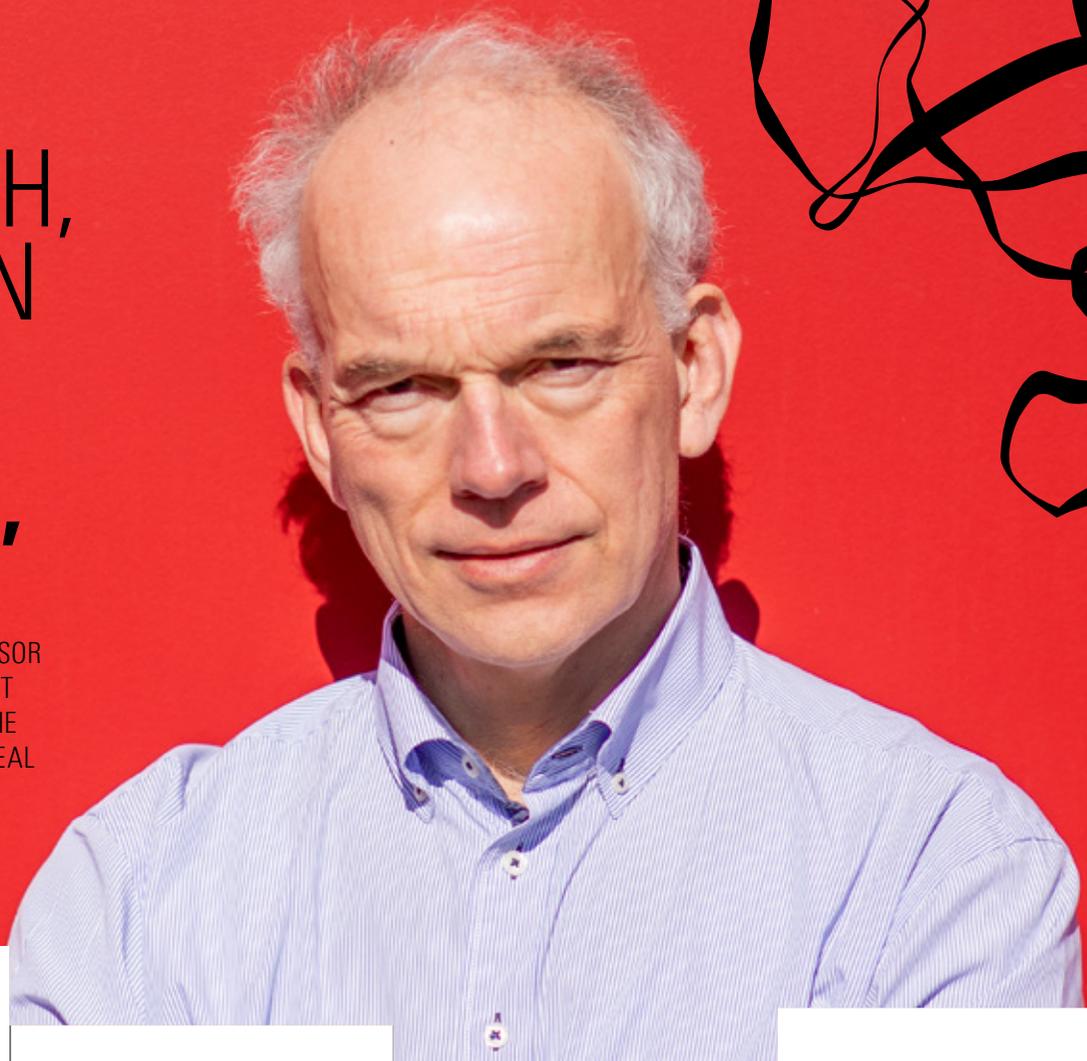


Campus

**'WATCH,
LISTEN
AND
BE
OPEN'**

UNIVERSITY PROFESSOR
DETLEF LOHSE ABOUT
THE COLLAPSE OF THE
ENLIGHTENMENT IDEAL



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'MAKE THE WORLD
AS YOU LIKE IT'**

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**DOING
SOMETHING GOOD
FOR THE WORLD**

COLOPHON

This Campus Magazine is a co-production between U-Today, Marketing & Communications and the Alumni Office at the University of Twente. The magazine aims to connect the UT community and is spread among university staff, students, alumni and other relations.

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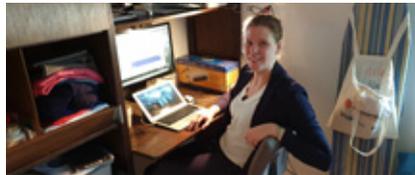
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FOREWORD



PLACE TO BE

Can you remember the very first time you visited the campus? A colleague of mine asked me that while we were talking about the article on page 4.

Truthfully, I cannot. Then again, I have been coming here since I was five years old, when I got swimming lessons at the THT. What I can remember is the beautiful blue water of the indoor pool and the time that former head lifeguard Henk Siers dove into the water after me as fast as he could because I had decided I didn't need my inflatable armbands.

Later, I would go to concerts on the Ganzenveld. I saw Sting there when he performed during the benefit concert for the fireworks disaster. I also went to see BLOF, Direct and Anouk. I loved singing along with the crowd and dancing on the soggy lawn, while a flock of chattering geese swam in the pond nearby.

Since 2002, I have covered a lot of kilometers on my bike and on foot along the campus' pathways. My travels often take me along the Drienerlolaan and past the Carillonveld on my way to appointments in the Spiegel. Other times, I go past the tennis courts to Boerderij Bosch to get tickets at the UT-Kring. During my lunch hour, I enjoy walking past the campus housing along the Horstlindelaan.

Still, I do not have a favourite place to be on the campus - except maybe in the summertime when I ride my bike onto the campus in the early hours of the morning.

When the sun first rises above the U Parkhotel and the imposing building casts its reflection in the water of the Vrijhof and at the end of the afternoon, when - after a long day at work - I finally get to dive into the blue water of the outdoor pool. Fortunately, the lifeguard doesn't have to drag me to safety anymore.

But then you are suddenly forced to stay at home because of the coronavirus. And after the umpteenth home working day, you realize all the more how special that place is. The place where we usually cycle, drive and walk to study and work every day.

Fortunately, the campus is more than a plot of land with trees, ponds and buildings. It is a place where stories bring people closer together. And we can continue to write about it, especially during corona times.

After all, there is a reason why we call this magazine Campus. Enjoy!

Maaikje Platvoet
Editor-in-chief U-Today

FROM CLOISTER TO CAMPUS AND BACK AGAIN

CAMPUS IS THE NEW MONASTERY

4

EVERY UNIVERSITY AND MAJOR COMPANY SEEMS TO HAVE A CAMPUS NOWADAYS. AS THE FIRST CAMPUS UNIVERSITY IN THE NETHERLANDS, THE UNIVERSITY OF TWENTE WAS A FORERUNNER IN THAT REGARD. WHAT MAKES A 'REAL' CAMPUS? AND WHY HAS IT BECOME SUCH A WIDESPREAD PHENOMENON? 'IT'S LIKE A MODERN CLOISTER BUT WITHOUT THE RELIGION.'





'City campus is a contradiction in itself'

GREEN AND ISOLATED

'A city campus is a contradiction in itself,' disagrees Timmerman. 'Campus is the Latin word for field, which you won't find in the middle of a city.' In his mind, the essence of a campus is being green and isolated. 'One of the first campuses ever was founded by Thomas Jefferson: the University of Virginia in the US. It was built outside the city to keep the academic community isolated from the influences of the outside world. I think this is the reason why the nametag campus is so popular nowadays. It is associated with the utopian and idealistic idea of the first campuses in the US, which aimed to educate the best and the brightest in the country, to create a community of future leaders.'

Historically, the first universities were in Europe and they were connected to the Church. Their origins go back to monasteries and cloisters – which were also isolated from the world. This model was copied by Jefferson and his model was used for the University of Twente, just in a more modern form. 'It's like a modern cloister but without the religion,' says Timmerman. 'Just like Jefferson's campus, the UT has three separate areas: for education and research, for relaxation and for housing. A real campus has staff and students living on the premises and it has a green field. Jefferson's campus also had the lawn for festivities, we have that here as well. We have a unique space for festivals, such as the Kick-In or Green Vibrations.'

Campus of the University of Virginia. Picture provided by the University of Virginia.



Peter Timmerman, head of Studium Generale and a walking encyclopedia of UT campus history, has a clear vision on a 'real' campus. 'Look at the map of the Amsterdam Science Park,' he says, showing us a print from the website of the University of Amsterdam (UvA). 'They present a nice green map with an open parklike environment. But...' He reveals a new print from Google Maps. 'But actually it looks like this: a concrete jungle. It's a sort of greenwashing for PR purposes. Nowadays everyone seems to claim they have a campus, but the UT is the only real campus university in the Netherlands.'

Opinions on this topic differ, though. According to Alexandra den Heijer, a professor of Public Real Estate at Delft University of Technology, the definition has become much broader among universities. As the lead scientist at the Campus Research Team, she characterizes a campus as all buildings and land with a university-related function. 'That can be lecture halls, offices and labs, but also housing, cafés and spaces for startups. This definition is therefore not just about the property of the university, but also about management and usage of required facilities, such as student housing, which is not in the hands of the university, but is used by its students. In this definition, a campus can also be located throughout a city; it is not necessarily a closed entity like in Twente.'



TWO MODELS

Den Heijer would define this type university as a ‘campus as a city’. ‘In this model, everything is centralized in one place. Students and staff don’t need to leave the campus. The big advantage of a campus as a city is the community feeling. In addition, you hardly lose any time by moving from building to building. This also makes multidisciplinary research easier; it is clearer where everything is located. Moreover, a foreign student will probably feel more at home in this model. The student is temporarily admitted to the community and can immerse him- or herself in the campus family. This prevents the sense of loneliness that always lurks in a large city. The campus as a city can therefore profile itself as “temporary home” for foreign students. That is a big advantage for Twente.’

On the other end of the spectrum lies the ‘city as a campus’ model, where living, studying and relaxing are separated and spread around the city. This, Den Heijer stresses, is also referred to as a real campus with Europe’s oldest universities like Bologna, Cambridge, Oxford and Uppsala as vivid examples. ‘The advantage of the city as a campus is that the university does not have to organize all facilities itself. You can use the capacities of the city, such as the cultural facilities or the restaurants and bars. The university is less of a bubble when it is located in the city, it is less of an ivory tower. And that is exactly what universities are often

blamed for nowadays: the lack of social engagement. A city as a campus is much more visible for the rest of our society. On the other hand, universities are growing and that puts a lot of pressure on a city. If universities are too big, they become almost a parasite of the city. They can take the life out of its host.’

COMMUNITY FEELING

Timmerman agrees that there are advantages and disadvantages to both models, but he believes that it is the sense of community that truly makes a campus – and something that you can only get at the campus as a city form. ‘The campus’s isolation could be seen as elitist, but it works. Because of the campus formula, everyone is close together. You meet so many people just on your way from a meeting to a meeting. I often feel like a fly in a vanilla pie. When I walk outside, I always meet people, stop and discuss things with them. It gives you a community feeling. In earlier days I studied at what is nowadays called the Roeterseiland-campus of the UvA, but I always felt lost in space over there. At the UT campus you have a good overview of the whole university. It makes you feel connected to the people and the institute.’

SILENCE, PLEASE!

There are pros and cons to both variations of a campus, but why do we even need a physical space in an age where all information can be passed digitally? Wouldn’t we prefer to work or study from our own bed? Apparently not, says Alexandra den Heijer. ‘In a recent study of fourteen Dutch campuses, we discovered a remarkable trend. The former hypothesis was that contemporary technology allows students to work anywhere, resulting in lower

*‘Because of the campus formula,
everyone is close together’*



'University is less of a bubble when it is located in the city'

activity in university buildings. But that hypothesis turns out to be incorrect. Nowadays, students and employees visit the campus even more. They lock themselves up to fully concentrate on a project. There is less distraction on campus.'

Every future-proof campus will therefore need one crucial feature: silence. 'Silence is the new scarcity in our society,' states Den Heijer. 'It is very difficult to find a place where you are not distracted. People need to find a place to be alone and focus. Silent study places are much in demand at universities right now. On the other hand, the campus is still a place for community, for being together. So, we need what we call "bipolar" facilities: silent library-like spaces where there is buzz right outside the door.'

The green Twente campus is certainly unique in this regard, acknowledges the professor. 'It is a place with an enormous amount of space and that is what the UT community must cherish. Perhaps the campus is the new monastery. People go to the campus for a retreat, a "retraite". In that respect, Twente certainly has good cards for the future.' •

UT CAMPUS ARCHITECTURE

Initially, the task of designing the UT campus was given to two renowned architects Wim van Tijen and Samuel van Embden. The general layout of the estate was based on American campus universities and followed principles of 'Functionalism'. These two original architects are responsible for the large buildings, such as Spiegel, Hogekamp and Langezijds.

Perhaps to make the campus less 'monotonous', Van Tijen and Van Embden decided to hire a new generation of architects: so called 'angry young men'. While the older guard focused on functional, straightforward and efficient design, the angry young men had a completely different approach. They wanted to create buildings that would facilitate social contact, that would bring people together. Hence, you can now find yourself searching for others in buildings such as Cubicus, Bastille or Vrijhof. Having these two groups of architects led to a big clash of generations and styles, but resulted in the UT campus as we know it today. •

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A BRIEF HISTORY OF THE UT

On January 25, 1961, the municipality of Enschede offers the Drienerloo estate, of more than 96 hectares, to the national government. With this gift Twente hopes to bring the third Polytechnic University of the Netherlands to the East. And not without success: Enschede surpasses the other three candidates Arnhem, Zwolle and Deventer. The large Drienerloo estate offers more than enough space for a new type of university: the campus model, where living, studying, working and partying come together. A unique experiment in the Netherlands, at that time - and perhaps it still is unique in its kind. In 1964 Queen Juliana officially opens the UT, then called the THT - Technische Hogeschool Twente (only in the summer of 1986 does the THT get its current name: University of Twente). The first group consists of two hundred students, four of whom are women. From then to now, the campus went through an enormous growth. These days, the UT hosts more than 11,000 students and more than 3,100 employees from more than eighty countries worldwide. Even after almost sixty years, one thing remains binding at the UT: the campus on the Drienerloo estate. •

CORONA CRISIS HITS THE UNIVERSITY OF TWENTE

Photo: Bart Verhoeven



The coronavirus outbreak has affected lives of everyone in the Netherlands and the UT is no exception. Due to the corona crisis, physical activities on campus had to be suspended. University buildings were closed, education was provided only online and the vast majority of UT staff was forced to work from home. This magazine was also created from a 'home office' during the corona crisis. •



MINDLAB

Mindlab has been described as 'a must-see science fiction thriller'. This theatre performance, which aims to get at the heart of the scientific community, was initiated by professor Ellen Giebels, vice dean of the Faculty of Behavioural, Management and Social sciences at the UT. The performance highlights the dark sides of the academic world, including topics such as #MeToo, abuse of power and high workload. Made by Productiehuis Plezant, Mindlab was based on interviews with employees of Utrecht University and the UT. The premiere was held at the Theaterloods in Kootwijk on the 13th of February, after which six performances were organized directly at the UT. •

Photo: Gijs van Ouwerkerk



THOM PALSTRA STOPS AS RECTOR

After a term of four years, Thom Palstra will retire as rector magnificus of the UT. The plan is to officially hand over his duties to his successor at the Dies Natalis ceremony on the 27th of November, 2020. Afterwards, Palstra wants to take a sabbatical and return to his work as a professor of materials chemistry. He commented: 'I miss the direct scientific interaction with colleagues, graduate students and undergraduate students.' •



NO SMOKING ON CAMPUS

Since the 30th of March, smoking is prohibited on the entire UT campus with the exception of residential areas. Smoking is also not allowed during all events on campus, including festivals. 'Our government aims for a smoke-free generation and has introduced a law prohibiting smoking in educational areas,' says UT vice-president Mirjam Bult. 'Research shows that seeing smoking leads to smoking. As a university, we are responsible for the wellbeing of our staff and students, which is why we decided to make the entire campus smoke-free. We don't ask anyone to stop smoking, but we can provide guidance and help to those who want to quit.' •

ATTRACTIVE HOSTS CHARGE MORE ON AIRBNB

Would you like to charge more for your Airbnb listing? Make sure you look pretty in your profile photo. UT researcher Mariëlle Stel and colleagues studied the effect of Airbnb hosts' appearance on the price of their listings in New York City. The results clearly show: the more attractive the host, the more they charge – because people seem happy to pay 'a beauty premium'. 'Although to be precise, it is more of an ugliness penalty,' clarifies Stel. 'If you are unattractive, you charge less. By 6,82% per night to be exact.' •

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ENGLISH IS THE OFFICIAL LANGUAGE

English is now the official language of communication at the University of Twente. The new language policy came to effect on the 1st of January 2020. The President of the Executive Board, Victor van der Chijs says: 'The policy is a logical continuation of the internationalization vision of 2015. We do this because we are an international university, where inclusiveness is of paramount importance.' Based on the language policy, all formal communication becomes English. Meetings are in principle in English, Dutch is allowed if everyone has a good command of the language. All master's programs are already in English and the last bachelor's programs are in the transition phase. Dutch is naturally allowed in informal situations on campus. •

HOME OFFICE IN TIMES OF CORONA

THE CORONA CRISIS DISRUPTED THE USUAL LIFE AT THE UT THIS SPRING. PHYSICAL EDUCATION WAS CANCELLED, UNIVERSITY BUILDINGS CLOSED AND MOST EMPLOYEES WERE FORCED TO WORK FROM HOME. A LOT OF VIDEO CALLS AND CHAT WINDOWS... OUR DAILY ROUTINE BECAME RATHER DIFFERENT. THIS IS WHAT IT WAS LIKE FOR A FEW OF OUR COLLEAGUES.

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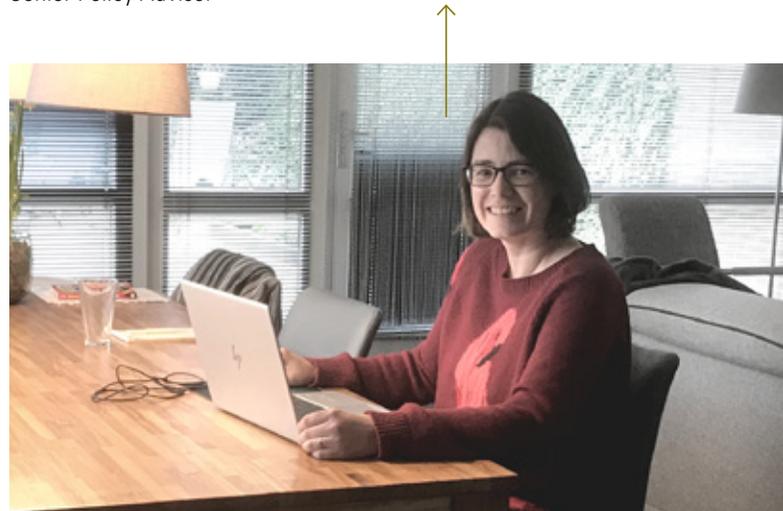


You can see find full episodes from the online series 'Thuiswerkers' on www.utoday.nl

'I am surprised to see how well it is going this week'

'I'm surprised to see how well it's going this week. I help the children to start up in the morning, but they work on their own afterwards. It is especially funny to see how quickly everyone has become a pro with digital communication tools. I had never heard of BlueJeans, but I know how to work with that now. All in all it is very reasonable. But of course it is not ideal.' •

Marloes Letteboer
Senior Policy Advisor



'An advantage of this period is that I see my wife more'

'You notice how accustomed we are to face to face contact. That is not possible now, and I find that distance a great loss. An advantage of this period is that I see my wife more. And yes, she also likes that. I live close to the campus, but don't come there at the moment because it is simply not the intention. At home I had set up a nice office when we first came to Twente, but I didn't sit there much because as a rector you are mainly on campus. These days I spend more hours at this desk than ever before. I miss the daily bike ride to and across campus.' •

Thom Palstra
Rector



'Good things can come from working at home'

'I learnt that Newton was forced to work from home due to the plague. He was at home, looking at his garden and an apple fell down. I think you know the story. That is how he came up with his brilliant theory of gravitation. That means that important discoveries can be made even from home. That is comforting for me. It doesn't mean that I will come up with a brilliant theory, but good things can come from working at home.' •

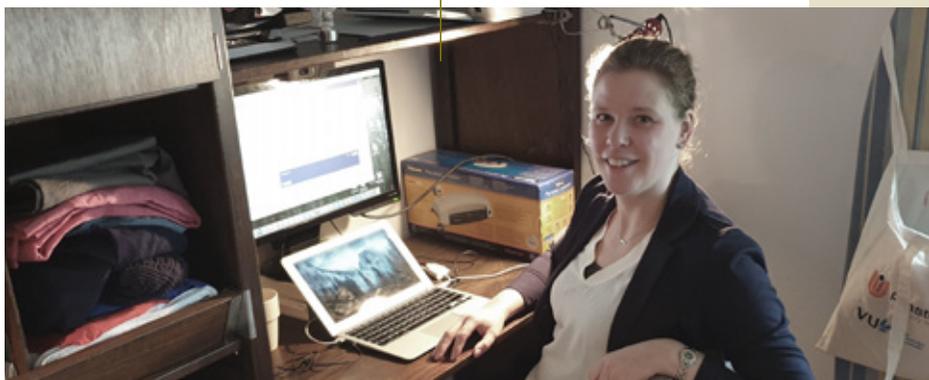
Peter Timmerman
Head of Studium Generale



'Everyone is very forgiving'

'It's just about compromise, especially with a child at home. But I think everyone has that. The best thing is to see that everyone is very forgiving. Do you miss a conference call once? Then we solve that. Normally you get comments if you are late or do not complete a task. I feel that we are all trying to make the best of it and that brings us closer.' •

Marleen Groenier
Human Factors researcher



'I mainly try to see the situation as an opportunity'

'I mainly try to see the situation as an opportunity now. At the UT you are constantly called, emailed, there is a meeting or people come to your office. At home you are less likely to be distracted, which makes the work more efficient. For example, I am now writing a hypothesis paper together with my PhD students, which we would otherwise just not do.' •

Kerensa Broersen
Associate professor at the Applied Stem Cell Technologies group

'WATCH, LISTEN AND BE OPEN'

12

UNIVERSITY PROFESSOR DETLEF LOHSE IS A GLOBALLY RENOWNED EXPERT IN FLUID DYNAMICS. HE WON THE INTERNATIONAL BACHELOR PRIZE, THE MAX PLANCK MEDAL, THE APS FLUID DYNAMICS PRIZE AND THE BALZAN PRIZE. IN HIS OWN COUNTRY, HE WAS HONOURED WITH THE SPINOZA PRIZE AND THE SIMON STEVIN MASTER PRIZE. HIS CORE SCIENTIFIC PRINCIPLES ARE CREATIVITY, CURIOSITY AND INTEGRITY, BUT HE IS CONCERNED ABOUT THE COLLAPSE OF THE ENLIGHTENMENT IDEAL.

1. EMBRACE OPPORTUNITIES

'When I applied for a job at the University of Twente in 1998, I had never supervised a big group of people before. I had just completed my habilitation at the Universität Marburg, which in Germany those days was a necessity to become professor. After a long day, I was browsing through the journal *Physics Today*. A vacancy from the University of Twente - which I was not familiar with at that time - caught my eye. They were looking for a professor in Multiphase Flow. I had never worked on that subject, but multiphase flow is nothing else but bubbles or particles in turbulence. As I did have experience both with a single bubble and with turbulence, I decided to go for it and mailed off my

application. Much to my surprise, I was invited for an interview.'

'After that interview, it turned out that I had been lucky once more. I had given my application talk on single bubble sonoluminescence, the phenomenon that an ultrasound-driven gas bubble can emit light. We had found out why and when this is the case, and apparently also the appointments committee was convinced. As I heard years later, the setting had been perfect for me: the candidate who had given his application talk just before me had also talked on single bubble sonoluminescence, but referred to it as a 'big mystery,' thereby unknowingly perfectly setting up the scene for me.'



2. LEARN FROM YOUR MASTERS

'I have always had a passion for science. As a child in Hamburg, I had set up a chemistry lab in the basement of our house, where I experimented with sulphuric acid, ammonia and various other chemical substances. With the insight from now on the toxicity of one or the other organic liquid I used, I would by the way be hesitant to let young children freely experiment with this stuff. But I did not do unreasonable things and my father gave me the trust and freedom to do experiments, to enjoy science, and he clearly stimulated my curiosity. He was an engineer and a professor himself. He was more focused on applications than on research and he loved to teach.'

'My father is a prime example of integrity. He was straightforward, contents-driven, and always calm and honest. I highly value those character traits and try to follow his example. I once encountered a manager who told completely opposing stories at two consecutive meetings. In response to my confusion, he said: 'Detlef, you are not a politician.' I am fortunate in that the most important role models in my scientific life are great examples for scientific integrity. Besides my father, these include my thesis supervisor Siegfried Grossmann, my colleague Andrea Prosperetti and my predecessor Leen van Wijngaarden. Leen still visits our department nearly every day. In the twenty-two years that I have been doing research in Twente, we never had any difference in our views. It is reassuring that regardless of age, culture or background, rationality and civility tends to lead to the same conclusions.'

3. WATCH, LISTEN, AND BE OPEN

'Science is like a very complex puzzle. However, one does not always have all required pieces on the table and other pieces may be wrong because they are based on incorrect measurements or calculations. I am often asked how I find the problems I work on. The answer is simple: be curious, watch, listen and be open. In the best case, the problem to work on is both relevant and outstanding, at the same time.'

'Solving an outstanding problem requires hard and well-organised work. Talent alone is not enough. Before being able to solve the puzzle one must invest years to collect the individual pieces. Often they do not fit together; and others are missing. So you have to collect new ones, and recombine them differently. And then, all of the sudden, when you are lucky – and often at an unexpected moment – all the pieces fall together in your mind and you know that you have solved the problem. It is this moment for which you do science. I have been lucky enough to have had several such moments. Take, for example, the fun problem of the snapping shrimp. I happened to talk to a zoologist about the mysterious sound that a shrimp makes when it closes its claws. Is it caused by the two halves of the claws snapping together? When I saw the acoustic

signal, I thought: 'no, it's an oscillating air bubble that is formed when the claws are rapidly closed.' The next step was to calculate and to measure, which confirmed my hypothesis.'

'When I started in Twente, the Rector those days, Frans van Vught, had a vision for the UT, which as crucial element included to stimulate the scientists to acquire grants from the Dutch National Science Foundation. That worked in my favour. I have always loved to write project proposals. As Leen once put it: 'You compose a proposal like a symphony and thus pave the path for the future research in the group.' This brought along that the group grew and attracted talents from around the world. But also the local technicians are absolutely crucial, as they have the technical skills to bring the ideas to life. Lastly, our group manager Joanita Leferink is truly one in a million. She takes care of absolutely everything for our department. In essence, science is teamwork.'

4. HONOUR YOUR HERITAGE

'My wife claims that I grew up in a very protected environment. Perhaps she is right. As a child, I loved nothing more than doing science and I was given the opportunity to just follow this passion and did so. A friend wanted to take me to a disco. I went with her as a favour. We were standing in line, the door opened up and a wave of smoke and noise hit me. I turned around on the spot and left.'

'My father passed away last summer. He was 95 years old, but still sharp and well organised. Despite his age, he still learnt how to program in the computer language Python. I don't see many other elderly people doing that. When I received the Max Planck medal in early 2019, he attended the ceremony. He was pretty proud. One weekend before his death, I visited him at my childhood's home to help with the gardening, because that had become difficult for him in his final months. He was a true gentleman, someone to look up to.'

'I come from a harmonious family. In sixty-one years of marriage, never ever my parents shouted at each other or at me or my sister. My mother was a housewife. When we returned from school, she was waiting for us with a cup of tea. Her youth was difficult. She grew up during the Second World War and twice lost everything she had. She met my father while working in her family's bakery. She made it possible for my father to have his career, gave us love and stimulated her children to be all they could be. She passed in 2015.'

5. PRIVATE LIFE AND SCIENCE ARE SEAMLESSLY INTEGRATED

'I have never felt the need for a separate private life, in addition to my life as a scientist. The two are seamlessly integrated. My best friends are scientists and my wife also has a scientific background. My children have seen early on how much intellectual satisfaction science can give. My daughter is now following a PhD program in molecular biology and my son studies mathematics. I have always



done various enjoyable joint activities with my children and we are still doing so today. When they were little, we used to play soccer. We would grab the ball and walk to a nearby pitch of grass. My former neighbour, a professor himself, told me: 'Seeing you like that makes me regret that I never did things with my kids.'

6. STAY IN TOUCH WITH YOUR ENVIRONMENT

'I do not use Twitter because I don't have the time, but I am socially involved. I worry about the age we live in and in which my children have to grow up. For the past five years or so, the Enlightenment ideal - with its sovereignty of reason - is breaking down. In the early years of the twentieth century, physicist and Nobel Prize winner Hendrik Lorentz was a Dutch national hero; today, people are obsessed with Wie is de Mol. With Donald Trump as president of the United States and populists gaining popularity throughout Europe and in the Netherlands, science and rational reasoning is under pressure. To have facts and so-called alternative facts standing next to each other on equal grounds is frightening.'

'Science and the humanities are under heavy pressure and the government is not allocating enough funds to education and research. It is shocking to me that an essential subject like history is only an elective in high schools as we can and must learn so much from the past. As a society, we are supposed to invest into

the intellectual development and the education of young people. By not doing so people become more susceptible to populists and their propaganda, like denying scientific facts like for example global warming. If this continues, we are going back to the Dark Ages.'

7. SCIENCE DOES NOT KNOW BORDERS

'Science is an international endeavour. The people in my group came to Twente from all over the world. After their time here, they leave for new jobs around the globe, many of them as professors. My friends live all over the world. At the same time, however, I feel a strong connection to the Netherlands and to Enschede. I still have the German nationality, but I regret not to be able to vote in the country I live in.'

'Other than that, I am completely integrated here. The North-German culture is not that different from the Dutch one, of course. I appreciate the down-to-earth mentality, openness and rationality here in Twente. The academic culture is more international here than in Germany and there is a stronger focus on excellence. I very much like this intellectual environment. However, when I look beyond science, I see serious challenges for our Western culture. My way of contributing to this is to be honest, work hard and make my voice heard in science and society'. •



VICTOR VAN DER CHIJS, UNIVERSITY OF TWENTE'S PRESIDENT, ALSO CHAIRS THE CENTRAL CRISIS TEAM THAT GUIDES UT THROUGH THE CORONA CRISIS. AT THE MOMENT WE SPEAK TO HIM, THE CAMPUS BUILDINGS ARE STILL CLOSED.

03

THIS IS AN EXAMPLE OF THE 'PEOPLE-FIRST' APPROACH?

'Yes, the ink of our vision document, in which we choose to be 'people-first university of technology' is barely dry. Now our people already turn this into practice. We see 'people first' as an approach in which it is not technology that is leading. It is based on the question 'what do people need?' In the current situation our teachers and support staff have asked themselves: 'what do our students need' and fully focused on that. But that's not the only thing: our researchers checked what people in health care urgently needed. We collected all medical equipment we had in stock, and moved it to the hospital. We formed teams working on ventilation machines and health care logistics. That is the 'challenge-based' approach that is in our vision document as well.'

04

WILL THE CRISIS, IN A WAY, BE A TURNING POINT?

'Let me emphasize that what I would like to see, is a vibrant campus, full of energy. The moment we can take the decision to reopen, we know that our students' and staff's health is secure again. That is priority number one. Will the crisis then have changed us, as a university? We took steps in digitalisation that would have taken much more time under normal circumstances. But don't forget that our students also make their choice based on the offline campus facilities and personal contact in project work. Teaching will never be fully digital. Still, in our ideas for a European university, the online experiences will prove very valuable.'

05

DO YOU FORESEE MORE CHANGES?

'In a way, you can compare UT's situation to what's happening in society as a whole. People are more willing to help each other, things can be realised much faster than ever before. In science, this is translated into a faster introduction of 'open science' and the willingness to form flexible teams with industry and other partners. The question what consequences this crisis will have for our economy, and thus for the UT, is hard to answer. But we've learnt valuable lessons, that is for sure.'

01

AN EMPTY CAMPUS, IT ALMOST SEEMS SURREAL. HOW DOES THAT MAKE YOU FEEL?

'When I'm visiting the campus these days, the overwhelming feeling is: this isn't right. No lights in the labs, no groups of students on bikes. This all went very fast in March. We decided to cancel the Open Days for prospective students, and a few days later we even had to take the decision of closing all buildings, following the latest government guidelines. These are far-reaching measures, that is for sure.'

02

HOW DID THE UT COMMUNITY DEAL WITH THE SITUATION?

'The campus may be empty, our community started working at thousands of home offices immediately. In little over a week, online teaching was ready, so our students could move on. I am incredibly proud of that!'

SOPHISTICATED OR WISE?

Here they are: the University of Twente's new mission, vision and strategy. Under the name Shaping2030, the document outlines the University of Twente's purpose (our mission), where we want to be in ten years' time (our vision) and how we intend to get there (our strategy).

It is a sleek brochure filled with bold statements and intentions for the coming decade. I am usually sceptical of documents like this one, with all their visual spectacle and visionary pretence. How much of what they promise is nonsense? Are all those statements true? Are they logical? I start reading and bam! We are not living in an era of change, but in a change of era. The Danish language has a saying that making predictions is difficult, especially when it comes to the future. However, I would suggest that even predicting the past is difficult. That is basically what is happening here. Who has the prophetic insight to make such an assured claim about the present? Well, what does it matter anyway? At the very least, a sentence like that gives an illusion of depth.

I read on, get to the part about our mission and stop when I see this: We enable society to achieve the goals it sets itself by wise use of science and technology. The Dutch version uses the word 'uitgekiend' ('sophisticated') instead of 'wijs' ('wise'). This time, I do believe it matters - a great deal, in fact. This is a crucial statement that I would like to put to the test. In the field of technology, the correctness of a formula or model is demonstrated by, among other things, behaviour in extreme situations. This method can be applied in



a broader sense as well. The aforementioned statement would have been a perfect fit for the mission statement of Topf & Söhne, a former manufacturer of industrial installations. It developed technology with which society was able to achieve a goal that it had set for itself. The company's use of technology was sophisticated, but was it wise? Sometimes, the wise thing to do is to stuff a piece of technology in a safe and bury the key until better times arrive.

In other words, this part of our mission fails the test under extreme circumstances. Even in everyday use, it remains problematic. Who is 'society'? Does it set goals? Who sets these goals, then? We can hardly even agree on what our problems are.

And then... the coronavirus emerged. Is this the problem we can all agree on and which will allow us to set shared goals for ourselves? •

Wiendelt Steenbergen
Professor of Biomedical Photonic Imaging

PRINTING PARTICLES

THE YOUNG SPIN-OFF IAMFLUIDICS HAS DEVELOPED A PRINTING TECHNOLOGY THAT CAN EVENTUALLY BE USED FOR THE PRODUCTION OF NEW DRUGS OR EVEN LIVE CELLS. THE COMPANY HAS GOTTEN OFF THE GROUND REMARKABLY QUICKLY AND IS NOW FIRST GAINING EXPERIENCE BY DEVELOPING PRODUCTS FOR THE COSMETICS SECTOR. WE INTERVIEWED FOUNDER TOM KAMPERMAN, UT ALUMNUS OF BIOMEDICAL TECHNOLOGY.

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The lab where he works, which is part of Harvard Medical School, will be closed for a while due to the coronavirus. On the day we talk to Tom Kamperman, he is about to catch a flight back to the Netherlands: 'There is not a whole lot for me to do here at the moment.' A Rubicon grant has allowed him to conduct his research at the prestigious institute for a period of one year. 'This truly is a hub of bright minds. It is not that the facilities are better here than in Twente; on the contrary. Things are done a bit quicker and 'looser' here. If you believe you can contribute to a project in some way, you're in. In addition to my own project, I am therefore involved in three others as well.' Since January, Kamperman's work at Harvard has been centred around encapsulating live cells. With this protective shell, they can survive during e.g. a 3D printing process.

RISING EARLY

Printing live cells; isn't that reminiscent of the ambition of the spin-off lamFluidics, the company that Kamperman founded together with his UT colleague Claas Willem Visser? 'That's true, although our work there does not involve encapsulating cells like I am doing here at Harvard. The knowledge will certainly come in handy, though.' In addition to his four

projects at Harvard, Kamperman also keeps in touch with his colleagues of lamFluidics in Twente. 'There is a time difference, of course, so I get up extra early two mornings a week for a few long Skype calls with the management and the laboratory staff.'

DAMAGED TISSUE

lamFluidics has developed a new technology with which to print small particles, such as microgels. This is often done with fluid microchips, which can mix different substances together. lamFluidics has opted for a different and much faster approach, which is called 'in-air microfluidics.' This involves shooting one jet of fluid at another in mid-air. It is a new method with which to combine and print different substances. Professor Marcel Karperien, Kamperman's thesis supervisor, believed the idea was right for a patent. Karperien himself specialises in repairing damaged cartilage, where he saw potential applications for the new printing technique. 'At that time, we had no plans for a business yet, but things were moving quite fast. The business developers gave us a choice: sell the patent or do something with it ourselves.' Kamperman and Visser opted for the latter. Not long after, they acquired a one-million-euro investment and business support from Menno Noorlander and Ivo Aarninkhof, among others.





NO MICROPLASTICS

Kamperman has not given up his ambition to print cells to repair damaged tissue or materials for the pharmaceutical industry. 'However, those are product-market combinations that require a ton of investments and lengthy approval processes. lamFluidics is therefore first targeting the cosmetics sector.' Kamperman: 'In that sector, it is important how something feels and smells, what it looks like and what its shelf life is.' The company prints so-called beads of hydrogel for cosmetic products. 'We make sure these are biodegradable, so we are not introducing more microplastics into the environment.'

CREATIVITY

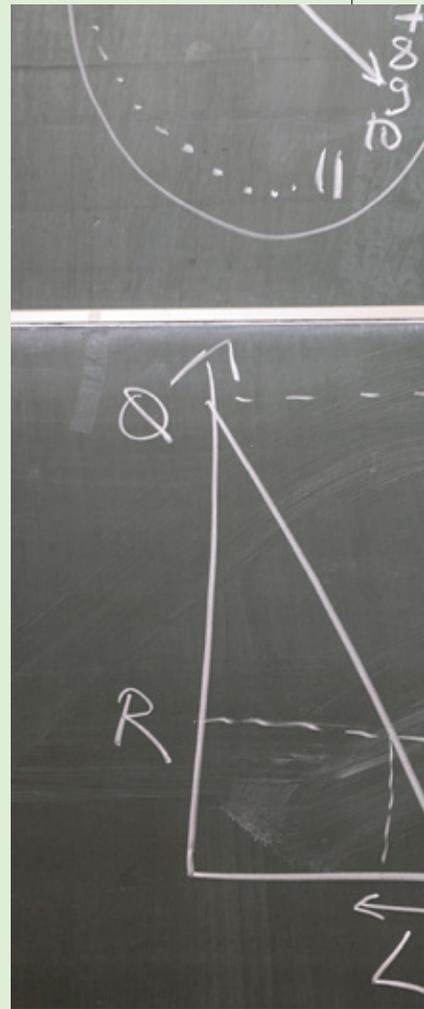
Kamperman hopes to return to Harvard soon to finish out the year. 'I also want to use my time there to look for investors in Boston.' Once he has returned to Twente, does he mainly envision himself as a researcher or as an entrepreneur? 'I won't have to make that choice for a while. I can use the unlimited creativity of science for the benefit of the company. At the same time, being an entrepreneur teaches me a lot about directing teams, acquiring funding and the commercial transfer of new knowledge. It is certainly intense, but I will continue to do both for as long as I can.' •

i

In 2019, Tom Kamperman won the Overijssel PhD Award for his doctoral thesis. In that same year, MIT Technology Review selected him as 'Innovator under 35' in Europe.

RELENTLESS ENTHUSIASM

WHAT MAKES A TEACHER GOOD? WHERE DOES THE PASSION FOR PASSING ON KNOWLEDGE COME FROM? IN THE SERIES 'MEET THE TEACHER' WE FOCUS ON PEOPLE WHO ARE TRULY DEDICATED TO EDUCATION. IN THIS FIRST EPISODE: IPEK SEYRAN TOPAN.



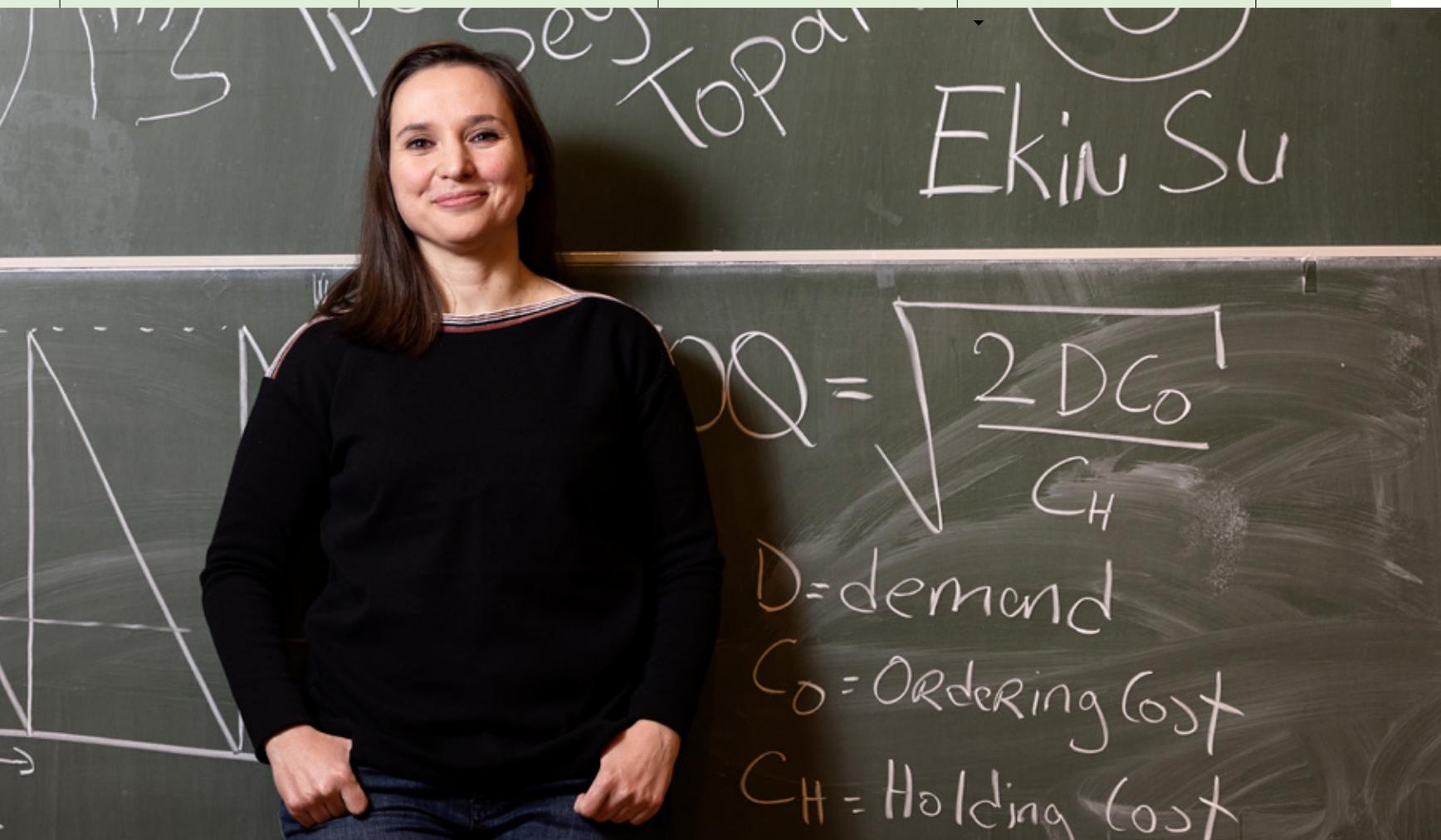
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Ipek Seyran Topan is the current holder of the title 'UT teacher of the year'. She won the Central Education Award last summer, it was a close call for her to be in the final. After earlier encouragements by colleagues Elke van der Veen and Erwin Hans, her four-year-old daughter gave the decisive push when she played with the huge cup her mother won for the decentral education award at International Business Administration. The message: a cup needs to be added, preferably an even bigger one. Busy as she was, Seyran Topan didn't feel that she had the time to write an essay and prepare mini lectures, in order to have a shot at the title of 'teacher of the year'. But on the way back from a Berlin city trip, she changed her mind and went for it. The rest is, as they say, history.

Good education starts, according to Seyran Topan, by putting yourself in someone else's shoes. You must know who your audience is. That shy student in the back of the lecture hall won't say anything, but nevertheless asks for a different approach than that assertive student in the front row. So the teacher makes sure that she gets to know the background of students. And that she makes the material she has to transfer as tangible as possible, for everyone.

This particularly applies to one of the courses she gives: quantitative modeling. Complicated mathematics, which is generally easier to handle for the average Industrial Engineering & Management student than for colleagues at International Business Administration, because of their math background in middle school. According to her, her Powerpoint slides are just like books; lots of visual help and practical examples, in combination with the much-needed theoretical basis. And above all, she finds it important not to go overboard with the theory, which is rarely more fascinating than the practical side of things. It's a balancing act.

One of her other 'weapons' in the lecture hall is her relentless enthusiasm. Seyran Topan admits to being a major source of energy. It is trapped in her personality, so she tries to use it to her advantage. Especially in combination with humour and pleasure. Taking photos of students during exams, which she then sends to them? That is part of the routine. She had once also exhausted herself, at the end of a long lecture. She let her students know her energy was depleted and she was starving. They offered sandwiches and snacks, but suddenly she found a chocolate. She continued her lecture, speaking with her mouth full. That too is part of her routine, having fun.



All energy, humour, empathy and pleasure come together in the greatest good for Seyran Topan: trust. Trust from her in the student and vice versa. And above all, the student's own trust and self-confidence. This also requires a quid pro quo: the teacher expects her students to be at least present – for which she keeps personal attendance statistics. In return, her students can expect that she will go not one, but several extra miles. Test results? Returned within three days. She removes questions or uncertainties even faster. If something is vague, it causes unwanted stress. According to the teacher, students must be able to be students, as carefree as possible.

Even though she sometimes teaches up to 160 students at the same time, students are more than just a number for Ipek Seyran Topan. They always look for appreciation. And the teacher feels unquestionably responsible for appreciating them. With the Central Education Award she received a bit of appreciation - and a check worth 2500 euros. That prize money will go to her daughter's account. A little appreciation for the big catalyst of her success. •

**'According to the teacher,
students must be able to be students,
as carefree as possible'**

BEHIND THE SCENES

During the corona crisis and the consequent lockdown at the UT, the campus was eerily quiet. Don't let the silence fool you, though. UT staff was still hard at work behind the scenes, in the TechMed Centre for example. The Centre offered its expertise and facilities to local hospitals. They first came into the media spotlight by collecting face masks, protective suits and disinfectants for the MST hospital in Enschede. They further assisted the healthcare sector by devising a way to allow several people to use one breathing ventilator at the same time in an emergency.





VIRTUAL REALITY

'MAKE THE WORLD AS YOU LIKE IT'

FOR MOST OF US, THE TERM VIRTUAL REALITY (VR) SPARKS EXCITEMENT. WHILE THE USE OF VR FOR ENTERTAINMENT HAS SURELY FOUND ITS PLACE IN OUR WORLD, THE TECHNOLOGY HAS MUCH LARGER POTENTIAL: FOR TRAINING, THERAPY AND RESEARCH. MANY SCIENTISTS AT THE UNIVERSITY OF TWENTE ARE EXPLORING THESE SERIOUS APPLICATIONS. IN THEIR HANDS, VR BECOMES A TOOL TO OVERCOME ADDICTION, TO CONDUCT EXPERIMENTAL RESEARCH IN CRIMINOLOGY AND TO TREAT PSYCHIATRIC PATIENTS.

Experts at the UT use virtual reality for a wide range of projects, but they all agree on one thing: VR should never be the goal in itself. It should be a useful tool. For the user, it should be a way to visualize and fully grasp the consequences of their decisions. To experts, including scientists and therapists, it can offer something unavailable before: a chance to directly observe (and consequently shape) people's behavior in a controlled and safe setting.

VIRTUAL BURGLARY

This opens up a world of possibilities, believes researcher Iris van Sintemaartensdijk. 'Experimental research in criminology was not possible before VR,' says the PhD candidate involved in the Virtual Burglary Project. 'I'm a psychologist with focus on criminology. I study how guardianship, meaning presence of people, influences burglars. Until now, we could search for patterns, such as which houses are targeted. We could also interview the burglars and ask what they did and why. However, they are not always completely truthful and our memory is also not perfect. VR now gives us the opportunity to bypass these issues. We can directly observe the burglars' behavior and be in full control of the experiment.'

Because of that, Van Sintemaartensdijk has spent a lot of time in prisons across the Netherlands. She has worked with 181 convicted burglars, all of whom have completed an experiment using a special VR application developed for the project. 'We have created two virtual neighborhoods and asked the burglars to scout the area as if they wanted to burglar a house. We could then observe their behavior, see exactly where and when they stop, where and how they walk and so on.'

'We ask burglars to scout the area as if they wanted to burglar a house'

This leads to insights that researchers could otherwise not gain. 'VR offers us the closest possible approximation of the real world. Once the criminals are in the VR environment, their normal behavior is activated and so we can see what influences their decisions,' says Van Sintemaartensdijk. 'For example, we can manipulate the environment by adding signs with warnings against a neighborhood watch and we add avatars. Once we understand the burglars' thinking patterns, we can hopefully prevent crimes.'

TRIGGERS AND HELPERS

Preventing crimes and other incidents is also a goal of research by Hanneke Kip. At the UT and at Transfore, an organization for forensic mental healthcare, this PhD candidate works with psychiatric patients who have committed aggressive or sexual offenses. During her research on eHealth in forensic mental healthcare, she found VR to be a good fit for these patients. 'There are already a lot of e-health solutions out there, but they don't seem to work that well,' says Kip. 'They are often web-based platforms and self-study materials. However, patients are not very motivated to use them. Moreover, patients are often low educated and don't have much experience with homework or working on self-improvement. It is difficult for them to reflect on their own thoughts, emotions and behaviors. We therefore interviewed patients and therapists to see what would be the best approach. The general response was that it would be truly helpful for patients to not only talk, but to actually do. Which is why we believe that VR could be of true added value.'

In close collaboration with patients and healthcare professionals, Kip is developing a VR application called Triggers and Helpers. 'We want to figure out what the patients' triggers are, what causes their aggressive outbursts. For example, VR can be used for virtual roleplay, where the therapist can be present as an avatar and try to trigger the patient. Since triggers are very personal and different for everyone, the application will be customizable. We will be able to personalize the environment, the people involved and the triggers. This way we can build fully personalized VR scenarios and teach the patients self-control, teach them how to regulate their emotions. For example, if a patient has history of domestic violence, we can put them in a living room with an avatar that looks like their partner. We can put in noises, such as a barking dog or a loud TV, and we can have the avatar say things that the patient finds annoying.'

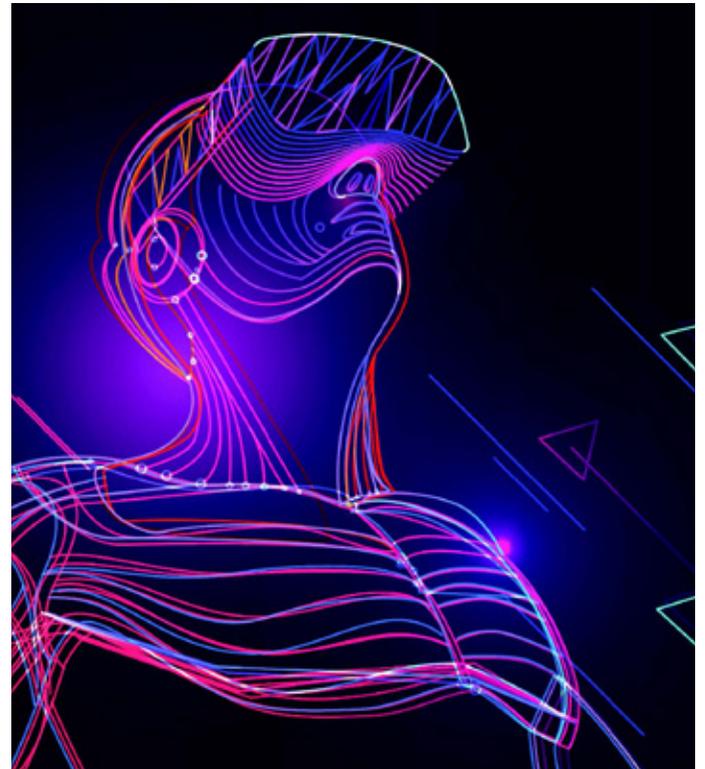
'We can teach patients to regulate their emotions'

The scientist believes that this approach can be of much added value for existing treatment. 'It will allow us to do things that normal "talking therapy" doesn't,' says Kip. 'You can ask the patients why they became angry, but it can be difficult for them to explain. Using VR, the therapist can directly observe the behavior. For the patients, it can help them regulate emotions in situations that are specifically difficult for them. If we train them how to react in VR environment, we hope they also behave that way in real life. The main goal is to prevent reoffending, to stop them from committing assaults.'

ADDICTION TREATMENT

Offering a safe environment to train coping mechanisms is indeed a big advantage of VR – and the reason why UT researchers Randy Klaassen and Simon Langener aim to apply virtual reality in addiction treatment. In collaboration with an addiction treatment center Tactus, they want to use the technology to treat alcohol, cannabis and nicotine addictions.

'They can directly experience the results of their actions'



*'We see it as a tool
to visualize data'*

'Our target group are people with mild intellectual disability, with IQ in the range 52-75,' explains Klaassen. 'For this group it is very difficult to reflect on their behavior. We believe expressive technology can help them, because it is about doing not talking. They can directly experience the results of their actions in a controlled and safe environment.' The VR scenario has been designed to resemble a typical town and can be personalized to the needs of every patient. 'The treatment is about breaking a person's habits and those are linked to specific environment and objects,' says Klaassen. 'For example, some people only smoke at home, some drink only one brand of beer or smoke certain cigarettes.'

'The objective is to teach the clients self-control techniques,' says Langener. 'They can practice recognizing the craving and train self-control, for example by walking away from a bar and going into a park instead. It can also help train them in social interaction, because resisting social pressure is a big issue for them. In the VR environment they can interact with social agents and learn some coping mechanisms. The big potential of VR lies in this direct experience, in doing instead of talking.'

VR: NOTHING NEW?

Although the use of VR in serious applications is gaining momentum, the implementation in real clinical practice is still a challenge – partly due to the costs and time needed to develop the technology. However, there are already fields where virtual reality is commonplace, says Roy Damgrave from the UT's VR Lab. 'VR is actually quite an old field. The first idea is from the 1960's and the first VR headset was developed in 1965. Even though most VR glasses were developed thanks to the gaming industry, VR technology also has a long history in military, where it was developed for training purposes and where it is commonly used.'

The VR Lab on campus is not the place for military or gaming applications, though. It is most frequently used by the industry. 'For example, we quite often get requests related to the layout of a factory,' says Damgrave. 'We visualize the potential layout in VR, so that you can walk around, interact with the environment, with the machinery. We use VR as a tool to make information more accessible. It is certainly a lot more than just the goggles. We see it as a tool to visualize data – data that you might already have and would like to use for decision making.'



Still from the Virtual Burglary application

For these purposes, virtual reality certainly isn't sci-fi. 'It is already common in some industries, such as car manufacturing. Manufacturers use it to review designs and understand the implications of various changes,' says Damgrave. 'It is easier to use VR in industry than in other fields, because it is more beneficial only if you have sufficient data that you need visualized. In industry, the data often already exists and the causes and effects of changes are clear. That is the difference between industry use and healthcare use, for example.'

In which fields will VR turn into an everyday occurrence remains open, but the researchers agree it is likely to become more prominent in the world, especially in training of various skills and behavior. On top of its practical value, virtual reality has a certain appeal that cannot be matched by other technologies. As Roy Damgrave puts it: 'VR allows you to be in another world without the hassle of actually having to go there. It allows you to make the world as you like it.' •

RESEARCHERS FEATURED IN THE ARTICLE:

- Iris van Sintemaartensdijk, PhD researcher at the Psychology of Conflict, Risk and Safety group (BMS Faculty)
- Hanneke Kip, PhD researcher at the Department of Psychology, Health & Technology (BMS Faculty)
- Roy Damgrave, Assistant Professor at the Department of Design, Production and Management (ET Faculty) & the head of the VR Lab
- Randy Klaassen, Assistant Professor at the Human Media Interaction group (EEMCS Faculty)
- Simon Langener, PhD researcher at the Human Media Interaction group (EEMCS Faculty)

LADS FROM CNØDDE BRING OUT THE BEST IN THEMSELVES

THE UT IS HOME TO COUNTLESS CLUBS, SOCIETIES AND ASSOCIATIONS. IN THIS COLUMN, WE VISIT THEM ON THEIR HOME TURF. THIS TIME, THE HONOUR GOES TO THE MEN OF CNØDDE. THE COLLEGE WAS ESTABLISHED EXACTLY HALF A CENTURY AGO, IN 1970. A REPORT OF A NIGHT IN THE GELE KATER, CNØDDE'S PUB OF CHOICE.

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Café de Kater is located on the west side of the Oude Markt in Enschede. Once you go inside, a lengthy staircase in the corner of the room takes you up to the first floor. Go up yet another flight of stairs and you'll enter the domain of Cnødde: de Gele Kater. Even though this Wednesday evening has only just begun, the room is already filled with young men, each of whom is wearing the characteristic yellow sweater. The Gele Kater is decorated with an assortment of relics and tokens, left behind by previous generations of members. From a floor mosaic in the shape of Cnødde's logo, a unicorn, to a 'shield' hanging on the wall that bears the name of every member - more than 250 in all.

Cnødde made this café on the Oude Markt its home in 1998. Before that time, the College's members used to gather in the Bastille. The Kater, located in the heart of Enschede, has a long-standing tradition as a student pub and Cnødde's members often found themselves on both sides of the bar. One day, the idea for a private domain was born. The former owner of the pub told them that a space was available in the attic above the café, which might be right for them. The students did not have to think about that offer for long. Since that day, the College gathers every Wednesday evening above the Kater; a unique location that affords a wide view of the Oude Markt.

PUB BOSS

Cnødde is anarchistically leaderless, although there is a primus inter pares - the first among his equals: a president of sorts, although they would never call him that themselves. Someone simply has to take responsibility for certain things, like the finances. Then there is the pub boss. They are responsible for the club, oversee maintenance and keep in touch with the operator of the Kater.



The pub is more than a place to hang out. It is a place where Cnødde's members can be themselves. This statement is met with consenting nods from the gentlemen. Have you ever heard of the Yellow Walls? Probably not. The Yellow Walls extend beyond the physical walls of the pub itself. When Cnødde's members say to each other, 'what I'm about to tell you should stay within the Yellow Walls,' the other person knows that the story is only intended for members of the College. It is an unwritten rule that new members are taught as early as possible.

There is no shortage of interested members, either. Every year, the College invites around forty men to a total of three evenings of introductory drinks. It is all about that click. After three nights, both parties must have felt it. Some years, the club welcomes six new members; other times, there are only one or two who make the cut. Every new group has to go through a number of hazing rituals. What those rituals are is a closely guarded secret - even tonight. New members should find out for themselves. In other words: what happens at Cnødde, stays at Cnødde. It is all about instilling a love for the club.

ENTREPRENEURSHIP

Despite the bond they all share, the students' characters are quite diverse. They all have the same mindset, however. They do not stop until they have achieved their goal. Entrepreneurship is also part of every member's DNA. The members of Cnødde bring out the best in themselves and engage in all kinds of activities besides their studies. On Wednesday evenings, the wildest tales are shared in the Gele Kater. No member will want to miss out on that. That is why the college has such a strong motivational effect, the members know.

This year, the club celebrates its fiftieth anniversary. The College's tenth quinquennium. They have already organised a number of activities, including a big party in the Twentsche Foodhal. The anniversary year will conclude with a gala. One year, Cnødde organised a book ball in the university library at the Vrijhof. Expectations are high, but the members are keeping mum about the location of this year's gala for the time being.

GAUDEAMUS IGITUR

A final point of order. Cnødde is a College and not a society. On Wednesdays, they come here straight from their lecture rooms. They also have an excellent relationship with the University itself, they say. A clear example is the annual performance during the Dies Natalis, where the members sing the Gaudeamus igitur. Former rector Ed Brinksma asked the gentlemen to sing the opening song. The UT arranged a vocal coach and the gents got three singing lessons in the Gele Kater.

Unfortunately, the performance was cancelled last year because of the opening of the TechMed Centre. A bitter disappointment. The King came to visit and the Gaudeamus igitur was not sung. They hope to receive another invitation this year, however. After all, doing something three times makes it a tradition. The members of Cnødde know that all too well. •



DOING SOMETHING GOOD FOR THE WORLD

MARCEL BELT (56) CALLS HIMSELF CHIEF SOAP OFFICER AT HIS BUSINESS THE GREEN SOAP COMPANY. THE BUSINESS ADMINISTRATION ALUMNUS HAS BEEN PAVING THE ROAD TO SUCCESS WITH HIS SUSTAINABLE AND ENVIRONMENTALLY FRIENDLY SOAP SINCE 2015. THESE DAYS, THE COMPANY EARNS FOUR MILLION EUROS IN REVENUE. BEING A TRUE FAMILY MAN, HE WAS INSPIRED BY HIS THREE DAUGHTERS TO MAKE HIS PART OF THE WORLD A BIT BETTER.

Belt only became an entrepreneur five years ago. After graduating in 1988, he spent twenty-five years working for such multinationals as Unilever and Reckitt Benckiser. While he was stationed in Mexico for Reckitt, where he was responsible for the marketing of healthcare and cleaning products, his wife suddenly passed away in 2005. 'With three girls aged 1, 3 and 5, I thought to myself: 'what now?'' Belt says. 'Reckitt freed up a position for me as General Manager Netherlands. I am still grateful for that.'

In 2014, while Belt was working at Douwe Egberts, he decided to take some time off. 'I wanted to spend more time with my family,' he says. 'We had always had an au pair, but by the time my oldest daughter Mila turned fifteen, that was no longer the ideal solution. So I quit my job. I had saved some money over the course of my career, which I figured would last me around five years or so.'

TAKING CONTROL

Still, he found it hard to let go completely. Friends and acquaintances set up their own businesses and asked Belt for advice. 'At one point, I was helping others so often that it felt like I was in the back seat of a car. I told them to go left here or turn right there, but I was not actually in control myself. That's when I decided to set up my own company.'

The business was clear: cleaning products. 'When it comes to cleaning products, I know what I'm talking about,' Belt says. 'If I can give young entrepreneurs one piece of advice, it would be to play a home game. Choose a sector that you are truly knowledgeable about. There is so much involved in running your own business. With my years of experience, I speak the language of buyers and suppliers, but also of the people who create the formula for the product. If you are a student at the UT and believe you have a golden idea, it is still advisable to work for a wonderful company for a while. Gain some experience first. Just think how many start-ups go under in the first five years. I see the same happening in the networking clubs I am now a member of. Being 56, I am not like most start-ups, of course. On the other hand, my age does give me a head start on all those young men and women.'



With his Green Soap products, Marcel Belt makes three promises: 'The natural aromas smell fresh, they are great to clean with and both the products and their packaging are completely environmentally friendly.' Belt: 'Our products are both sustainable and fantastic to work with. With this, we set ourselves apart from other sustainable cleaning products. Those often require you to compromise in some way.'





ENTERPRISING MINDSET

Marcel Belt started his career at Unilever. 'There were 3,500 applicants for twenty-five management trainee positions,' he says. 'After a five-round three-month-long selection procedure, I was hired. Fortunately for me, Unilever was looking for a different kind of people than usual at the time; they wanted to move away from the corporate mindset that you find in Amsterdam and Rotterdam. I also impressed them with my internship. As part of the UT's Developmental Science department, I went to Jakarta for Unilever. I had arranged the entire trip myself. Apparently, my enterprising mindset caught their attention.'

After a four-year period of internal training at Unilever, he finally got the foreign post he wanted. Belt left for Hungary. It was a tumultuous period in history. The Iron Curtain, which had separated Western and Eastern Europe for so long, had only recently been torn down. 'There were cranes everywhere,' Belt says. 'More importantly, we got almost complete control over the marketing and sales of our products. There was no infrastructure to speak of, the entire country was in an uproar.'

Next, Belt was sent to Milan, where he was made responsible for the innovation programme in Europe. 'That was a completely different job,' he says. 'Whereas I had enjoyed the freedom of pioneering in the east, I now found myself in a rigidly corporate environment in Milan. That's when I learned that multinationals

can be very political organisations. If you have an idea, you must first present it to a level of management. If they like your idea, you get to present it to the next level of management. I quickly grew to detest that rigidity. Even back then, I believed actions speak louder than words.'

DAUGHTERS

Belt felt right at home in an environment where he could be both a pioneer and an entrepreneur. His company, whose products bear his own first name and have images of his three daughters on their packaging, brings him joy. His daughters are important to him, Belt says. 'Sustainability was always important to me, but my daughters gave me the final push I needed. Their generation seems to be more mindful of the world around them and they worry more about climate change. I want to do something about the unfairness, because my generation is the one who made a mess of things. When I am gone, I do not want my daughters to remember me as the guy with the massive villa. I'd rather have them think of me as the father who did something good to make his part of the world a better place.' •

'My daughters gave me the final push I needed'

IS THE CAMPUS GUILTY?

Can a landscape be guilty? The artist Armando called the forest edges and tree tops around the former concentration camp Amersfoort guilty: after all, they had witnessed the terrible things that happened there during the Second World War. He represented that nature in his paintings as pitch-black shapes.

How would Armando have felt about the University of Twente's campus? Is our environment guilty as well? What crimes were committed here during the years between 1940 and 1945? Were any Jews betrayed here? Were people executed? Was the Horst Wessel Song ever sung here?

Where the UT's buildings now stand, there used to be three farms; meadows full of cows; groves of trees. It was an idyllic estate called Drienerlo, owned by Gerrit Albert Lasonder, a descendant of the Lasonder family that made its fortune in the textile industry in Enschede. Gerrit rented out Drienerlo to three farmers.

Gerrit himself was an uninteresting lawyer, a mama's boy who married Anne Bauer in 1941 at the age of 58. She was German. In that same year, Gerrit joined the NSB. In the tea house that used to be on the campus, where the carillon now stands, he sometimes entertained other members of the NSB. Is that a crime?

The British liberated Enschede on 3 April 1945. Gerrit had died in 1944. Because he had been a member of the NSB and had married a German during the war, his possessions were taken away. That included the Drienerlo estate. Anne was left destitute. In 1961, Drienerlo became home to the campus of the Technical University of Applied Sciences of Twente, which would later become the UT.

Since the end of the war, a former member of the resistance had been trying to restore Gerrit's honour. During the war, Leendert Overduin, a pastor in Enschede, led a large organisation with his two sisters that helped Jews go into hiding. He rode his bike across the Netherlands to establish contacts. His group saved the lives of at least one thousand Jews. Just like he became an active member of the resistance movement during the war because he was outraged about the persecution of the Jews, he protested against the



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persecution of some members of the NSB after the war and loathed people's hostile attitude towards their children. Surely, they were innocent?

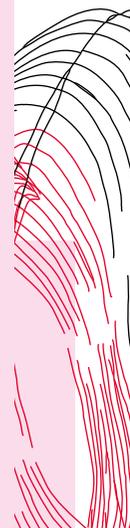
He also believed the fate of Gerrit and Anne Lasonder was unjust. Historian Coen Hilbrink quotes Leendert: 'When I needed to find a place to house a Jewish married couple - even if only for a single night - I could walk through entire streets in Enschede and be told by everyone I asked: no, not here, we're too afraid. However, when I approached one of Lasonder's tenants - all members of the NSB themselves - they did offer shelter to Jews. Lasonder knew about it, too. He could have reported me and countless others if he had wanted to, but he never did.' Gerrit's honour was restored in 1969.

Sometimes, the line between guilt and innocence is blurred. The same man who invited members of the NSB for tea at Drienerlo also sheltered Jews on his estate.

Does that mean our campus is innocent? Armando passed away not too long ago, so I don't know what he would have thought. However, I hate the humanisation of a landscape. People act or do not act. Nature simply is •

Hiska Bakker

Historian, journalist and a presenter at Studium Generale



ALL-WEATHER RESEARCH

PHD STUDENT DAAN POPPEMA OFTEN LEAVES THE CONFINES OF HIS OFFICE OR LAB. A CONSIDERABLE PART OF HIS RESEARCH AT THE WATER ENGINEERING MANAGEMENT DEPARTMENT CONSISTS OF FIELDWORK. RECENTLY, HE HAS BEEN WORKING NEAR THE RENOWNED HUIS TER DUIN ON THE BEACH OF NOORDWIJK. BETWEEN THE LOCAL SAILING CLUB'S SHACK AND A BEACH PAVILION, TWO SEA CONTAINERS STAND SIDE BY SIDE – SEEMINGLY HALF BURIED – WITH SAND PILED UP AROUND THEM IN A HORSESHOE SHAPE.

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It is all part of the PhD candidate's work. Poppema is studying the effects of beach structures such as recreational cottages and pavilions on the development of dunes by wind and sand. This so-called aeolian sediment dynamic is on full display on the beach of Noordwijk. Within just one month, erosion formed a deep trench around the sea containers – which were provided by researchers from Delft University of Technology, with whom Poppema is collaborating – with a pile of sand around it.

Measuring this displacement of sand is a precise task, Poppema explains. 'I lay down markers here and there. Next, I walk around in a zigzag pattern with a four-metre-long telescopic stick with a camera mounted on top. Every metre, I stop to take a picture – more than a thousand every day. A computer can then identify the various points of reference and glue the pictures together. This results in a 3D model, which shows us what the effects are.'



Poppema has no use for what other people would consider perfect weather for a day at the beach. To get the sand moving a bit, you need at least wind force 4; a gentle breeze is not enough. Last year, he placed circa twenty scale models – measuring about one cubic metre in size – on different beaches. 'When I visited Terschelling, it was windy the first day. The two weeks after that were practically windless,' Poppema sighs. That is not always the case, however. 'During the recent storm Ciara, we were able to conduct a lot of measurements. As added benefits, there was hardly any rain and a lot of sand displacement. Even though we were practically sandblasted, those conditions were perfect for our research. A storm like that leads to a ton of invaluable data.'



Even when Poppema is hard at work, he cannot completely escape the unique setting of his fieldwork. 'I was deliberately looking for something like that after my master's research, for which I studied how plants in a salt marsh influence sediment dynamics. I didn't want to be cooped up in an office and just focus on modelling. Even when you do that, you have to know and feel the forces that are in play in the real world. I chose this topic very deliberately because of the fieldwork that comes with it. It is more than the feeling of being on holiday; I am also very much aware of the social relevance of my work.'

That social relevance goes beyond the nuisance for local pavilion owners who have to sweep their terraces. 'Even today, dunes are a crucial barrier between the sea and the hinterland,' Poppema explains. 'Given the predicted rise of the sea level, it is important that beaches and dunes grow as well.'

Monitoring that dynamic is no easy task. Even Albert Einstein knew that, whose son Hans studied sediment transport. 'In our field, we like to repeat what Einstein once said: that his son was working on a much harder topic of research than he was,' Poppema says. The doctoral candidate enjoys the complexity of his chosen topic, but he loves his work outside. Through wind and weather. •

UT'ERS ON THE MOVE



2012

MARIËLLE BOUWMAN
COM'12

During her studies, Mariëlle Bouwman did an internship at eFocus. After graduating, she worked there for several years as a Digital Consultant. Mariëlle then moved to Sydney, where she continued her career as a Digital Consultant at Valtech and then at BizTech. In March of 2020, she started a new job as Client Engagement Manager & Senior Digital Consultant at MediaMonks. •

2008

MARTIJN TIDEMAN
ME'08

Since January of 2020, Martijn Tideman works as Director Business Development Autonomous Vehicles at NVIDIA in San Francisco. This ties in well with his career in the field of Autonomous Driving. After graduating, he worked at TNO Automotive, TASS International and Siemens, among other organisations. •

1999

HILCO VAN MOERKERK
EE'99

In addition to being the founder of GEOREKA Software, Hilco van Moerkerk became the new Managing Director of UNEXMIN GeoRobotics in February of 2020. UNEXMIN GeoRobotics is a spin-off that develops innovative robotic technology services that are used to monitor flooded mines. •



2016

JOAN LOBO PRAT
PHD'16

In January of 2020, Joan Lobo Prat started his new job as Rehabilitation Engineer at ABLE Human Motion in Barcelona. He works on the development and clinical evaluation of rehabilitation technology for people with a neuromuscular condition. This was also the topic of his doctoral research. •



2008

DAAN GIESEN
BA'08

Since February of 2020, Daan Giesen works as Head of Growth at LessonUp, a company that develops interactive digital lessons. Before this, he worked at Bol.com as Project Lead for beta.bol.com. •



2000

ERIK HOEKSEMA
BIT'00

In January of 2020, Erik Hoeksema became the new head of the sustainability department at BAM Infra Nederland. Before starting his new job, he worked in several positions related to the field of sustainability, for example at KPMG. During his time at the University of Twente, Erik was a member of the board of the I.C.T.S.V Inter-Actief study association, with a focus on Internal Relations. •

2011

ARNE SCHOONDERBEEK
CIT'11

In February of 2020, Arne Schoonderbeek started his new job as Associate Director Transport & Planning Infrastructure at Royal HaskoningDHV. Before this, he worked as an Engineer for the Royal Netherlands Army, after which he commanded a decontamination platoon, a support platoon and an armoured engineer platoon. •



1990

MIRJAM WESTGEEST
BSK'90

After several jobs in public administration, Mirjam Westgeest became the new Director of Personnel and Organisation at Defence Materiel Organisation in Utrecht in January of 2020. In the past, she worked at the Ministries of Transport and Water Management, Infrastructure and the Environment, Foreign Affairs and Economic Affairs and Climate Policy. •



1996

JEROEN VERHOEVEN
TBK'96

In February of 2020, Jeroen Verhoeven started a new job as Vice President Production Partner Management, Renewable Polymers and Chemicals at Neste in Düsseldorf. During his time at the UT, he was a member of the board of the study association Stress. Over the course of his career, he has held many leadership positions in the fields of supply chain, transformation and commercial departments •



MORE UT'ERS ON THE MOVE

The most recent information about the careers of UT alumni is available at utwente.nl/alumni. If you recently started a new job yourself or know someone who did something unique or won a prestigious award of some kind, let us know via: alumni@utwente.nl

'I am quite jealous of the current students'

JEROEN GEBBEN (49) IS AN ALUMNUS OF PUBLIC ADMINISTRATION AND THE CURRENT MAYOR OF TYTSJERKSTERADIEL, A MUNICIPALITY IN THE PROVINCE OF FRIESLAND. RECENTLY, HE HAS LENT A HELPING HAND TO STUDENTS FROM THE MANAGEMENT, SOCIETY AND TECHNOLOGY PROGRAMME, WHO HAVE BEEN ASSIGNED TO CONDUCT INTERVIEWS WITH VARIOUS UT ALUMNI. 'IT WAS NICE TO TALK TO MY FUTURE COLLEAGUES.'

Why did you agree to participate in the students' project?

Gebben: 'I was in their shoes once and I know how nice it is to talk to people who have experience in the field of public management. If somebody directly from the business talks to you openly, it helps you combine your theoretical knowledge with practice. For me, it was also interesting to get insights into how the study is evolving. Moreover, it was nice to talk to my future colleagues.'

Was there anything that surprised you? How has the study programme changed since you graduated in 2005?

'I was surprised to see how much the students are involved in society and to see how international the environment has become. In my time at the UT, the study was more theoretical. I didn't know precisely what I was studying for and what the work would entail. Now the programme seems more practical and pragmatic. I'm jealous of that. I prefer this type of study. The international aspect also adds a lot. It allows you to see more ways to approach an issue and to learn from practices across the world. The study seems more inclusive now. I'm quite jealous of the current students.'



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You mentioned that you weren't sure what you were working towards as a student. Does that mean you didn't have the goal of becoming a mayor?

'Actually, becoming a mayor was my goal. I'm really interested in safety and security, so I wanted to be either a chief commander of the police force or to be a mayor. I couldn't join the police force, so I decided to go for public administration. My interest in becoming a mayor became even greater over the years and I became more active in politics. Being a mayor is a great job where you can serve your community. I love it.' •

ALUMNI TALKS 2020 "SEE THE FUTURE"



The Vrijhof Amphitheater is the scene of our annual event for alumni, students and staff on Friday October 2nd from 15:00, with inspiring talks by UT alumni focused on the future so save the date!



SPIRITS OF SOUL

In December 2019, the Dutch Student Jazz Orchestra (NSJO) organised its annual tour through the Netherlands. This iteration was called "Spirits of SOUL." The orchestra, which consists of thirty-one students from all over the Netherlands, is directed by Nils van Haften. The set they played was made up of a wide range of soul classics from, among others, James Brown, Aretha Franklin and Stevie Wonder. The orchestra combined soul with elements of e.g. jazz. With several surprises, such as musicians hidden in the crowd and a choir as the final act, it was an interesting and entertaining evening for the musicians and the audience alike. The show, held in Metropool in Enschede, attracted a record number of 475 visitors, 75% of whom were students. The orchestra gave the enthusiastic crowd, which filled every seat in the house, a night to remember. •



IDEEFIKS STUDY TOUR DUBLIN

The study trip for students of the Philosophy of Science, Technology and Society master's programme to Dublin, organised by the WTS IDEEFIKS study association, was a big hit. Among other things, the twenty students visited the University College Dublin, Google, engineering firm Arup and the ADAPT Center. They also attended a lecture from UT assistant professor dr. Nolen Gertz about his book Nihilism and Technology, held in Trinity College. Of course, no visit to Dublin would be complete without a visit to Dublin Castle and several pubs. •

The study trip was made possible by
A financial contribution from the Twente University Fund.



WELL SPENT!

A unique piece of the Hogekamp building can be found in the U Parkhotel! Thanks to the contributions of many alumni and (former) employees to the 2019 annual campaign, four new display cases have been purchased to show part of the Electrical Engineering, Mathematics and Computer Science (EEMCS) Historical Study Collection to the public. All the more reason to take a quick look at the U Parkhotel.

The annual campaign also boosted the research into Needle-free injections by David Fernandez Rivas, assistant professor at the MESA + Institute for Nanotechnology. The annual campaign not only brought him a nice financial contribution, but also extra publicity. At the end of 2019, he received a substantial European subsidy of one and a half million euros. •

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EMERGENCY FUND FOR UT-STUDENTS

The corona crisis hits some harder than others. In our University of Twente community, various students and PhD students have gotten into trouble. We have to go through this crisis together: so let's help them!

Twente University Fund has launched a crowdfunding campaign to help those most in need of our help. Think of the costs of repatriation, the termination of a grant, the loss of an established part-time job and support for social isolation. Not everyone can fall back on parents or use social services.

The reactions are heartwarming. Many alumni, relations, employees and friends of the university responded and gave generously! Donations, small and large, are still very welcome! Go to www.steunutwente.nl/project/corona and donate. Together we can make a difference! •

TEAM UP FOR TALENT! 2020



IN LATE DECEMBER 2019, THE UNIVERSITY FUND LAUNCHED ITS TEAM UP FOR TALENT! CAMPAIGN. WITH THE HELP OF DONATIONS FROM MORE THAN 300 ALUMNI, (FORMER) STAFF AND RELATIONS OF THE UNIVERSITY, THE FINAL GOAL OF €30,000 HAS NEARLY BEEN REACHED!

Will you help us get there? Team up for Talent! This year, we are gathering donations for COPD research, the A3T Drone Team and its humanitarian mission in Malawi, the Kipaji Scholarshipfund and Xperimenta op Xpeditie, research and technical education in classrooms. For more information about the various projects, go to www.utwente.nl/team-up-for-talent or donate directly to the campaign via Tikkie!



TWENTE UNIVERSITY FUND

You can support the Twente University Fund with a one-time donation, a periodical donation or as an estate left to the University Fund. Furthermore, it is possible to set up a fund of your own within the framework of the University Fund's objectives, for which you can pick a name and purpose. Doing this gives you complete control over how your contribution is utilised. Note that if you want to set up your own named fund, you must make a donation of at least €10,000. •

More information

Visit www.utwente.nl/ufonds or contact Maurice Essers via 053 4893993 or m.l.g.essers@utwente.nl.

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Do you already donate to the campaign every year or are you thinking about doing so? You can easily enjoy a tax benefit by turning your donation into a periodical gift! Doing so will allow you to raise your contribution without spending any extra money. Go to www.utwente.nl/doneren-met-voordeel for more information.

If you have any questions about donating with tax benefits, Josine Meerburg can answer them for you. You can contact her via j.e.meerburg@utwente.nl •

Campus