know that individuals can make a big difference – for themselves, but also for others. That is my passion and it’s a principle at this point. I want my life’s work to be more than just whatever job I have at the moment. I want to participate and actively work toward changing things. Hopefully that also motivates others to become involved. As I’m getting older and getting more experience, I feel that I should try and help wherever I can. After all, it will be up to my generation to be in charge soon.’

WHAT I DO
‘My PhD research is about self-regulation, also known as self-management or self-care when it comes to health regulation. This generally refers to what a person can consciously do to plan their life based on their goals, what cognitive functions or specific behaviours are involved and so on. I focus on how individuals with chronic conditions can take better care of themselves. This covers, for example, patients with heart failure or those recovering from a stroke. And because we are the UT, I research possible interventions with digital technologies. I’m looking into how we can design and use technologies to motivate people and facilitate changes in their lifestyle.’

My doctoral research was possible thanks to a scholarship from the Mexican National Council for Science and Technology, but this scholarship ran out in 2021. I needed an extension to continue my research, and so I also started searching for jobs. Luckily enough, I could apply for my current position as an Information Specialist, which is now my fulltime job at the UT. I’m still busy writing my PhD dissertation and I’m still very passionate about it, but I haven’t been able to give it much attention lately. I need to engage more. It’s become a behavioural problem – and I’m an expert on that, so I know how that goes. The pattern needs to be broken. Everyone has been very supportive and understanding of my situation. It’s all up to me now.’

MY PHD JOURNEY
‘I’m very happy that I embarked on the PhD journey, though. It has exceeded my expectations. It might sound like a cliche, but the best part has been the community. I never could have imagined all the different people I’d meet. There are some bad parts, of course. Although I’m usually very positive, there were a few moments when I had to be critical. Being a PhD on a scholarship has its disadvantages. On top of doing research, I had to be busy with a lot of extra things. Around the middle of my PhD I even had to prove to the Dutch government that I had sufficient financial means to stay here, because the scholarship wasn’t enough. Recently, I had serious troubles with housing. Often I felt like I was in a gap, like I didn’t have enough rights. At one point, I was even considering to leave. When a lot of small things accumulate, it just gets to you. But that’s all in the past now.

I see myself staying at the UT. I’m really happy with my job and I see many areas where I can contribute, such as Open Access. I’m passionate about science and how it can improve – and I want to be able to influence that.’
Within Nedap, Zijlstra has started in Digital Business & Analytics. This summer, Zijlstra completed his master’s programme in Business Administration at the UT, specialising in Marketing. Zijlstra is employed as New Business Developer at Nedap. As of September 2022, Hidde Zijlstra has been working in the male grooming products department. Gulhane completed his master’s degree in Interaction Technology at UT this year. He also completed an honours programme in Design Track.

HIDDE ZIJLSTRA
BA
As of September 2022, Hidde Zijlstra is employed as a New Business Developer at Nedap. This summer, Zijlstra completed his master’s programme in Business Administration at the UT, specialising in Digital Business & Analytics. Within Nedap, Zijlstra has started working in the Harmony proposition, which is developing a platform for RFID (radio-frequency identification) in logistics. There, the alumni works to facilitate the implementation of RFID in logistics.

2021
LUKAS VAN REMMEN
UT
In September, Lukas van Remmen started working as a Marketing Specialist at OpenUp. OpenUp is an Amsterdam-based company that specialises in everything related to mental well-being. Recently, OpenUp was named one of the top 10 start-ups in the Netherlands. In addition to his job at OpenUp, Van Remmen is also working on his own health tech start-up. Van Remmen studied Communication Science at the UT.

2015
MARIE ZAPPEIJ
PSY
In October, Maria Zappeij started her new job at Koningsplein Gazelle NV – in the role of HR Business Partner. Zappeij obtained her bachelor’s degree in Psychology from the UT in 2015. After completing her master’s programme in Nijmegen, she worked as an intermediary at Randstad Group Nederland and as an HR consultant at RabinLogistics.

1999
ANGELA GALIANO
GFM
In August, Angela Galiano joined ONErpm as Country Manager of the Andean and Caribbean countries. ONErpm is one of the largest music distributors in the world. Galiano has been involved in the music industry for quite some time, having previously worked at Sound Royalties and Dinastia INC, among other companies. In 1999, Galiano graduated in Business & Marketing Management.

Would you like to know if your programme has an Alumni Association? Check www.utwente.nl/en/alumni/your-alumni-benefits/alumni-associations/
To add luster to its seventh lustrum, AEGEE-Enschede organized a free laser tag game, the evening continued in AEGEE’s home pub, Asterion. •

The evening at the Sickhouse at Stationsplein for all students in Enschede. After the activity in the Sickhouse at Stationsplein for all students in Enschede.

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In September, Ilse Akkermans, Cyrelle Tenhagen, Ans Vlooswijk and Maudi Sonder won gold in the coxless pair at the European University Rowing Championships on the Yeditepe University campus in Istanbul. •

Nicole Vermeulen has had a successful career at large companies such as Essent and P&G as well as at smaller companies and scale-ups. She now works as a Supply Chain Engineer at Shell. She has been working there for 10 years on the energy transition and has played an essential role in the Holland Hydrogen project, the construction of a green hydrogen factory in the Maasvlakte. She is also active as a guest lecturer in education and as a mentor in a number of women’s networks.

In January 2023, she will start as a board member in a solar energy scale-up in Switzerland. Her motivation is to positively influence both diversity and the energy transition in the energy industry and at as many companies as possible. To realize this ambition, she wants to take part in the only accredited training for non-executive board members, in London. She will use the scholarship to co-finance this training.

Maurice Essers currently works as a postdoc researcher at 10 Def. Her ambition is to have a chair in Gender & Energy Design. Through her foundation 75inQ she aims to bring her knowledge to boardrooms at an accelerated pace. In order to make more impact in those boardrooms, she wants to follow courses at the Erasmus Center for Women and Organizations (ECWO) with the runner-up grant. This also gives her access to the ECWO alumni network.

The Marina van Damme grant was awarded for the 20th time this year by the University Fund Twente and was made possible thanks to a donation from M.A. van Damme-Van Wiele. In 1985 she was a PhD student at the Technical University of Twente.

The Marina van Damme Scholarship, 2022 goes to alumna Nicole Vermeulen, graduate of International Business Administration (2005). Mariëlle Feenstra, alumna of Public Administration (2002), has received the runner-up scholarship. The jury selected them from 22 candidates on the basis of their ambition, passion and the possibility to take a next step in their career.

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Artificial Flower by Eva Schockemöhle wins first Niers Fund EHealth Voucher

Physical activity is necessary for the prevention of many diseases of affluence. That’s why student Vera Schockemöhle developed the Artificial Flower as part of her graduation for the Bachelor’s in Creative Technology. The flower opens up if the user becomes active.

The jury considered this to be a creative and innovative concept with a high likability factor, but more validation is needed. That is why Vera wins the first eHealth Voucher, which consists of 5,000 euros plus the support of the Desiglab, Novel-T and the UT chair Biomedical Signals and Systems in the further development.

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‘STUDENTS SHOULD BECOME AWARE OF WHAT THEY HAVE TO OFFER’

WHAT DOES ‘SHAPING 2030’ MEAN FOR THE STAFF OF THE UNIVERSITY OF TWENTE?

IN A SERIES OF DOUBLE INTERVIEWS, TWO PROFESSIONALS SIT DOWN TO TALK TO EACH OTHER ABOUT THAT. WHERE DO THEIR ACTIVITIES OVERLAP? HOW DO THEY DIFFER? WHAT CAN ONE LEARN FROM THE OTHER AND VICE VERSA?

IN THIS EDITION: PROJECT MANAGER DEMITRIANA MINASSIAN AND CAREER COUNSELLOR WILLEKE STUKKER – JANSEN.

Willeke: ‘So tell me, who are you? What do you do?’

Demitriana: ‘I currently work as a project manager for Strategic Business Development. I’ve been at UT for five years now, first as a student with a pre-master in Industrial Design and a master’s in Industrial Design Engineering. As a student, I also worked in parallel at the DesignLab and Fraunhofer Innovation Platform. After my graduation I got my first full-time job as a Research Engineer at Fraunhofer Innovation Platform where I worked for two years. Right now, I am the project manager of MISSION, which is a Marie Sklodowska-Curie project, funded by the European Union’s Horizon 2020 research and innovation programme. The Faculty of Electrical Engineering Mathematics & Computing (EEMCS, red.) is participating and coordinating in the project, whereas there are another nine international partners.’

Willeke: ‘I also support a colleague with DIH-HERO, a project that tries to accelerate innovation in robotics for healthcare, which is also funded by the EU and is led by EEMCS. It has been in motion for three years already and has funded more than sixty projects through different calls. Those are my main work activities, but I am also involved in the service council of SBD and some other internal initiatives.’

Demitriana: ‘I’m originally from Cyprus but also half Armenian. And I did my bachelor’s in the UK. Currently, I live with my partner and our dog, a black mini schnauzer. It is a pandemic puppy.’

Willeke: ‘That sounds interesting, and where are you from?’

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Demitriana: ‘I’m originally from Cyprus but also half Armenian. And I did my bachelor’s in the UK. Currently, I live with my partner and our dog, a black mini schnauzer. It is a pandemic puppy.’

Willeke: ‘A pandemic puppy?’

Demitriana: ‘That sounds interesting, and where are you from?’

Willeke: ‘So tell me, who are you? What do you do?’

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Demitriana: ‘That sounds interesting, and where are you from?’
I started in the first year that the bachelor programmes made the switch to English. In my premaster I did a few bachelor courses, this transition made it a bit chaotic. There are also simple things like different councils in the university only being participating, contributing and being involved. Or even some events and articles only being published in Dutch. Of course, you can learn Dutch, but that is a process and takes time. Sometimes, people forget that learning another language takes a lot of effort. But I do see a lot of steps the university has taken. There can always be more, but I do appreciate the progress I see.

Willeke: ‘You also studied in the UK, was it completely different?’

Demitriana: ‘Yes, it was completely different! One of the culture shocks I had when I came to the Netherlands from the UK, is that everything at the university in the UK was so structured. There was a guide for everything. You knew exactly what to expect. You knew how to find an internship, how the interview was supposed to go, how to dress and how you are expected to behave. Here everything is more unclear, but also in a way that it is more flexible as well. Some things are more intuitive, but that also creates a lot of uncertainty. Job interviews here made me ask myself questions like ‘How formal is formal?’ and ‘Is a suit too much?’. I’m not always certain what people expect from me. The master’s programme was way more flexible than my bachelor’s in the UK. I had more choices; there were so many possible combinations of courses. However, that also created a lot of uncertainty and stress on ensuing you are making the right choice and right combination. I used to do ‘checklists’ for everything. What would you say that freshly graduated students are missing before they enter the job market?’

Willeke: ‘Self-confidence. Not knowing whether you are capable enough to start as a professional in the field is often experienced as stressful. This can cause a lot of doubt. Students should become aware of what they have to offer.’

Demitriana: ‘I recognize that! I find it a big challenge to present skills I know I have but that are not certified. During my studies, I got to explore many different topics that are not 100% related to my study. But then I felt very self-consciousness to say ‘Hey I know about this!’ when I didn’t have a class to show for it.’

Willeke: ‘Proving you have certain skills can be difficult. To overcome that, we have a STAR exercise in our module. Think of an achievement you are proud of and describe the situation, task, actions and result you had it a difficult exercise. The right example doesn’t always pop up in your mind especially if you haven’t got a lot of experience. But it might be something very small. You don’t have to have been president of a board, it can be something like stepping out to do a side job.’

Demitriana: ‘It was very nice to learn about your work. Do you have any other interests besides work?’

Demitriana: ‘Yeah, when we all had to work from home at the beginning of the pandemic, we saw a good opportunity to raise a puppy as it should be raised. This way it didn’t have to stay home alone. We could help her to get used slowly to longer periods alone. And what about you, who are you?’

Willeke: ‘I work as a career counsellor at Career Services, which is part of Student Affairs Coaching and Counselling (SACC) and the department of CES. As Career Services, we help students in the process of completing their studies and starting up their professional career. If they wish to find a job, we offer guidance in finding out what the options are and where to find opportunities, based on their preferences, future dreams and interests. But we also help bachelor students in choosing a master track that really matches their personal profile and ambitions. Furthermore we offer study choice tests and workshops on career related topics and skills.’

Demitriana: ‘That must be very helpful for many students.’

Willeke: ‘Yes! We have been president of a board, it can be something like stepping out to do a side job.’

Willeke: ‘That must be very helpful for many students.’

Demitriana: ‘What would you say is the biggest challenge that students are facing?’

Willeke: ‘It depends a bit on the background. In general, the biggest challenge students may face is getting a picture of the kind of jobs there are in their study direction and whether those are what they are aiming for. They’ve done this long study track to get their master’s degree and then it’s often not clear what to do with it. It may take a while, an open mind and a lot of creative thinking to find the right fit. I am happy to be able to support in this search.

We also try to help companies. A lot of companies are seeking knowledge workers or engineers. We contribute to all kinds of programmes made the switch to English. In my premaster I did a few bachelor courses, this transition made it a bit chaotic. There are also simple things like different councils in the university only being participating, contributing and being involved. Or even some events and articles only being published in Dutch. Of course, you can learn Dutch, but that is a process and takes time. Sometimes, people forget that learning another language takes a lot of effort. But I do see a lot of steps the university has taken. There can always be more, but I do appreciate the progress I see.’

Demitriana: ‘I experimented with making candles. And a few weeks ago I tried self-drying clay. It was a lot I found. It is very meditative.’

Willeke: ‘Yes definitely! I also enjoy decorating my own home. We just built a new garden building for me to work in. And I enjoy decorating it a lot! Thinking about how I want it to look. In the past, I used to sing as well. But during the pandemic, that stopped and I haven’t picked it up again. Do you have any other hobbies?’

Demitriana: ‘I dance in a competitive team. We’re dancing in different competitions throughout the year all over the Netherlands and we train a lot. I went back to it last year after I stopped for a while. But last year I asked myself why I actually stopped. So I looked for a dance school and joined a team. It felt strange, but it was a very good move for me.’

Willeke: ‘Sounds like a great hobby, you can express yourself and it’s a nice combination of exercise and music.’

Demitriana: ‘Yes and I really like music too! •

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The challenges society faces today are complex and far-reaching. More than ever, they call for the collaboration of many different, complementary stakeholders. At ECIU University, of which University of Twente is a partner, our vision is to help solve these complex challenges and make society futureproof by collaborating at local, national and international levels.

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