

# UNIVERSITY OF TWENTE.



**WERE YOU THERE?**  
**Open House 2018**

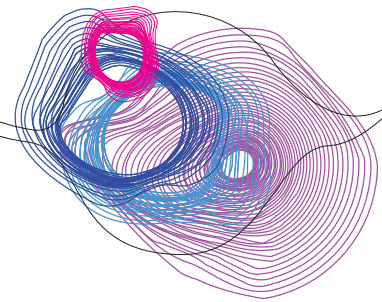
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**Joint Mechanical Engineering bachelor's programme**

**WAR FOR TALENT**  
**The hunt for highly educated technicians**

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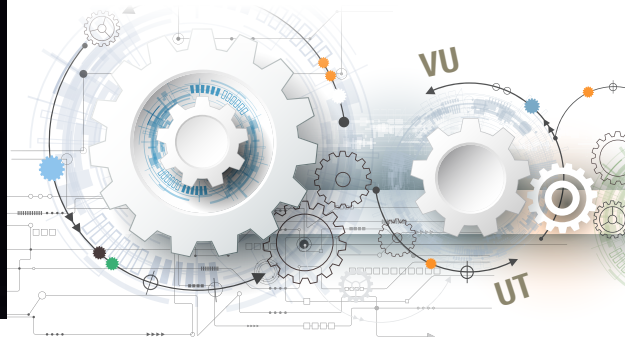
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## RETAINING YOUNG TALENT

“Twente’s campus in the lead,” wrote the regional newspaper *De Twentsche Courant Tubantia* in early June. A study of Dutch “knowledge campuses,” conducted by Buck Consultants, shows that Kennispark Twente holds the #1 position: the park houses by far the largest number of organisations – nearly twice as much as the number two. These are spin-offs of the University of Twente, as well as organisations that like to settle close to the University and the pool of young talent it houses. Figures from Statistics Netherlands (CBS) also show that the economy in Twente grows at a higher rate than the Dutch national average. That explains why we have received the title of “most entrepreneurial university” for the third time in a row.

These are all wonderful results, yet we cannot rest on our laurels. Every university is focusing on entrepreneurship now. Rapid growth is not only seen at the other technical universities, but also at classical universities like the ones in Groningen and Leiden. Our

entrepreneurial attitude made us pioneers, but we have to regularly reinvent ourselves if we want to maintain our lead.

Another conclusion from the report is that the growth rate of the employment opportunities at Kennispark Twente lags behind the average of all other – 35 in total – knowledge campuses in the Netherlands. Unlike the area around Eindhoven, we lack major corporations in Twente. Our employment opportunities are found at the hundreds of SME spin-offs and scale-ups. We find that some of our graduates prefer to work at a large organisation and in a different region. That is why we are collaborating with the municipality of Enschede on an initiative to retain young talent in the region or stimulate them to return. We are aware that it is not all about work; the region’s living environment, facilities and culture are also important factors. For you, as an alumnus or relation of the University, a new or renewed introduction to the region might also be interesting! ●



“WE HAVE TO REGULARLY  
REINVENT OURSELVES IF WE WANT  
TO MAINTAIN OUR LEAD”



**VICTOR VAN DER CHIJS, LL.M.,**  
(1960) CHAIRMAN OF THE UNIVERSITY  
OF TWENTE EXECUTIVE BOARD SINCE  
OCTOBER 2013.

## DOSSIER

Over the course of the next five years, the Netherlands will need 60,000 highly educated engineers. The four technical universities can only supply half that number. That means it is all hands on deck for businesses and knowledge institutes, including the University of Twente. BY Marco Krijnsen PHOTOGRAPHY Gijs van Ouwkerk

### 'WAR FOR TALENT'



# ALL HANDS ON DECK

The UT spin-off Demcon is doing well. The developer of high-end technology is experiencing spectacular growth and it will soon begin the construction of a brand-new Technology Center, right across from the University of Twente. This year, the organisation will need 100 to 150 new employees to keep up with this rapid expansion. "We will find them all," says director Dennis Schipper with conviction. Nevertheless, the UT alumnus of Mechanical Engineering is concerned. Demcon is already forced to refuse many projects because it simply lacks the manpower. That problem is only expected to grow in the time to come, because the competition on the employment market is becoming noticeably fiercer. Schipper: "We must be careful that the shortage of engineers does not impede our growth."

### **Attracting more students**

Schipper believes that the only way for Demcon to stay in the race for technical talent is for the organisation to be visible to potential employees who are either still studying or have recently graduated. That is why the company is investing in all kinds of cooperative alliances, for example with knowledge institutes

in the area. Demcon sponsors Saxion's Mechatronics lectorate and the UT's Robotics and Mechatronics chair. The collaboration with the University will be expanded in the future. Demcon will also finance half of the Precision Engineering chair, the research group that focuses on medical robotics.

This improved visibility is required to avoid a brain-drain of highly educated engineers to other places and companies, Schipper says. Additional measures are also needed. "The University of Twente stops at the Hengelosestraat, which still forms a barrier. We must attract more students for lectures, projects or drinks. We do not do enough of that, even though Demcon is located close to the University. This situation is even more difficult for businesses based in Oldenzaal or Almelo. They are often completely invisible to UT students."

### **Multinationals in Twente**

Victor van der Chijs, the president of the UT's Executive Board, acknowledges this problem. "We have the right people in Twente and we have small and medium-sized high-tech companies with a large number of vacancies. Nevertheless, many of

"We post 3,000 to 4,000 vacancies per year and receive 125,000 applications"

- Peter Wennink, CEO ASML



## A TECHNICAL DEGREE, BUT NO TECHNICAL JOB

An important cause for the shortage of technical staff is the fact that many highly educated engineers work in other sectors. National figures show that only 44% of the students in this group ultimately end up in a technical position at a technical organisation. For women, that percentage is much lower still. The chance that they choose a profession outside the technology sector is four times larger than for men.

The "Mind the Gap!" study recently mapped out the situation in Twente. The results show that one out of every five technology professionals "drops out" of the sector. Out of all highly educated technology professionals with a technical degree from the UT or Saxion, only 37% works in a technical position at a technical organisation, while 31% has a non-technical position at a technical

company. These figures are in line with the national averages.

In Twente, the problem is exacerbated because only few students with a technology degree are interested in a job at a local tech company (17% of the male students and 6% of the female students).

The number of female technology students has increased in recent years, but the effects are limited for the time being. That is due to the fact that women are far more likely to leave the technology sector than their male colleagues. The IT sector in particular struggles with this phenomenon. According to researchers, this is caused in part by the male-dominated culture on the work floor. Women feel like they are undervalued and given less challenging tasks than men in similar positions.



"We must be careful that the shortage of engineers does not impede our growth"

- Dennis Schipper, director of Demcon

our students leave for the Randstad. They want to work for a major corporation, preferably a multinational. We should therefore try to bring those companies here. We have to focus on the ASMLs of this world." Van Der Chijs also believes that the number of fish in the sea of technical top talent will have to increase. The supply and demand on the employment market can be balanced with a higher intake of new technology students. That explains the University of Twente and VU University Amsterdam's initiative to set up a joint engineering programme in Amsterdam. "In the Amsterdam region, far fewer young people choose a technical university programme. Twente is too far away, so we will go to them instead. We are creating a new market and I am curious to see what the results will be."

### Image problem

ASML in Veldhoven, the world's largest manufacturer of chip machines, already stated that all technical universities in the Netherlands should be active in the Amsterdam region in order to resolve the shortage

of technical staff. The need is dire, although ASML itself is not necessarily affected by it, says CEO Peter Wennink. "We post 3,000 to 4,000 vacancies per year and receive 125,000 applications. This does not necessarily mean that we always have enough candidates with the right competences for all positions. Our suppliers are struggling with the growing shortage of engineers. We will have to work together to resolve this problem." Wennink, who recently gave the Innovation lecture at the University of Twente, has identified a number of problem areas. "One of the causes is the poor image of the technology sector – not among young people but among their parents. They still believe that anyone with a technical degree will end up working in a dirty factory. That is certainly no longer the case, but it takes time to change the sector's image. Furthermore, the technical universities have to increase their capacity. I am not advocating diploma factories, but they will have to produce more excellent engineers. That requires additional funding from the ministry."



Peter Wennink gives his keynote speech during the Entrepreneurial Day.

### Female role models

A problem that is specific to the Netherlands is the shortage of female engineers. “Thirty-five percent of our foreign employees are women. That number is just 6% for Dutch employees. That is frankly ridiculous,” says Wennink. “Businesses have a role to play in this regard as well. At ASML, we host Girlsdays, for example. We send our best female engineers to show how fun and relevant the technology sector is. Young girls tend to love that.” Victor van der Chijs applauds that last initiative. “We are already doing a lot to get girls interested in the technical fields with the Technology Pact. We desperately need female role models. Vanessa Evers, our professor of Social Robotics, is a great example. She is a figurehead who can give others the final push they need to choose a technical study programme. That is why we will recruit more female professors in the years to come.”

### Social media

Several years ago, Thales in Hengelo, a company active in the field

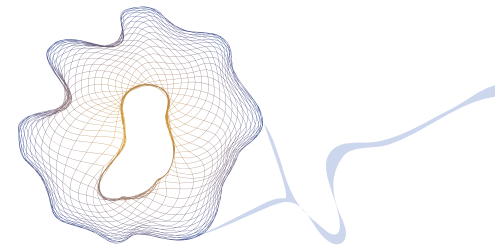
of radar technology, launched a scholarship programme to attract more women to the high-tech sector. Ten female students each received a €5,000 scholarship that allowed them to choose a technical master’s programme at a university. Following a major reorganisation at the company, this initiative no longer exists.

Now that the economy has recovered and the number of jobs in Hengelo will increase by 150 this year alone, Thales is considering a follow-up initiative. “Instead of scholarships, we may seek to actively collaborate with students in a start-up-like setting,” says spokesperson Job Harmelink. “We want to meet potential employees at an early stage. In the past, we used advertisements for that. These days, we go all-in on social media. The Arduino competition for students is another one of our platforms. We will expand it with mixed teams that do not consist solely of engineers. For us, that is a great way to attract the attention of young people.”

## SALARY IS IMPORTANT TO GENERATION Z

Employers are lining up to recruit the new generation of employees, the so-called Generation Z. What should they keep in mind? Like the millennials that came before them, today’s young people are difficult to retain and hard to reach. A study conducted by YoungCapital shows that they are slightly more conservative and value salary more. Relatively many people in Generation Z choose to become entrepreneurs, possibly in combination with a salaried job. In the latter case, they want to know exactly what their boss expects from them.

# IN BRIEF



## LASER SHOE

People suffering from Parkinson's disease often have trouble walking. They regularly experience freezing of gait, where their feet appear to be stuck to the ground. Research conducted by the UT and other institutes has shown that a special shoe can help. With each step, the shoe uses laser light to project a line on the floor for the patient to step over. This reduces the number of instances of freezing of gait by 46 percent and cuts the duration of each episode in half.



## BITCOIN

Research conducted by the University of Twente has shown that an attack on the Bitcoin is easier than previously assumed. A group of Bitcoin users with access to twenty percent of the computing power can execute an attack over the course of a few days that would force all other users to accept a new standard for the Bitcoin. Researcher Ansgar Fehnker compares this to an organisation in which twenty percent of the shareholders can impose their will on the vast majority of other shareholders. The attack retroactively cancels recent transactions, thereby undermining people's trust in the current standard.



## ELECTRIC BIKE

In late May, the Electric Superbike Twente student team presented the Liion-GP. This motorbike, which can achieve a top speed of 250 kilometres per hour, was designed and produced in a record time of just

nine months by the team's fifteen students from the University of Twente and Saxion. The bike will participate in its first official race on the Pembrey race track in the United Kingdom on 8 July.



## EIGHT TOP MASTERS

In total, eight of the UT's master's programmes have earned the title of "top programme." This is revealed in the latest edition of the *Keuzegids Masters*, which offers an annual comparison of all master's programmes in the Netherlands. The UT has achieved excellent scores across the board. It is the fastest riser and finished second of all fulltime universities. In late 2017, the UT already achieved a third place in the *Keuzegids Bachelors* and earned the title of "Best Technical University in the Netherlands." Go to [www.keuzegids.org](http://www.keuzegids.org) for more information.



## URINE TEST

A new spin-off from the University of Twente, NanoMed Diagnostics, is developing a urine test that can be used to detect the early stages of cancer. During a previous study conducted by the UT and the VUmc, researchers discovered strong indications that the presence of cancer in a patient's body can be identified by looking for specific signal substances on DNA fragments found in their urine. Furthermore, the position of these substances on the DNA provides an indication of what type of cancer the patient has. The researchers involved in the project expect to have a reliable and validated test ready for the international market in circa four years' time.



## TECHNICAL MEDICINE

Researchers with a background in Technical Medicine must be permanently included in the BIG register to allow them to perform medical procedures on their own. That is the recommendation of an evaluation committee following an experiment in which researchers were given this authority on a temporary basis. Minister Bruno Bruins (Medical Care and Sports) will submit a

bill to make this possible. The new occupational group in the healthcare sector originated at the University of Twente. Heleen Miedema, the founder and programme director of the Technical Medicine programme, is overjoyed. "This is an important step for the occupational group, the University of Twente and the healthcare sector in general."



More information about these items can be found at: [www.utwente.nl/en](http://www.utwente.nl/en)

Is there anything better than a cup of coffee? Did you know that the production of the coffee beans used for one cup of coffee costs 140 litres of water? The steak on your plate required 2,000 litres. Water is becoming scarce, so it is high time to provide more insight into the impact of our consumption. Rick Hogeboom obtains his doctoral degree with research into the water footprint. BY Frederike Krommendijk PHOTOGRAPHY Gijs van Duwerkerk



*"In just a few decades, we are using up groundwater reserves that have built up over the course of centuries or millennia"*

## PROMOTIONAL RESEARCH INTO THE RELATIONSHIP BETWEEN WATER SCARCITY AND CONSUMPTION

# CALCULATE YOUR WATER FOOTPRINT

If Rick Hogeboom was not such a happy fellow, he might get depressed from mapping out the world's water situation. "There are three problems associated with water: too much, not enough or too polluted. Pollution is often visible and floods are hard to ignore as well. Water scarcity, however, is like misery in slow motion. The effects are hardly felt here in the Netherlands, but four billion people around the world already experience water scarcity one month out of the year. For 1.5 billion people, that scarcity lasts all year long."

Installing a more efficient shower head or a smaller toilet tank is not enough. People all over the world will have to change their behaviour. "That starts with consumers. How long will we be able to continue eating meat every day when the production of animal feed requires so much water? Do those avocados and almonds still look as good when you know how much groundwater is used for their production in Chile and California? When you link consumption to this water footprint, it quickly becomes clear that this situation cannot last: in just a few decades, we are using up groundwater reserves that have built up over the course of centuries or millennia." Investors should also keep the water footprint in mind when considering an investment in yet another almond or avocado farm in a sun-drenched, dry location. "I get what they are thinking: they are after the most lucrative deal. However, it would be great if sustainability also factored into their

decisions. I recently attended a gathering with major investors, where it became clear to me that this is hardly ever an issue at the moment. Water is a scarce resource and there are limits to the growth."

How much good will it really do if Western consumers stop buying avocados? "It is not that simple, of course. The thing is that we, as rich countries, can bring our products in from anywhere. If the water runs out somewhere and production grinds to a halt, we will simply buy our stuff somewhere else. That will stop one day, though." Is it a hopeless cause? "No, but similar to how everyone is only now beginning to truly realise the impact of CO<sub>2</sub> emission and climate change, it is important to start raising awareness. For example, our research data shows that an avocado grown in one place is a less sustainable choice in terms of water usage than one that originates elsewhere. A vegetarian diet has a lower water footprint than one that includes meat. Fortunately, we do have some choice in the matter."

With knowledge of the water footprint, policy makers can make different choices. "For example, we are studying the efficiency of irrigation. Using droplets is far more efficient than spraying. If it is possible to grow coffee in a way that costs 100 litres per cup, policy makers can prohibit methods that require 200 litres per cup. They can also stimulate the use of the far more efficient droplet irrigation method. There are plenty of measures that can be taken, but awareness is step one."

By the time Rick graduates next summer, he will have spent 5.5 years working on this subject. He has also been actively involved in water management outside the university for years, for example as the director of the Water Footprint Network and as part of the Wetskills foundation, where students help corporations and governments in developing countries quickly resolve their water-related problems. "I wanted to become an engineer in the army to work on construction projects in developing countries. From the Royal Military Academy, I came to the UT to earn my bachelor's degree in Civil Engineering. I am an idealist and because water is such an urgent problem in many developing countries, I was inspired to stay here and focus all my attention on water management."

"Our current consumption pattern is draining the ground water supply in many places all over the world"

After he obtains his doctoral degree, the world will be at his feet. He is definitely interested in a postgraduate degree from the UT, but his options also include global organisations such as the World Bank and the UN's Food and Agriculture Organization (FAO). "I want to contribute in some capacity to raising the awareness of consumers, businesses and policy makers. They have to understand that we must start taking better care of our global water supply. The current situation cannot last forever."



Rick Hogeboom recently gave a TEDxTwente talk which you can watch: [youtube.com/watch?v=DCzTJi4Xp0A](https://www.youtube.com/watch?v=DCzTJi4Xp0A)

# “THE UT HAS MADE ME WHO I AM TODAY”



## FROM DROP-OUT TO TOP STUDENT

UT alumnus Peter Riezebos (38) is an artist, writer and multidisciplinary scientist who currently lives in China. Despite the large distance to Twente, he still feels connected to the University. With his Named Fund, he wants to help students study in a way that suits them best.

BY **Marieke Vroom** PHOTOGRAPHY **private image / Rikkert Harink**

“I often struggled to scrape together enough cash to pay for my ticket”

Right before our call, Peter Riezebos sends a picture of his view of Shanghai’s imposing skyline. “I am ready,” the caption reads. He had planned to work out with his personal trainer, but he has rescheduled that appointment. The artist’s agenda is packed. His work is popular all over the world and he hops from plane to plane – from China to America to the Netherlands and back – to attend expositions, book presentations, auctions and painting sessions. In between, he finds the time to work on his doctoral research. “I need that pressure, otherwise I get bored easily.”



In celebration of the seventieth anniversary of the Twente University Fund, artist and UT alumnus Peter Riezebos displayed his work at the UT. Throughout the month, a selection of his art was presented in the exposition space of the Vrijhof building. Riezebos has achieved international success with his work. Art enthusiasts line up to attend his exhibitions and auctions. This year alone, he had shows in Amsterdam, New York, Los Angeles and Shanghai. The artist still has close ties with the UT. He has set up a Named Fund to offer motivated students – with or without learning difficulties – financial support for their special educational needs or extracurricular activities. During the opening of his exposition at the UT, the alumnus and his wife donated 15,000 euros to the Peter Riezebos Fund.

### Catching up

The alumnus did not have an easy start in life. He did not fit within the traditional school system and was classified as an “unruly” student. Teachers had no idea what to do with him. He spent a lot of time in detention, failed his intermediate general secondary education and was expelled from his senior secondary vocational education programme twice. A serious depression resulted in a clinical admission for a period of a year. He was diagnosed with Asperger’s and ADHD, among other things. “With the help of doctors and psychiatrists, I found out that there was a lot going on in my head, but that it also held a lot of potential.”

Love brought Riezebos to the UT. His wife Lindy lived in Haaksbergen at the time and studied Commercial Economics at Saxion. “She stimulated me to resume my education.” Between 2006 and 2014, he studied Psychology and Communication Studies, took two minors and a pre-master’s in Philosophy, completed the honours programme for excellent students and enrolled in a higher education Business Administration programme in the evenings.

“Call it catching up or a need to prove myself. When you move from a negative to a positive situation and you suddenly find out that you can do a lot more than you thought possible, you seize every opportunity

you can get,” he says when asked about his choice to enrol in multiple programmes at the same time. “On top of that, I am interested in a great many things. When I found out what works for me and where my talents lie, I also discovered that I love understanding the world and connecting different aspects from a multidisciplinary perspective – as long as things happen by my rules and meet my conditions.”

### Support and flexibility

The University of Twente gave him the room he needed. Riezebos did not attend many lectures. Instead, he worked on extracurricular projects, collaborated on publications and presented his research at conferences abroad. “I have trouble sitting still and listening. A two-hour lecture tired me out as if it were eight hours long. However, if you gave me a project that allowed me to do my own research, I would do eight hours’ worth of work in two hours’ time.”

He found the joy in life during his time as a student, the alumnus says. “I met people who supported me and were very flexible. That allowed me to flourish.” It also motivated his decision to give back. “The University has done so much for me. My time at the UT was a major factor in making me who I am today. I cannot simply forget about that.”

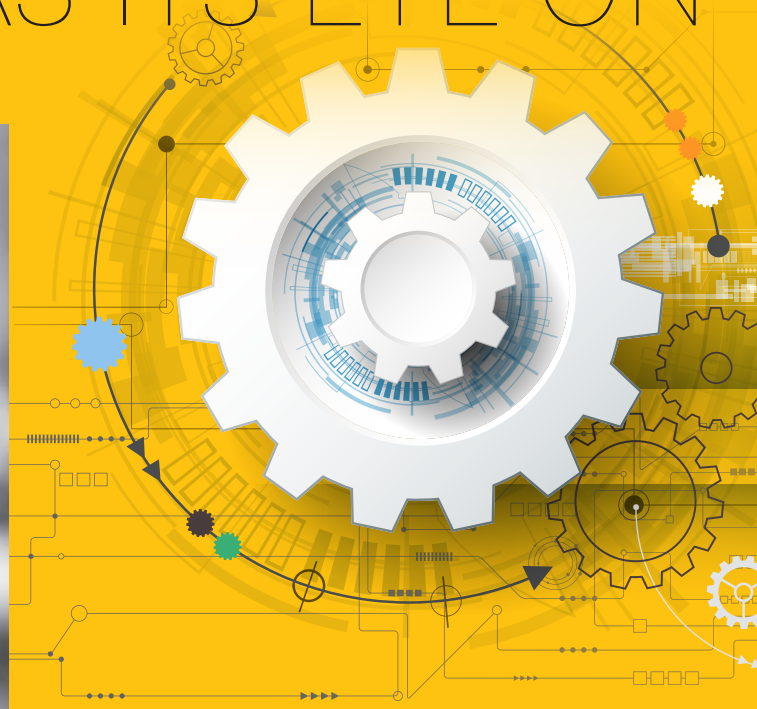
With the Peter Riezebos Fund, he wants to support students with learning difficulties. “I know from personal experience how challenging life can be when you are dealing with mental obstacles.” A student who has trouble functioning in a lecture hall or as part of a study group can apply for a scholarship to create a study area at home. The fund is also available for ambitious students who want to take on extracurricular activities. “I learned a whole lot from the international conferences I attended during my studies. That takes money, though. I often struggled to scrape together enough cash to pay for my ticket. It is important to me that there are funds available for that. If it gives someone the opportunity to learn and have fun, I am happy to contribute.”

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# UT HAS ITS EYE ON

“We can introduce a whole new group of students to the UT”



## JOINT MECHANICAL ENGINEERING BACHELOR'S PROGRAMME WITH VU

The employment market is in dire need of highly educated technical staff. Nevertheless, the Mechanical Engineering bachelor's programme is not particularly popular among high school students in the province of North Holland. The main reason: there is no technical university in the region. In September of next year, the UT will therefore introduce a new programme in Amsterdam in collaboration with VU University Amsterdam. With this programme, the UT hopes to see more students move on the master's programme.

BY **Frederike Krommendijk & U-Today** PHOTOGRAPHY **Rikkert Harink & Claudia Kamergorodsk**

Victor van der Chijs, the president of the UT's Executive Board, explains that only eleven percent of the high school students in Amsterdam with a pre-university education choose a technical programme. "If there is a technical university in the region, that number increases to 23 percent. That is why we will go to the student if they will not come to us. It will be good for us, for VU University Amsterdam and for the employment

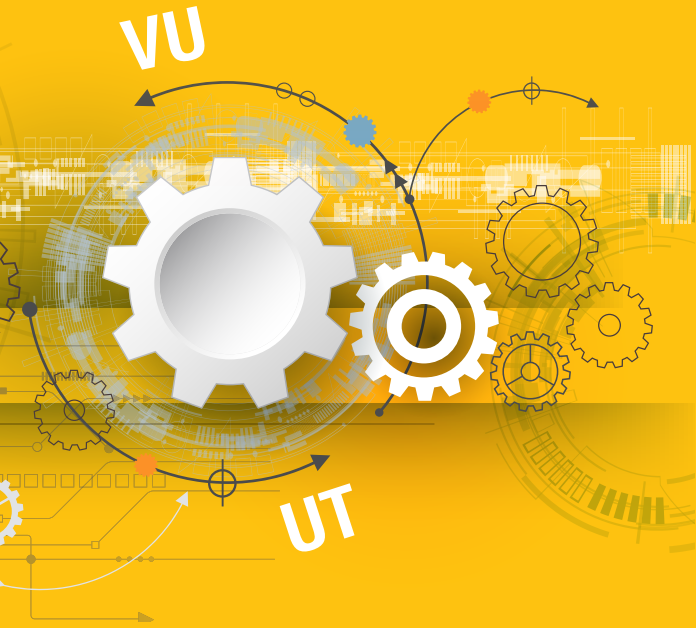
market, which is in dire need of highly educated technical staff." Once students have completed the bachelor's programme in Amsterdam, the move to Enschede to acquire their master's degree at the UT is not so large anymore. "With this bachelor's programme, we can introduce a whole new group of students to the UT. We expect that this will make it more appealing for them to obtain their master's degree here."

The students from North Holland will frequently visit the UT. Every month, they will spend three weeks at VU University Amsterdam and one week in Enschede. They get to use the UT's facilities, such as laboratories, and the UT looks for affordable housing on the campus for that one week per month. Some of the UT's employees will teach their classes in Amsterdam. It is not out of the question that other joint programmes will be set up in Amsterdam. For UT employees who live elsewhere in the country, travelling to Amsterdam is not necessarily more difficult than their commute to Enschede.

### Part of the UT

The bachelor's programme will formally be a part of the UT. Setting up a new programme takes years, but this allows the programme to operate under the UT licence. It will be a joint programme in the truest sense of the word. The UT will initially supply more lecturers, but as time goes on, each institute will provide fifty percent.

# STUDENTS IN AMSTERDAM



“We are taking our social responsibility with this technical bachelor’s programme”

The curriculum is similar to that in Twente: it is based on the Twente educational model (TOM) and project-based education. The goal is to attract a maximum of 200 students in order to preserve the small scale of the education.

Mirjam van Praag, the president of VU University Amsterdam’s Executive Board, also sees major advantages in this collaboration. “Research has shown that in North Holland fewer young people choose a technical university education. Apparently, the proximity of study programmes is a major factor in their choice. As the shortage of employees with a technical background grows, our choice to offer a technical bachelor’s programme in Amsterdam can be seen as our social responsibility. If anyone benefits from this, it is the student who ends up choosing our joint programme and, a bit later, our society as a whole.”

VU University Amsterdam and the UT have a lot in common, Van

Praag says. “We are both driven by the added value we can create for our society. This is deeply ingrained in the culture of both institutes. To me, that is an important foundation for good collaboration. Our institutes also complement each other on a substantial level; our respective research and educational infrastructures tie into each other well. The UT and VU University Amsterdam also collaborate with Delft University of Technology and the University of Amsterdam. Our new cooperative alliance does not detract from that at all. Rather, I see it as an important addition to the existing partnerships of both universities.”

Van Praag emphasises that there are still some practical issues to be resolved concerning the joint bachelor’s programme. “Colleagues from Twente who visit our campus must be given access to our administrative systems and facilities. We also want to offer students housing on the campus in Twente, because they will go there regularly to attend

lectures. Issues like participation and the authorities of e.g. examination boards also pose some challenges. Lastly, it is important to eventually collaborate on our research as well. Whenever possible, we want to involve lecturers from Twente in our research programmes. We have come a long way already, but we want to dot every I and cross every T.”

Does this joint bachelor’s programme open the door for further collaboration with the UT in the future? Van Praag finds that a tough question to answer right now. “It is enough of a challenge to make this Amsterdam branch of the Mechanical Engineering programme cost-effective. Technical programmes are expensive. The key goal of our collaboration is to get more young people interested in a career in a technical field. Of course, we hope this programme becomes a resounding success. Let’s start small for now,” she says soberly.



“The UT offers so many opportunities that I want to seize them all”

## PRESIDENT OF NESST, PLAYING SPORTS, WORKING AND STUDYING

Going out and drinking beer is fun, but student Amy de Lange (22) prefers to spend her time on other pursuits. She plays sports, has a job, is on her way to becoming an entrepreneur and serves as president of Nesst, a foundation that helps students and young professionals set up their own business. “It is a lot, but it also gives me a lot of energy.” BY Frederike Krommendijk PHOTOGRAPHY Arjan Reef

## MAKING THE MOST OF HER STUDENT LIFE

She is enrolled in the third year of the Industrial Design bachelor’s programme and has a job. You might say she has plenty to do already, but Amy likes to take on more. “The UT offers so many opportunities that I want to seize them all. I already joined the ice-skating team and did lindyhop dancing for a while. These days, I frequently hit the climbing wall. There is a lot more to do than just studying.”

She considered joining a sorority, but it was all too organised for her liking. “I prefer a bit more spontaneity. Don’t get me wrong: I love going to the pub, but I would rather do something that actually benefits my development.”

She has found that combination of social and educational in her position as president of Nesst. This foundation helps students and young professionals set up their own business. “I did that myself and it is a very educational experience. The Industrial Design programme teaches you all about product design, but the entire process of bringing that product to market is largely overlooked. At Nesst, you get to brainstorm about your idea, draw up a business plan and talk to local entrepreneurs.

On top of that, you can learn from established professionals, such as accountants and lawyers, and you gain more insight into marketing. No matter how good your idea is, there is a lot more to setting up and running your own business. To me, all this knowledge was invaluable.” Amy is not an entrepreneur just yet, but she does have the prototype of a backpack from the Amy Naomi webshop in her apartment. Despite being made of paper, which is good for the environment, it is exceptionally sturdy. “As I use it, I encounter some small issues, such as the clips. Once I resolve those, it is ready to be sold in the webshop.”

As the president of Nesst, she now finds herself on the opposite side of the table to help students like her who dream of running their own (web)shop or business. “I get to use my organisational talents here. It is important to stay on top of everything, safeguard the goals and communicate well. I used to see a president as some dominant personality who smacks their fist down on the table. That is not like me at all. A gentle hand works just as well. Uncovering such useful self-knowledge is another benefit of this position.”



## A FRENCH REVOLUTION FOR THE DIGITAL REVOLUTION

Can we base information technology on the democratic values of the French Revolution: liberty, equality and fraternity? In the western world, the American model is currently prevalent: all your data is owned by a corporation. In the Chinese model, all your data is owned by the state. Why is there no European alternative yet?

With these questions, professor of Media Sociology Jan van Dijk recently departed the University of Twente. Back in 1991, his visionary book *The Network Society* predicted that the internet would develop in three phases. It would first connect people, then things and finally our bodies. Keep in mind that the term “social media” did not exist yet and a concept like the Internet of Things went beyond anyone’s wildest imagination.

The message he delivered in his farewell speech was clear: connecting everything and everyone forever will have far-reaching social and political consequences. The recent Facebook scandal has demonstrated that not only our privacy but also our very democracy are at stake. These days, the biggest threat does not come from a distant totalitarian regime, but from an American corporation that is simply following its own business model. All of a sudden, the digital revolution has taken an unexpected turn: a revitalisation of the European philosophy. How can we honour the legacy of the French Revolution? As a tribute to Jan van Dijk, I would like to give it a try.

In our digital society, “freedom” is generally interpreted as “privacy,” which is tellingly defined as “the right to be left alone.” The philosopher Isaiah Berlin would say that this is mostly a negative definition of freedom: “freedom from something.” The opposite is the positive “freedom to.” This form of freedom is positively directed at something. With regards to technology, this is not only the freedom not to get involved with it, but also to treat it responsibly. That requires us to create the right social conditions through education and legislation.

During the French Revolution, equality was about putting an end to ranks and classes. In a digital society, it means inclusive design: designing technology in such a way that it is both affordable and understandable for everyone. To do that, we must first understand how we are influenced. If everyone is to receive equal opportunities, “algorithm awareness” will have to become a major aspect of citizenship and of design in a digital society.

Solidarity (a better word for our times than “fraternity”) is perhaps the most important value of all. Does digital technology offer an alternative to individualism? Can “data ownership” also lead to “data donorship?” Can “digital protection” be expanded into “digital compassion?” Can digital technology facilitate new forms of civic participation and political engagement? Only when that is the case can we truly talk about the “connectedness of everything, always and everywhere.” ●



“IN OUR DIGITAL SOCIETY, FREEDOM IS GENERALLY INTERPRETED AS *PRIVACY*, WHICH IS TELLINGLY DEFINED AS *THE RIGHT TO BE LEFT ALONE*”



**PROF. DR. IR. P.P.C.C. (PETER-PAUL) VERBEEK** (1970) IS UNIVERSITY OF TWENTE PROFESSOR OF PHILOSOPHY OF MAN AND TECHNOLOGY.

Annemieke Koster was already an entrepreneur during her Applied Communication Science study at the UT. She enjoyed being her own boss so much that she gave up her master's degree for it. Today, she maintains close relationships with both the UT and Saxion as the founder of Enschede Textielstad. "The great thing about Twente is the interplay between the knowledge institutes' new inventions and entrepreneurship." BY Frederike Krommendijk PHOTOGRAPHY Arjan Reef

# SPINNING A YARN



## USED ITEMS OF CLOTHING ARE GIVEN A NEW LIFE ON ANNEMIEKE KOSTER'S LOOM



She was supposed to become a communication scientist, but her career has taken a completely different turn. In 2013, Annemieke Koster saw a news report on a disaster that had occurred in a clothing workshop in Bangladesh. Contrary to most people, she decided to do something to change the clothing industry for the better. "I started researching how clothes are made. I looked at everything from how everything is put together in those workshops to all the steps leading up to that, including cotton production, weaving and how zippers are made. The situation was even more dire than I thought. I could not sit back and do nothing."

### Yarn from recycled material

Although she had never even set foot inside a weaving mill, she founded her own company that produces fabrics for the clothing and furniture upholstery industries in a sustainable manner. Her business is called Enschede Textielstad, after her hometown's rich history in the textile sector. "I have yarn made from recycled materials. To do that, I collaborate with e.g. Frankenhuis in Haaksbergen, where unusable items of clothing are fiberised. I also work together with parties that process the trimmings from garment workshops (e.g. those owned by ZARA) into new yarn. I acquire that yarn as close to my own business as possible.

Enschede Textielstad is housed in the Ter Kuile weaving mill on the

Kneedweg. "I received a lot of help from elderly weavers who taught me the ins and outs of the process. Preserving all that knowledge is another form of sustainability." Because Annemieke loves to innovate, she rekindled her ties with knowledge institutes like the University of Twente. "I notice that the UT is now more aware of the fact that entrepreneurship is becoming an increasingly important skill in many fields. When I was working on my master's degree, studying and entrepreneurship were still two separate worlds. That has really improved."

### Major success

In fact, Annemieke is now reaping the benefits of the close ties that exist between the UT and entrepreneurs. "Two years ago, I founded the Textielcafé for local entrepreneurs together with the municipality of Enschede. We all encounter the same issues, such as the aging workforce and competition from abroad, and we are all looking for ways to innovate. One of the initiatives we set up in collaboration with the DesignLab was a day about Smart Textiles. That was a major success and it resulted in a bunch of concrete alliances between parties. Both the UT and Saxion can connect the latest technological developments to the knowledge and expertise of existing companies. We can make this into a strong textile region once more in a sustainable manner, using all kinds of innovations."

Annemieke's textile is gradually becoming more popular. Things are

going well for her, because sustainability is becoming a major concern. "People's awareness is growing. That much is clear from the questions students ask and consumers' changing purchasing behaviour. Nevertheless, we still have a lot to do." Fortunately, she has worked on a number of highly visible projects, such as creating the cushions on the stands at ABN AMRO's sustainable Circl pavilion in Amsterdam and supplying upholstery fabrics to the Arendsen Volvo garage in Hengelo, which was built using circular processes. "People have to have the chance to experience these developments for themselves. Luckily, a growing number of fashion labels, upholstery companies and architects are realising the importance of circularity to their work.

"We can make this into a strong textile region once more in a new way, using all kinds of innovations"

What is Annemieke's advice for other alumni? "Stay in Twente. I am one of the few students from my year who stuck around and I am glad I did. It might be slightly more difficult to find a way in with a company, but you will forge a strong bond once you do – one based on equality and continuity. I see that as a major advantage over the looser ties that exist in the west. People are not always in such a rush here."

## IN THE LAB

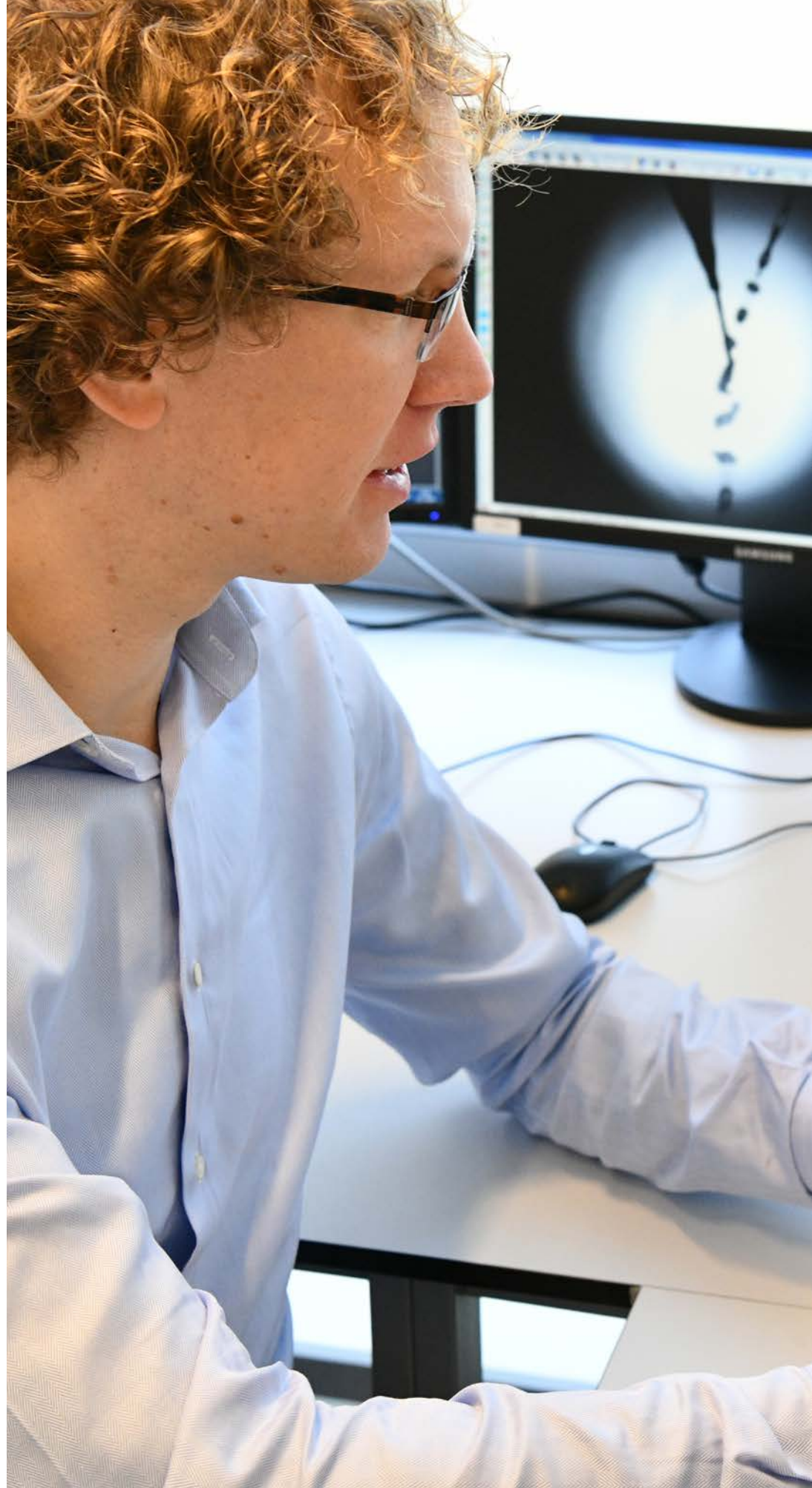
Name **Claas-Willem Visser**  
Age **37**  
Position **Researcher in the  
Physics of Fluids group**  
Education **Applied Physics (UT)**  
Lab **Developmental  
BioEngineering**

BY **Marco Krijnsen**

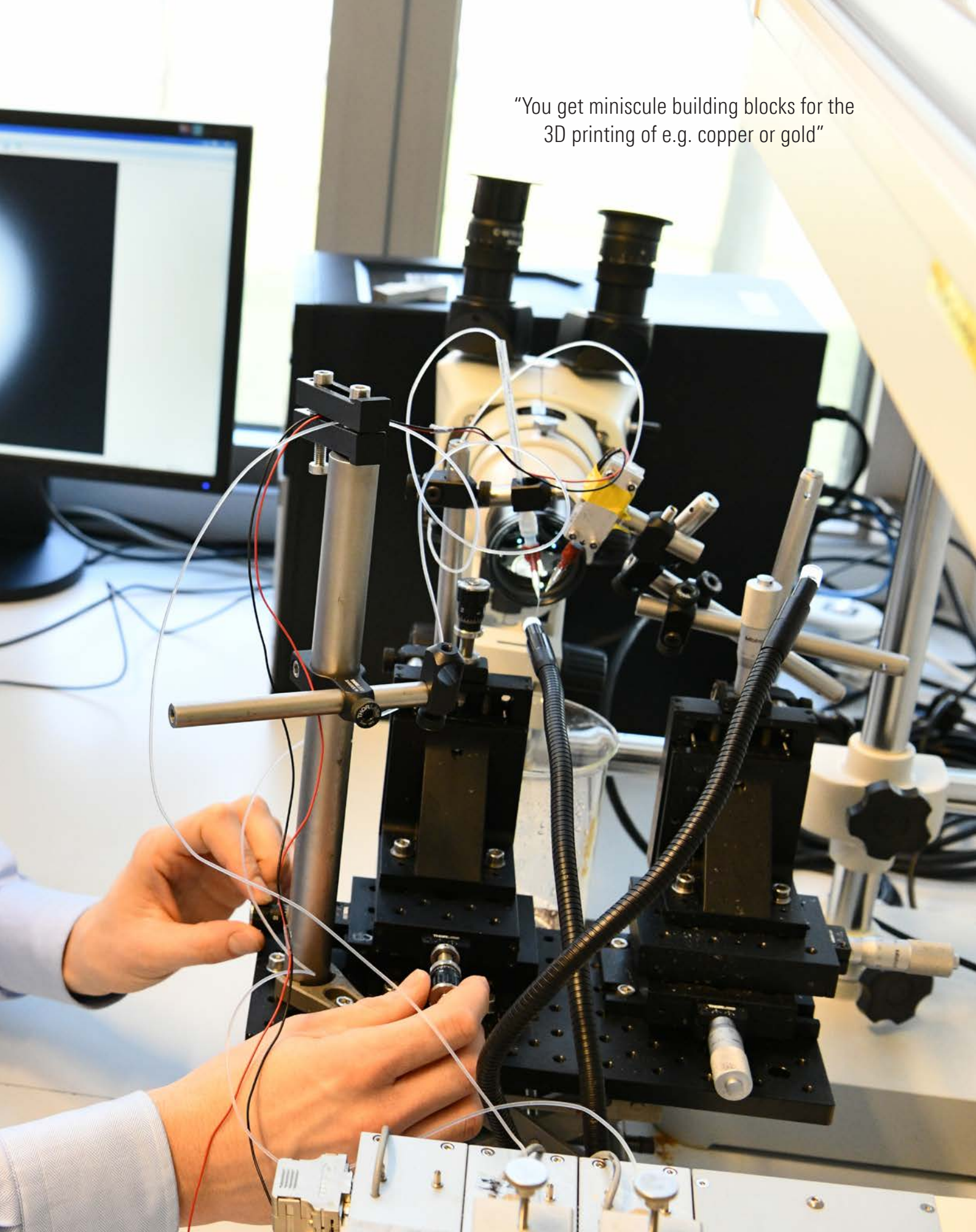
PHOTOGRAPHY **Eric Brinkhorst**

Printing plastic with a 3D printer has become commonplace. However, things get a lot more complicated when you want to print with other materials. These are often too hard to print with or too soft to retain their shape. A new printing technique developed in Twente has solved this problem. Instead of using a nozzle, the printer uses a small plate of glass with a thin layer of metal on it. Using a focused beam of laser light, a microdroplet of metal is ejected from the layer. "By doing that at high speeds, you get miniscule building blocks that you can use for the 3D printing of e.g. copper or gold," says Visser. In late 2014, he obtained his doctoral degree with this technology and he received a Rubicon grant from the NWO to conduct further research at Harvard University. In the United States, Visser focused on the printing of living cells. Over the past two years, he regularly flew back to Twente, where his colleague Tom Kamperman is also working on the new technology in the lab in the Zuidhorst.

Now that the researchers have found a way to print faster, they are able to produce live materials such as pieces of cartilage or skin. This technology also has a range of potential commercial applications, e.g. the production of microparticles for cosmetics or drugs. This will require further research in the Developmental BioEngineering lab. Visser wants to market this technology with the start-up lamFluidics, which he founded together with his colleagues Tom Kamperman and Menno Noordlander.



"You get miniscule building blocks for the  
3D printing of e.g. copper or gold"



## AMBITION & ACHIEVEMENT

They sold their first company Applicare to the American General Electric Company, GE. Philips recently took over their second company, Forcare. There is no end in sight for the success story of Harm-Jan Wessels and Andries Hamster, two electrical engineers from Twente. BY Marco Krijnsen PHOTOGRAPHY Rikkert Harink

# LUBRICANT FOR



“Information exchange: we both saw major opportunities in that field”

- Andries Hamster



Forcare's head office is located in Zeist. It also has branches in the United Kingdom, Germany and Canada. The organisation employs ninety people in total.

# THE HEALTHCARE

Harm-Jan Wessels believes timing is everything. "The latest technical developments, the people, the opportunity and a dose of luck. When all that comes together, great things can happen." That was true back in 1986, when Wessels first came to the University of Twente. He wanted to make a contribution to the healthcare sector, but he did not choose a medical study. Instead, he went with electrical engineering. "That was a great choice, because I built a career that combined IT and healthcare almost immediately."

## Fifteen years ahead of their time

During the second year of his study, Wessels was involved in the foundation of Applicare. The business consisted of several talented students (including Wessels' own brother Frank, who had also studied electrical engineering in Twente) and Ruud Kroon, an experienced entrepreneur. The eager young students were told to go nuts on Kroon's expensive computers and write their software.

After graduating, Wessels shifted his focus to real-time 3D medical visualisations with Applicare Medical Imaging. This was a direct continuation of his final thesis project. Back then, the field was still in its infancy.

The engineers from Twente developed a program that allowed doctors to generate three-dimensional medical images on their computer screens. "We were fifteen years ahead of our time. At a tradeshow in Chicago, we found out that no one wanted our software," Wessels remembers.

They did receive advice from a radiologist who told them to write a program with which to view "regular" medical images such as MRI and CT scans. Applicare developed a program that could run on any computer with Windows NT. This breakthrough opened the doors to hospitals all over the world. "We knew right away that we were on to something that we could not let go. Since then, we are focused entirely on software development for the medical sector."

## The first million-dollar contracts

At that time, back in 1996, Andries Hamster joined Applicare. He had also studied electrical engineering at the UT and received job offers from five interesting employers after his graduation. Although IBM and Philips did appeal to him, he ultimately chose Applicare. "I would have the opportunity to contribute to the healthcare sector. That conti-

nues to be an intrinsic motivation for me to this day."

Applicare was gearing up for its next phase, made possible by a capital injection from investment company Holland Venture. Hamster started out as a software engineer, although he quickly shifted his focus to product integrations as the company grew. He became the link between the technology and the user. His job was to explain the product, show demos and listen to what the market wanted.

"We knew right away that we were on to something that we could not let go"

- Harm-Jan Wessels

The first million-dollar contracts with Kodak, IBM and the American Department of Defense (the world's largest healthcare organisation) were soon signed. Hamster: "We had the advantage of having a clear goal and a concrete product that could run on Windows NT. Combined with our use of open standards, we had a significant lead on other, bigger companies. They often think too long before starting something new. They are bogged down by their existing structures. We are not."



**ANDRIES HAMSTER**  
 (VP Business Development Forcare)  
 1989-1995 Studies Electrical Engineering UT  
 1996-2004 Works at Applicare/GE  
 2004-2005 Works at Nucletron  
 2006 Founds Forcare  
 2017 Sells Forcare to Philips

**HARM-JAN WESSELS**  
 (CEO Forcare)  
 1986-1991 Studies Electrical Engineering UT  
 1988 Founds Applicare  
 1999 Sells Applicare to GE  
 2006 Founds Forecare  
 2017 Sells Forcare to Philips

## U-COUNCIL MEMBER, GUITAR PLAYER AND POLICY OFFICER

Andries Hamster was active during his study of Electrical Engineering (1989-1995). He was a member of the Taste student association and held a seat on the U-council on behalf of the KPS student party. He also played guitar in the student band Jamming with Edward, which performed during the UT's days of the girl and at student parties. "We did not make a lot of money with that. We were happy if we had enough to pay for the sound equipment, the van and the beer..." Back in 1992, it earned them a photo on the cover of the UT magazine *Campus* (see photo).

After his graduation, Hamster stayed involved with the UT for a while longer as a temporary policy officer. He collaborated on plans for educational reform that were eligible for government subsidy.

### Takeover and restart

The company's rapid growth presented its owners with a dilemma. Should the organisation, which had thirty employees at this point, go public, or would a takeover be a better option for its continued development? The team decided to sell to the multinational organisation General Electric.

Several years later, Hamster left Applicare. A chance meeting at Schiphol in 2005 reunited him with his former colleague. Wessels and Hamster were both on their way to a tradeshow in Chicago. On the plane, they sowed the seeds for a new collaboration. "Digitisation had entered the healthcare sector and created a new problem: information exchange. Back then, different methods such as fax, mail and email were used and information security was not always guaranteed. We both saw major opportunities in that field," Hamster says.

### From Leuven to Kentucky

The result was the foundation of Forcare, which focuses on the user-friendly and secure exchange of information in the healthcare sector. When they finished developing their software after three years, they struggled to find buyers. At a tradeshow in Denmark, they were approached just before closing time by the CIO of UZ Leuven, the largest hospital in Belgium. This first international client opened the doors to more healthcare institutes in many European countries and Canada. They recently signed a multi-million-dollar contract with the American state of Kentucky for a solution that allows the state's healthcare professionals to exchange patient data.

### Philips

The rise of the company, made possible by a capital injection from Prime Ventures, caught the attention of

Philips. The electronics conglomerate took over Forcare in December of 2017 in a bid to strengthen its position on the healthcare information technology market. CEO Harm-Jan Wessels is proud of the sale. "As far as the people at Philips can tell, this is the first time they have taken over a Dutch company."

What is Forcare's strength? "Our open and standardised platform, which is compatible with competitors' systems," Wessels explains. He predicts further growth for the company. "We notice that patients are increasingly becoming healthcare consumers who want access to their own medical data. The new privacy regulations present a host of opportunities for our product. With the help of Philips, new markets have opened up that are hard to reach for a small player."



# ENRICHING AND EXPANDING KNOWLEDGE

The UT offers a range of postgraduate programmes through the BMS faculty. Participants acquire thorough knowledge and insights, form useful new relationships and share their experiences so others can learn from them. Emeritus professor Olaf Fisscher may have left the University five years ago, he continues to make an important contribution to this postgraduate education as a lecturer and an organiser of seminars. BY Frederike Krommendijk PHOTOGRAPHY Rikkert Harink

Everyone has their own reasons to go (back) to school. “We have people retraining for a different line of work, as well as those who want to enrich and expand their knowledge to benefit their current career. Some of our participants are over fifty. They know they have at least another fifteen years to go and want to keep up with the latest developments,” Fisscher illustrates.

The emeritus professor says the UT has a wealth of knowledge to offer alumni looking to expand their knowledge. “We have a lot to offer as a university, in terms of both knowledge and network. This is not a one-way street, however. Our masterclasses tend to be based on market demand. We offer masterclasses with a more generic structure as well as custom programmes for e.g. a ministry, a healthcare institute or an insurance company. You have to listen carefully to find out what the market wants. You also cannot let your own research come first,” Fisscher warns. For example, the UT has set up programmes about risk management for Achmea and it retrained eight employees of Nedap in Groenlo to become software specialists through the EWI faculty.

## “Lifelong learning is one of the core social functions of a university”

With its study programmes for professionals, the UT wants to be more than a source of knowledge. Participants are also introduced to the University’s extensive network. Vice versa, the University continues to expand and improve its network. “Alumni in key positions are eager to attract our recent graduates. They are also willing to contribute to guest lectures that give them a chance to share their wealth of practical experience with us.”

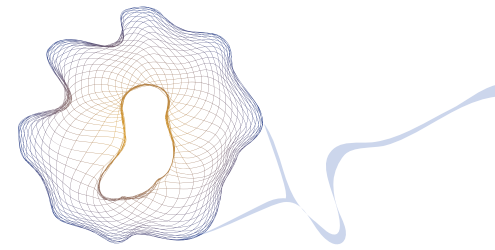
In addition to the public management and risk management programmes, the UT offers a whole range of other masterclasses. “Lifelong learning is one of the core social functions of a university. Fortunately, more and more institutes are accepting that responsibility. For a university, it is also simply a requirement to attract external funding. That should not be the primary concern, however. First and foremost, it is about sharing one’s knowledge and network.”



Are you curious about the UT’s programmes for alumni and other knowledge seekers?

• Look at [utwente.nl/pld](http://utwente.nl/pld)

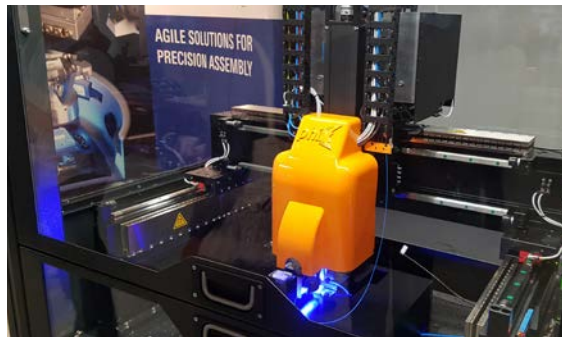
# IN BRIEF



## PHOTONIC CHIPS

In June, PHIX, a subsidiary of the UT spin-off LioniX, and the Fraunhofer Project Center presented a micro assembly machine. It was unveiled during the UT Photonics Event in The Gallery. The machine is powered by a technology that automates the labour-intensive and specialist task of manually installing

miniscule glass fibres onto a chip. This requires a great deal of precision and used to take an hour and a half when done by hand with the help of a microscope. The new machine automates this process and shortens the lead time to mere seconds. This brings the mass production of photonic chips one step closer.



## DA VINCI

The first robotic birds, such as the Robird that was developed at the University of Twente, are already spreading their wings. According to UT professor Stefano Stramigioli, it is now time for the next step. He received a European research subsidy of 2.8 million euros. With the help of new theories and experiments, he wants to make Leonardo Da Vinci's dream a reality: the development of the next generation of robotic birds that can take off and land like their real counterparts and can fly with an asymmetrical wing motion.

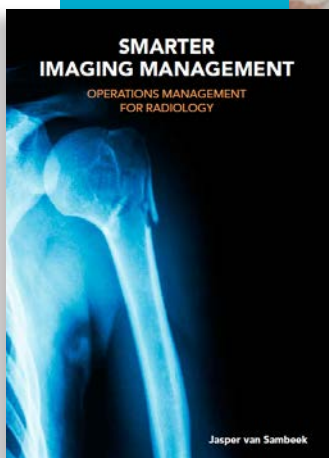


## 22 MILLION

With an investment of 22 million euros in five different research programmes, the 4TU.Federatie, the cooperative alliance of the four technical universities in the Netherlands, will give a strong impulse to the research into sustainable technology. Within these programmes, the four technical universities collaborate on research into personalised healthcare, sickness prevention and treatment, "smart" industry, more resilient societies and the global food problem. The project leaders of three of these programmes come from the University of Twente.

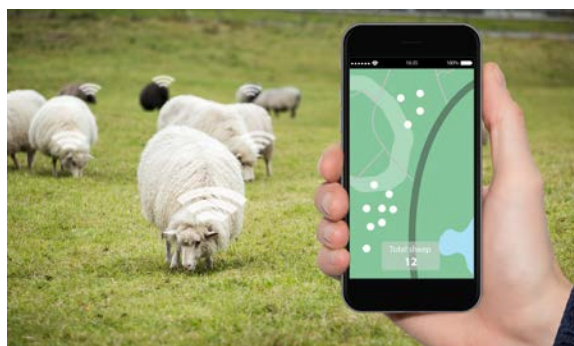
## RADIOLOGY

Research conducted by UT doctoral candidate Jasper van Sambeek has revealed that radiology processes in hospitals can be improved by applying models from the world of business administration. For example, he demonstrated that patients' CT scans can be processed much faster by using a walk-in system instead of scheduled appointments, while the capacity utilisation remains the same or even increases. Even though hospitals are the most complex organisations around and they cannot easily be compared to "normal" businesses, the researcher still believes it is possible to realise significant improvements to patient logistics by making proper use of business administration models.



## CAR TYRES

The University of Twente and Continental Reifen Deutschland GmbH are collaborating on a new process for the recycling of car tyres. Using a rapid pyrolysis process, it is possible to break down used tyres within seconds. This produces valuable materials and fuels for the production of new tyres. More than a billion tyres are replaced every year all over the world. Together, these contain 4.4 million tons of valuable products.



## IOT

Internet of Things (IoT) applications can help you save energy, improve your health and make your life more comfortable. Nevertheless, only 44.7 percent of all Dutch adults use these applications. Research conducted by the University of Twente

has shown that, in most cases, people only use a single device. That suggests we are not even close to realising the full potential of IoT. The researchers say that the main reasons for this limited use are the costs, a lack of interest and privacy concerns.



More information about these items can be found at: [www.utwente.nl/en](http://www.utwente.nl/en)



"Everyone is highly committed  
and so am I"

**SOLANGE PANAYOTOPOULOS** is an alumna of the University of Amsterdam (Sociology '90). Education and the employment market are the central themes of her CV. She worked on projects for the Chamber of Commerce to improve the relations between businesses and educational institutes and she worked for Saxion to set up the Connect Programme in collaboration with the UT. This programme prepared international graduates (alumni) to enter the Dutch employment market. Her current position as Alumni Community Manager makes for a logical next step in her professional career.

# CONNECTING TWENTE TO THE WORLD

**The University of Twente has more than 47,000 alumni. Former UT students live and work all over the world, from Enschede to Beijing and from San Francisco to Nairobi. To make optimal use of this extensive network, the UT recently appointed an Alumni Community Manager: Solange Panayotopoulos. BY Marieke Vroom PHOTOGRAPHY Gijs van Ouwerkerk**

"The network of graduates has more to offer than the occasional gathering to share a drink and catch up," Panayotopoulos says. "It creates opportunities for collaboration, development and innovation." The role of the Alumni Community Manager is to connect former students with the region of Twente and utilise the strengths of this network for the University and its (business) partners.

#### **A first**

The position is the first of its kind in the Netherlands. It is made possible by the Municipality of Enschede, the Province of Overijssel, the Region of Twente and the University of Twente. These

parties have different interests, Panayotopoulos explains. "A strong and involved alumni network keeps the UT informed about where its alumni end up in the world and what innovations and start-ups they are involved in. Alumni are often willing to share their knowledge, network and experience with the University and its students. The Municipality of Enschede sees other benefits. The city has partnerships with Palo Alto in Silicon Valley in the US and the Chinese port city of Dalian. "Enschede wants to strengthen these ties. Perhaps alumni who live or work in these partner cities are willing to contribute to that goal."

#### **Pilot**

The Alumni Community Manager has been appointed for a three-year pilot period. "Shaping this position is a lot of fun and a serious challenge. I can use my creativity and the possibilities are nearly endless. Of course, there are also downsides to building something from scratch. I want to achieve results, but will I be able to do that? It is good to see so much support in the region. The collaborating parties all see the potential that this position offers. Everyone is highly committed and so am I."

In the coming years, Solange wants to ensure that the alumni network is involved in events that are hosted by or important to the region of Twente. "Think of e.g. the Hannover Messe, a major innovation and technology tradeshow. In addition to the UT itself, it is also attended by many local entrepreneurs. It would be great to host an alumni meeting during such an event."

**If you have a suggestion for an (existing) event or if you see other opportunities to bring alumni and regional partners together, you can contact Solange via email at [s.a.y.s.panayotopoulos@utwente.nl](mailto:s.a.y.s.panayotopoulos@utwente.nl)**



## ALUMNI TALKS

The annual Alumni Talks – see the future through the eyes of successful UT alumni – will be held on Friday 5 October. The first speaker has already been announced: Minister of Defence Ank Bijleveld (BSK '84). With her wealth of experience in several administrative positions, she looks towards the future of Dutch administration. **Mark your calendars!** For more information, visit [utwente.nl/alumni/alumni-talks](http://utwente.nl/alumni/alumni-talks).



## TWENTE ALUMNI LECTURES

The inaugural edition of the Twente Alumni Lectures got off to a “flying” start. On 8 March, Boet Kreiken (Executive Vice President Customer Experience KLM) kicked the event off with an interesting lecture on the dynamic developments and challenges in the global aviation sector. After this successful first lecture, the Alumni Office also travelled to The Hague, Rotterdam, Maastricht and Utrecht. In total, more than 120 alumni attended the various lectures. What a wonderful start for this new tradition! **Would you like a lecture to be hosted in your city as well next year?** Let us know via [alumni@utwente.nl](mailto:alumni@utwente.nl).

## ALUMNI ON THE MOVE

- After finishing her Public Administration study, **Annemieke Alenius (PA '89)** eventually moved to Sweden to work in the eHealth industry. Since April of 2018, she is the Head of the Department for Coordination and Strategy at The Swedish eHealth Agency.
- Since April of 2018, **Jos ter Avest (BSK '85)** works as treasurer at the Prinses Beatrix Spierfonds. Additionally, he is the chairman of the Supervisory Board of International Card Services and ABN AMRO Hypotheek.
- In April of 2018, **Arthur Baas (TBK '06)** started working in the Digital Transformation department at Airbus. Before this, he worked as a Purchasing Manager at DAF Trucks and Dräxlmaier, among other places.
- In May of 2018, **Bastiaan Blankert (CT '02)** started his new job as a Research Scientist at the King Abdullah University of Science and Technology. In the past, he worked as a researcher at the University of Twente, an R&D Process Engineer at Pentair and a Membrane Technologist at Oasen.
- **Martijn Bouwmeester (BA '07)** works as Director Financial Planning and Analysis at Off.Grid:Electric in Amsterdam since April of 2018. Before this, he held several financial positions at Johnson & Johnson or one of its subsidiaries.
- Since March of 2018, **Stephan Brandenburg (IO '10)** works as a UX Researcher at Bijenkorf. After graduating from the UT, Stephan worked as a Designer, Teacher and Researcher at Saxion University of Applied Sciences.
- **Elmer van den Dries (SET '11)** started his new job as a Demand Forecast Analyst at DSM in April of 2018. Elmer previously held various data analysis positions at AkzoNobel.
- After finishing her Public Administration study, **Judith van Erp (BSK '95)** held research positions at the Vrije Universiteit Amsterdam, B&A Groep and the Research and Documentation Centre (WODC). These days, she works as a lecturer at Erasmus University Rotterdam and Utrecht University and she became a member of the Royal Netherlands Academy of Arts and Sciences in April of 2018.
- After a career in the energy sector at Gasunie, DNV KEMA and Shell, among other places, **Robert van der Geest (PhD '97)** started his new job as a Senior Gas Specialist at The World Bank in Washington, D.C., in April of 2018.

- Since May of 2018, **Ferry Haris (BIT '10)** works as an Enterprise Risk Manager - IT at APG Asset Management. Before this, he worked as an IT Auditor DHL, Heineken and TNT, among other places.
- After many years of research at the University of Twente and other places, **Maarten IJzerman (PhD '97)** became the new chairman of the data-driven Cancer Health Services Research at the Victorian Comprehensive Cancer Center in Melbourne in May of 2018.
- Since April of 2018, **Tessel Jarigmsma (TN '97)** works as COO at EVBox. She has already had a career in the telecommunication sector at Ericsson, Logica and T-Mobile.
- After a long career at AkzoNobel, **Conrad Keijzer (TBK '93)** became the new CEO of Imerys in Paris in March of 2018. Before this time, he worked as Managing Director at AkzoNobel Industrial Coatings.
- Since May of 2018, **Piotr Kmin (TBK '15)** works as Senior Advisor at KPMG New Zealand, where he focuses on Financial Risk Management. In the past, he has worked at several financial institutes in Poland, including UBS, BNP Paribas and Narodowy Bank Polski.
- After acquiring a master's degree in Social, Health and Organisational Psychology, **Ellen Meijer (PSY '07)** has had a career in that sector. Since April of 2018, she works as a Selection Psychologist at the Dutch national police force.
- In April of 2018, **Robert Remmers (EL '92)** started his new job as Head of Product Line at Infineon Technologies. Before this, Robert held positions at Philips, Texas Instruments and Melexis.
- After obtaining his doctoral degree from the University of Twente, **Domokos Sármany (PhD '10)** worked as a Software Engineer at Process Systems Enterprise in London. In April of 2018, he started a new job as an Analyst at the European Centre for Medium-Range Weather Forecasts.
- **Ed van de Weerd (TBK '93)** works as Managing Director Kruidvat the Netherlands at A.S. Watson Benelux since April of 2018. Before that time, he served as Commercial Director at Jumbo Supermarkten for nearly seven years.



## SAVE THE DATE

On Friday 30 November 2018, the Alumni Office will host a reunion for students who attended the “entrepreneurial university” since 1986. During this gathering, you can catch up with former fellow students and take an exclusive look at some of the UT's exceptional and innovative research.

**The reunion will begin at 10:30 am. Afterwards, we will attend the 58th dies natalis in the afternoon.**

## COLOPHON ALUMNI NEWS

Questions, comments and suggestions: [alumni@utwente.nl](mailto:alumni@utwente.nl)  
Tel. +31 (0)53 489 2104  
Twitter: @alumniUTwente

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### DESCENDANTS OF THE FOUNDERS RETURN TO THE CAMPUS

More than one hundred and thirty descendants of the family businesses, mostly from the region of Twente, that helped found the Twente Technical University of Applied Sciences during the mid-20th century visited the campus on Tuesday 13 June to celebrate the seventieth anniversary of the Twente University Fund Foundation.

In 1948, the Queen's Commissioners of the Netherlands' four north-eastern provinces founded the "Stichting Technisch Hoger Onderwijs voor Noord- en Oost-Nederland." Many organisations, most of them industrial, joined the initiative because they needed engineers to help with the necessary modernisation of the industry. After more than twelve years of lobbying, the foundation's hard work paid off: in 1961, the government decided to establish a third Technical University of Applied Sciences in Twente. The amount of regional support for the plan was an important factor in this decision. Dozens of businesses and benefactors each contributed at least ten thousand guilders. These assets were managed by the foundation whose name was initially changed to Twente University of Applied Sciences Fund Foundation, before changing again to the current Twente University Fund in 1986.

The descendants' visit was like a meeting of old friends. Names like Van Heek and Ten Cate, the founders of the textile industry in Twente, were among those attending. The strong family ties of the past were renewed. The gathering began with speeches by board president Victor van der Chijs and University Fund president Wilma van Ingen. Professor Dave Blank talked about the development of the University of Twente over the years. He concluded by giving some appealing examples of the UT's research. Next, the programme consisted of tours of several laboratories and the campus itself.

As they listened to the various speakers, the attendees were enraptured by the wonderful developments taking place in "their" Twente. To many of them, it was quite an eye opener to learn that their ancestors played such a prominent role in this region. Their curiosity and pride were certainly satisfied and we will surely see many of them again in the future.

### ANNUAL CAMPAIGN 2018: WILL YOU CONTRIBUTE AS WELL?

The annual campaign 2018 kicked off late last year with the presentation of four projects for which we recruit earmarked donations up to a sum of 30,000 euros. We are quite close to realising this goal because of the generous donations from nearly 400 alumni, (former) employees and relations of the University. Will you contribute as well?

5,000 euros for the very first Roboteam Twente for an extra robot for their robot football team. With the help of this "extra player," Roboteam Twente made a fantastic debut in Nagoya, Japan. The second Roboteam travelled to Montreal, Canada, in June to take part in RoboCup 2018.

#### Money well spent!

This past year, the many donations from alumni and relations resulted in a sum of

This year, we are recruiting funds for the wearable prosthetic kidney, the Leerlingenlab, the Kipaji Scholarship Fund and for extra subsidies for student activism. For more information about these projects and how to contribute!

[WWW.STEUNUTWENTE.NL](http://WWW.STEUNUTWENTE.NL)



### ISAAC NEWTON STUDY TOUR BRAZIL AND ARGENTINA

After a year of preparation, 28 students of Mechanical Engineering arrived in Rio de Janeiro on 10 November for a three-week study tour. Inspired by the theme of "Limitless Boundaries," the students visited companies in Rio de Janeiro, São Paulo, Buenos Aires and Rosario. The name of theme refers to the

virtually limitless possibilities in the field of mechanical engineering and technology. In addition to the company visits, there was also time to see the Copacabana, the Cristo Redentor and the Iguacu falls. Initiatives like these study tours are supported by the Twente University Fund.

## STRESS STUDY TOUR SHANGHAI

Circa thirty students of Industrial Engineering & Management and International Business Administration left on a study tour to Shanghai on 6 January. The group visited Dajin Logistics, ECNU University, Sany Caterpillar, Bontaz Group, BE China Smeden and Rainbow-Cargotec Group, among others. During the second week of their stay in China, the group visited the Dutch consulate, Baosteel and Faurecia Automotive. Of course, there was also plenty of time to see the sights.



## WOULD YOU LIKE TO ENDOW A NAMED FUND?

You can support the University of Twente by making a one-off donation, a regular contribution or by naming the University Fund as a beneficiary in your will. It is also possible to endow a 'named fund', provided its purpose is in keeping with the general objectives of the University Fund. You decide the fund's name and how its resources are to be spent. The minimum donation required to establish a named fund is € 10.000,-.

### More information

See [www.utwente.nl/ufonds](http://www.utwente.nl/ufonds) or contact Maurice Essers on +31 53 489 3993, email [m.l.g.essers@utwente.nl](mailto:m.l.g.essers@utwente.nl)

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## VAN DEN KROONENBERG AWARD FOR EMILE NIJSSSEN AND STEFAN WITKAMP

Alumni Emile Nijssen and Stefan Witkamp, the entrepreneurs behind Athom B.V., best known for the "Homey," won the Van den Kroonenberg award this year.

The entrepreneurs are both 25 and earned their bachelor's degree in Creative Technology from the UT in 2014. They developed the Homey, a device that turns houses into smart homes, as part of their final thesis project. Nijssen and Witkamp managed to successfully launch this innovative product in a highly competitive market by using a hardware platform, an app store and a community. This makes Nijssen and Witkamp prime examples of entrepreneurship at the UT.

Back in 2014, ING selected them as ING starter of the year, for which they beat out the digital kiosk Blendle, among others. During the start-up phase, they used the Kennispark's TOP scheme. In early 2014, they raised a sum of € 200,000 via Kickstarter. One year later, they raised another € 800,000. This allowed them to finance the initial production phase.

The Homey has to compete with Alexa (Amazon), Google Home and Siri (Apple), among others. It is sold at e.g. Mediamarkt, Bol.com and their own webshop. The Homey's sale in Sweden was rolled out via Kjell & Company and WebHallen. Athom B.V. currently has twelve employees.

The Van den Kroonenberg award is made possible by the Twente University Fund in honour of the founder of the entrepreneurial university, former rector professor Harry van den Kroonenberg. The award was given out for the thirty-fifth time this year.



## RENEE SPRINGER WINS THE MARINA VAN DAMME SCHOLARSHIP

The Marina van Damme scholarship for talented, ambitious female alumni was awarded to Renee Springer (MSE'07) this year. The judges chose her out of a total of twenty candidates. Sietske Zagers (TO'01) received the runner-up prize.

Springer, a mathematics teacher at the Vathorst College in Amersfoort, finished the mathematics teacher master's programme at the University of Twente with distinction in 2007. Before that, she earned a bachelor's degree in Applied Physics at the UT. The major shortage of mathematics teachers allowed her to acquire a ton of professional experience during her studies.

In addition to teaching, she has held various coordinating positions. This inspired an interest in the streamlining of work processes to reduce teachers' workloads and improve the quality of the education. That is what she is truly passionate about. Renee wants to develop herself further in the field of middle management. She will use the € 9,000 scholarship to finance a School Leader Basic Competence education.

## THE RUNNER-UP

Sietske Zagers works as CEO at Elevate, a social enterprise founded by the University Medical Centre Utrecht and Utrecht University. The company is an academic partner in the field of e-learning for medical professionals and life science researchers.

In 2001, Zagers finished the Applied Educational Science programme at the University of Twente. She wants to further develop her management career by expanding her knowledge of strategic management. The "Excelling in Female Leadership" course at Nyenrode is perfect for that. She will use the € 2,500 scholarship to pay for this course.

The Marina van Damme scholarship was awarded for the sixteenth time this year. It is made available every year by Mrs Marina van Damme, MSc. In June of 1965, she was the first engineer to obtain her doctoral degree from Twente Technical University of Applied Sciences. Until the early 1990s, she worked as director at AKZO Corporate Headquarters.



On Thursday 21 June, the Entrepreneurial Day ended with the award ceremony for the UT Challenge. Seven students pitched their entrepreneurial ideas during the finals in the Waaier; five of them won a monetary prize. Before that, alumnae Renee Springer and Sietske Zagers received the Marina van Damme Scholarship. Peter Wennink, CEO at ASML, kicked off the Entrepreneurial Day with a keynote speech.

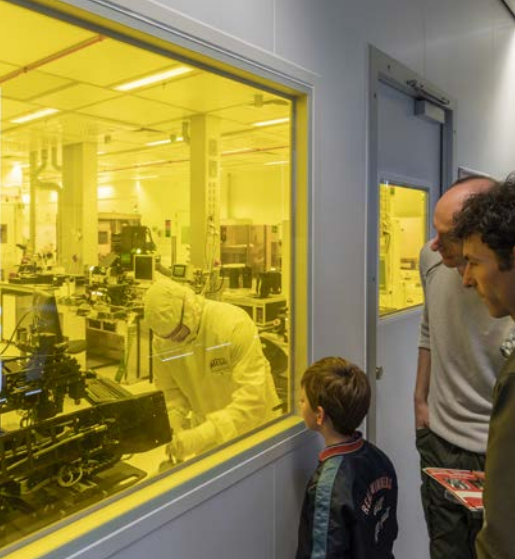


# ENTREPRENEURIAL





WERE YOU  
THERE?



DAY

OPENHOUSE



Looking through virtual reality goggles to see a monkey eating pizza, coding your own route for robots to follow, racing on a Segway and going for a drive in a car simulator. The University of Twente's Open House on Saturday 23 June offered all that and more.

The route through the Carré, Horst, NanoLab and DesignLab buildings

began in the research and education square. Along the way, there were forty stands with test setups to admire or activities to participate in. The children loved the many science experiments and went wild in a real robot playground. The UT's youngest visitors could collect stamps and go home with a full card as the scientists of the future.



# SHORT STAY



## HISTORY

The Hoge Kamp building was constructed in 1967. One of the architects involved in the project was Samuel van Embden. In the spirit of the New Professionalism, he designed a building that shows exactly what it is: a study machine. The Hoge Kamp building explicitly glorifies technology. During the era of functionalism, technology was featured prominently in the building's design, as evidenced by the large, white air-conditioning shafts that accentuated the exterior. It was a nonsense architecture. The former work and study building will now become a residential complex. A different function brings with it a different appearance. The five characteristic air-conditioning ducts along the outside of the building are gone. The white shafts that pumped fresh air into the building have been replaced by white fences as a small reminder of the former machine aesthetic.



The remodelling project of the HogeKamp building is in full swing. The former EL/TN building is being fully stripped. Its new purpose – to offer 445 student rooms and 72 hotel rooms – is becoming clearer every day. SOURCE U-Today PHOTOGRAPHY UT-archief/Rikkert Harink

## STUDENT ROOMS AND HOTEL IN THE HOGEKAMP BUILDING

It took a while for project developer Van Wijnen to find the right investors, but with student room lessor Camelot and conference hotel Drienerburght the right parties are on board and the recognisable landmark on campus is being given a new lease on life. Camelot will rent out the student rooms. In total, there will be 445 fully furnished rooms, each with its own toilet, bathroom and kitchen. The rooms will be between 20 and 30 square metres in size. Common areas will be built on the ground floor and in the basement of the HogeKamp building. This includes a TV room, a karaoke room, a fitness and game room, a lounge area, a study area and a laundry room. The bicycle parking facility will also be located in the

basement. The HogeKamp tower will house 48 luxury apartments, so-called “micro apartments.” These will be circa six metres tall and feature a mezzanine. In other words: an open space with two floors. The bedroom will be located on the top floor and can be reached with a staircase.

### Short stay

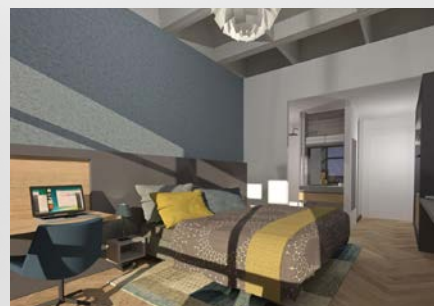
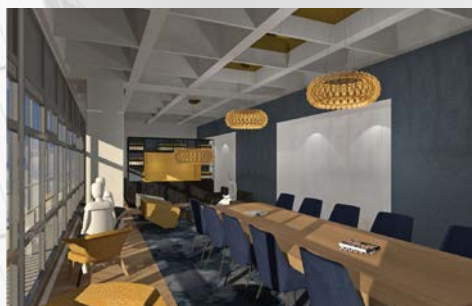
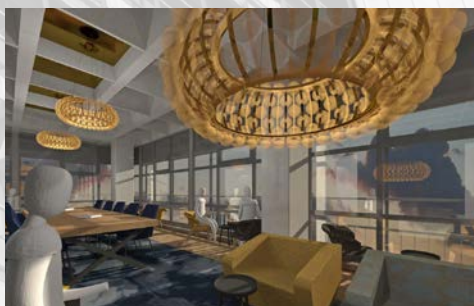
The building features nine floors with short-stay student rooms. There will be eleven-month lease contracts for international students and six-month contracts for Dutch students. A roof terrace surrounded by a glass wall will be built atop the HogeKamp building. Conference hotel Drienerburght will also move to the HogeKamp building and change its name to

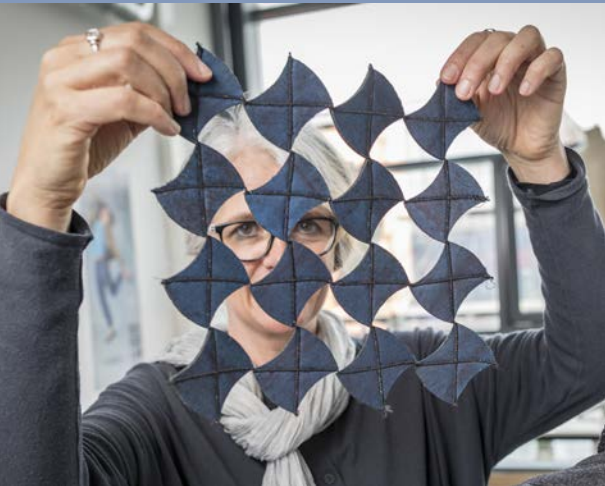
the U Parkhotel. The ground floor will feature the lobby, restaurant and conference rooms. The floors above will house 72 rooms for hotel guests.

The ninth floor will house the more luxurious executive suites and a large conference room. Finally, a 50 m<sup>2</sup> fitness area will be realised for hotel guests on the roof of the building.

The Faculty Club restaurant will also move to the U Parkhotel. It is not clear yet what will be done with the vacant buildings.

The front of the building will feature an open square with an adjustable design. It will contain flower beds, a pond, stands, staircases, seating areas and terraces, as well as stairs, bins and blocks that are moveable and stackable.





A robotic vest that corrects your posture when you are sagging in your chair or forget to walk straight – all while looking good to boot. UT researchers Angelika Mader and Geke Ludden developed one, together with fashion designer Hellen van Rees. The applications for this kind of haptic feedback technology are endless, from a relaxation vest for autistic children to a wearable pat-on-the-back-machine used for behavioural correction.

BY Frederike Krommendijk PHOTOGRAPHY Rikkert Harink

# ROBOTIC VEST STIMULATES GOOD POSTURE

You take: small cubes of fabric that can move like a harmonica, a few motors and interconnected coloured electrical wires. Collaborate with a celebrated fashion designer to turn this wearable technology into a nice vest, add some sensors that can monitor the wearer's movement and you end up with an invention that has a ton of possible applications. It all sounds futuristic, but the first vest has already been produced to widespread interest from third parties.

"We are still hard at work on the development," says Angelika Mader. "The motors that pull on the wires produce a tiny bit of sound. We are working on a solution for that: at the University of Linköping in Sweden, UT alumnus Edwin Jager is developing a knitted muscle that can contract textile using an electrical voltage. We collaborate closely with this group."

## A push in the right direction

The robotic vest that has already been completed can literally and figuratively give the wearer a push in the right direction. As soon as the sensors measure that the angle between the neck and the lower back is too

large, the motors pull on the strings and the vest creates a tiny bit of pressure in the right direction. It still has to be developed into an easy-to-produce and wearable product, but the interest from third parties is impressive. "We received a ton of publicity and people wanted to sign up as test subjects because they were suffering from back or neck pain, etcetera."

Physical therapists are also interested in the research into the corrective vest. They currently use tape, a corset or another fixation method to change a patient's posture. "Once you take those things off, your body will sag back into its old position, because you did not learn a new posture or strengthen the right muscles. This vest does not pull your body into the right posture; it only gives you a slight push, while your muscles do the rest," Mader explains.

## A pat on the back for good behaviour

She also sees opportunities in the field of ergonomics, e.g. to teach people a different method to lift heavy objects or to improve an athlete's technique. Other possible applications can be found in the fields of



orthopaedics, physical rehabilitation and psychology. “Soft pressure also has an emotional effect; it calms you down. You could develop a hugging shirt for people with PTSD or autistic children who are prone to overstimulation. It can even be used in learning processes to give the wearer a pat on the back for good behaviour. Positive feedback for desired behaviour makes people change their behaviour permanently, even after a short period of time. The goal is to eventually be able to stop using the vest. It can then be passed on to the next user, which makes it more sustainable as well.” Haptic feedback is not new, but it is mostly provided by vibrating motors in a material, similar to putting your smartphone on “vibrate.” That technology is far more localised and uses vibration, while the UT invention produces pressure. This feels more comfortable and is less distracting if e.g. a wearer is working on their computer.

The question if there is a demand for wearable technology that also looks good, like Hellen’s design, still has to be answered. Perhaps there is more demand for an extremely thin design that can be worn invisibly under-

neath a person’s clothes. In any case, it is abundantly clear that the development process must continue. “Until now, wearable technology has mostly been about materials equipped with sensors that measure a person’s heartbeat, blood pressure, body temperature, et-cetera. We wanted to come up with something that not only measures, but also provides instant feedback. That is what inspired us to design this vest. Along the way,

“The interest is impressive. People wanted to sign up as test subjects because they were suffering from back or neck pain”

we discovered that there are myriad other uses besides improving the wearer’s posture. That is fantastic, of course. We are now working hard to identify all these possible applications together with e.g. physical therapists and perhaps the Roessingh. The product is still in development, but the interest shown by third parties proves that we can definitely make a useful contribution with our research.”



# CFO AT

“We produce affordable, high-quality food products”

Mick Beekhuizen studied Industrial Engineering and Management at the UT. The programme’s comprehensiveness appealed to him. Since his graduation in 1999, his career has been just as versatile: he has worked at an investment bank and a training institute and now works at Chobani, the US’s largest manufacturer of Greek yoghurt. BY Hans van Eerden PHOTOGRAPHY Chobani



# YOGHURT KING CHOBANI

Mick Beekhuizen grew up near Rotterdam and chose the University of Twente because of its campus and the Industrial Engineering and Management programme. “The campus, which is located outside the city proper, and its many sports facilities appealed to me. I loved my time as a student. I organised a ton of different activities, such as a convention for my study association and the first UT brush-up camp for high school students. I also worked as a student recruiter for a while.” With its selection of technical and business administration courses, the programme was quite comprehensive. “It prepared me for the wide range of technical, IT and financial issues I face in my work.”

Beekhuizen conducted his final thesis project at ABN AMRO in Frankfurt, Germany. He enjoyed the banking sector and accepted a job at the investment bank of Goldman Sachs, also in Frankfurt, in 2000. “They were the first to present their offer and they had a very international team.” In 2004, he moved to New York to spend six months at Goldman Sachs’ merchant bank. Those six months turned into 8.5 years, during which time he advanced to the position of managing director with a focus on investments with private assets. “I did not plan to stay there for so long, but I loved the work, the interaction with busi-

nesses and the investments in a wide range of organisations.” In 2013, the UT alumnus decided to explore other opportunities. He became the new Chief Financial Officer (CFO) at the Education Management Corporation in Pittsburgh. “That was a challenging position, where I did more than just deal with the finances.”

## Cool brand

Still, the Big Apple had not lost its appeal. In the spring of 2016, he got a new job as CFO at Chobani’s head office in Manhattan. “I wanted to acquire new experiences and work at a young, growth-oriented company.” Chobani, founded by the Turkish Kurd Hamdi Ulukaya, produces Greek yoghurt and other food and snack products. The company grew into a billion-dollar organisation over the course of a decade. “In this sector of industry, Chobani is one of the few fast-growing companies.” Beekhuizen calls it a “cool brand” with major market appeal. “We produce delicious yoghurt with exclusively natural ingredients.” Another cool factor is that the company takes its corporate social responsibility very seriously. One third of its 3,000 employees – Beekhuizen included – are immigrants. The company also focuses on sustainability and provides support to external start-ups with its own incubator programme.

## Behind the numbers

“I love being part of this organisation. We produce affordable, high-quality food products.” Of course, working in a young, fast-growing company like this is challenging for a CFO. “I have to develop a strong financial team that is constantly connected to the rest of the organisation. As CFO, I want to have a voice in the boardroom and I tackle strategic and technical aspects such as the IT integration.” With that mindset, Beekhuizen regularly visits the

“As I walk around a factory with my background as a mechanical engineer, I quickly understand how the process work”

company’s own production sites. “With my background in mechanical engineering, I love doing that. As I walk around a factory, I quickly understand how the process works. When I talk to people in finances, I get the story behind the numbers.” That takes him back to his time at the UT. “That comprehensive programme still helps me to anticipate the most diverse situations every day.”

## DE ALWETENDE DAMES DER ANTIGOON

“Dichterbij Antigoon Dan Anderen,” or Huize DADA, got its name in 1997, its founding year. The student house on the Van Lochemstraat, behind the Oude Markt, was once located closest to Antigoon, the bar of student association Taste in De Pakkerij. These days, that honour has been taken from them by a new Tastehuis. BY **Marieke Vroom** PHOTOGRAPHY **Gijs van Ouwerkerk**

HUIZE  
DADA

The arrival of a new student house directly opposite De Pakkerij forced the seven female residents to come up with a new name. “We considered several variants, including De Apathie Der Alcohol,” says house eldest Tessa van Oostrum (master Business Administration). “In the end, we chose ‘De Alwetende Dames der Antigoon.’”

### Many activities

It is a Monday night. The seven ladies of DADA are coming home for their weekly house gathering. The weather is fine, so they are sitting on their roof terrace. The table is filled with cheese, bread, spreads and beer. “This sounds like a strict rule – which it is, in a way. It guarantees we all show up,” says Emma van der Minne (bachelor Advanced Technology completed, now a board member at Taste).

Originally, only members of Mnemosyne lived here. These days, that is no longer true, although many of DADA’s residents are still members of the same sorority. The housemates do a lot together: they host a spring dinner party, wine tastings, weekend trips, drinks with former residents and the Mister Taste pageant to

choose the most beautiful and talented man in the association. They hold house meetings four times per year to talk about their plans for the next quartile, what everyone is doing and how they are.

### The same type

“We rarely have any problems because we talk about everything,” Emma says. “You should be able to speak up if you are annoyed about something.” Tessa agrees: “We know that we can count on each other. We are a close-knit group and we are genuinely interested in each other. Whenever a room opens up, we devote a lot of time to the search for a new resident. We want to find someone who will fit in here and we do not mind waiting a bit longer if we cannot find the right person.” As a result, the house is still occupied by the same type of person as before, says Margriet Biewenga, the founder of DADA. Margriet started the Business Administration programme at the UT in 1994 and later switched to Saxion. She still keeps in touch with the ladies of Mnemosyne and DADA. “New residents quickly fit in here. They are extroverted, adventurous and always look on the bright side of life, just like the rest of us.”





"The residents are extroverted, adventurous and always look on the bright side of life"

Former resident and founder of DADA,  
Margriet Biewenga

### House assignment

Once you get chosen as the new housemate, it is time for the house assignment. Every youngest resident must contribute something to the house. After completing this assignment, the new resident will receive the official DADA jacket. For example, Marlies Bergkamp (bachelor Physical Therapy, Saxion) built a cabinet for the house's many shot glasses. "It is a tradition that anyone who goes on a trip brings back a shot glass. We have more than 100 already." The glasses come from all over: South Africa, Malaysia and America, as well as the province of Frisia and the local zoo.

### DADA game

"It is great that DADA is still around. Some things have not changed at all," says Margriet. One thing that is gone is the phone book in the hall. "The phone we all shared sat on a table next to a large, comfortable chair. You had to wait for someone else to finish their call and everyone could listen in."

These days, the entire house – and the people next door – will know it when the infamous DADA game is

played. There is literally no way around it in the small kitchen: a purple, round table with a board painted on it. It is similar to the Game of the Goose, but with drinking games and questions related to Taste. Tessa: "This game was made more than a decade ago as a house assignment and we still use it to this day. We often play it during our house gatherings. It is typically DADA."

The ladies are happy to demonstrate. They all pick a shot glass from the cabinet, which serves as their pawn. A pitcher of casnov (a vodka drink) sits in the centre of the table. Before too long, it is time for a refill. Nearly every round, someone has to drain their shot glass. They play a variety of drinking games, including Vikings, Teachers and I Never. Other members of Taste are also part of the game, often without their knowledge. DADA sometimes creates confusion among the members of the association, Emma laughs. "If you land on square 61, you have to call the secretary to change your address, because 'you recently moved to Square 61.' Some people actually have that registered as their address!"



Want to add a profile of your student house (current or former) on [facebook.com/AlumniUT/](https://facebook.com/AlumniUT/)? Get in touch via [alumni@utwente.nl](mailto:alumni@utwente.nl)



Djuri Baars was building websites by the time he was six years old. Later, he moved on to building his own computers. He was an early adopter of bitcoin and studied Business Information Technology (BIT) in Twente. These days, he is in charge of Rabobank's blockchain team. BY Hans van Eerden PHOTOGRAPHY Shutterstock and private image

# FROM BIT TO BLOCKCHAIN

"The BIT programme taught me everything I need to know"



The blockchain is mostly famous because of the bitcoin and other forms of cryptocurrency: a cryptographic encryption provides a fully reliable and secure data-sharing method. It can be used wherever information is exchanged: in the financial, government, industry and healthcare sectors, etcetera.

### Entrepreneurial

Djuri Baars (1989) was “messaging around” with computers and websites at an early age. He became interested in bitcoin way back in 2009. “I wanted to know what this new technology was all about.” He took a masterclass in cryptography, took part in hackathons and even won one related to open data. His entrepreneurial spirit inspired him to set up his own business and come to Twente. From Heemstede, where he completed his high school education, Enschede was not the nearest university town. After carefully examining his options, he chose the UT because of the combination of business administration and information technology that the BIT programme offers. “It has given me a solid foundation for my career. Some people call for the introduction of a separate block chain programme. I do not think that is necessary, because the BIT programme taught me everything I need to know.”

### Identity

For his final thesis project, Baars conducted research into the blockchain at Rabobank. “I could really let my creativity run wild there. That is why I decided to close my own business and get a job at the bank.” He now puts the insights he acquired during the BIT programme into practice as a Co-lead Blockchain Team in the Digital Transformation Office. Together with his former fellow student Chris Huls, he guides the bank into the blockchain era and researches its applications: identity (proving who you are online), payments and “smart contracts.” For example, a blockchain may make the time-consuming and error-prone administration involved in a mortgage application a thing of the past. “The Rabobank already advertises with its one-week mortgage offers; if all the information were available via a blockchain, this process could be sped up even more.”

### National coalition

This new technology will only work if “everyone” adopts it. That is why the National Blockchain Coalition was formed, of which Baars is a member on behalf of Rabobank. “Back in 2015, we were already evaluating the possibilities of identity on a blockchain. We quickly learned that this is only possible if you do it together. Several knowledge institutes are part of the coalition as well, although the UT is not one of them yet. My main concern is the lack of academic validation. There is room for improvement there.”

# AGENDA

**Sunday 12 until Tuesday 21 August**  
CuriousU, Summer school of the University of Twente

**Wednesday 22 until Thursday 30 August**  
Kick-In, introduction days

**Monday 3 September**  
Opening of the Academic Year

**Saturday 6 October**  
Twente Science Night

**Friday 30 November**  
Dies Natalis

**Further information:**  
[www.utwente.nl/en/events](http://www.utwente.nl/en/events)

UNIVERSITY OF TWENTE is a modern, enterprising research university. We work to develop the technologies that will define the future of ICT, biotechnology and nanotechnology. We are already acknowledged as world leaders in several areas. We approach new technology in the context of its relevance to society, applying insights from the social sciences and management disciplines. The combination of ‘high-tech’ and ‘human touch’ is extremely important to us. We are known for a design-led approach that addresses the needs of the private sector, and for the creation of new, innovative companies. We work on groundbreaking solutions to the major societal issues of the day, such as energy scarcity, sustainability, safety and security, and health. The University of Twente has over 2.600 staff, more than 10.000 students, a network of 47,000 alumni and some 1.000 spin-off companies.

**COLOPHON**  
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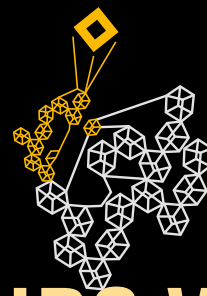
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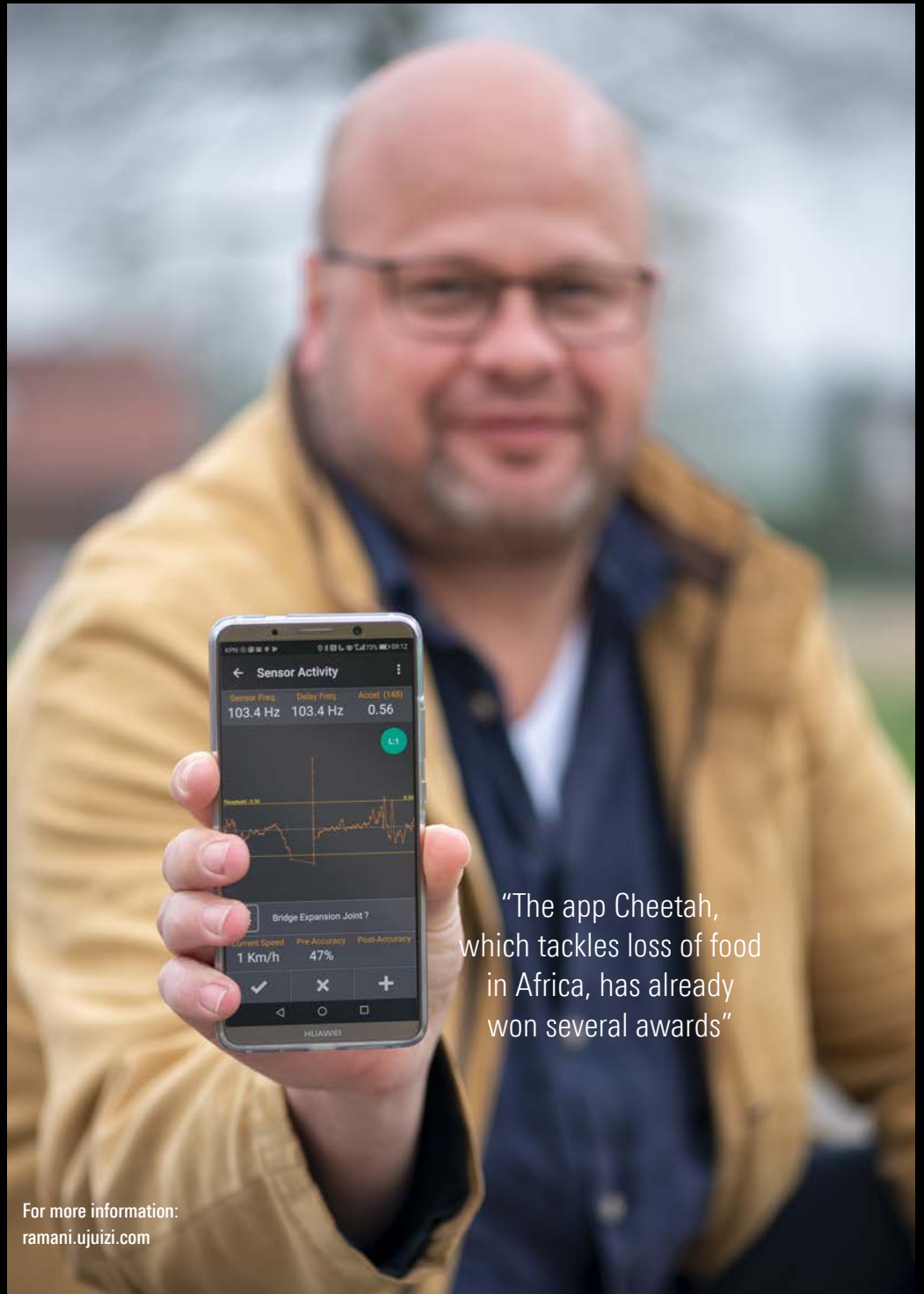
# LOCAL ENTREPRENEURS WITH APPS

BY Hans van Eerden PHOTOGRAPHY Arjan Reef

"We want to make geo-information publicly accessible and usable," says Valentijn Venus, researcher at the Geo-Information Science and Earth Observation (ITC) faculty. In 2016, he launched the spin-off Ramani (Swahili for "map"). The company shares data such as satellite images of crops and roads, weather reports and information gathered from smartphones via crowd sourcing. Ramani developed a toolkit that gives app developers access to these information resources. "We have an app that informs drivers carrying perishable goods about obstructions on their route. Another app informs mango farmers about the optimal times at which to harvest and dry the fruit. Journalists can use an app to report misconduct such as bribery. The app Cheetah, which tackles loss of food in Africa, has already won several awards."

Ramani is part of Ujuizi ("wisdom," "intelligence"), a holding that collaborates with corporations and uses the UT's intellectual property to improve mobile technology in developing countries. "There are already thousands of Ujuizi Laboratories throughout Ghana and Indonesia and we have recently met with local entrepreneurs in Kenya and South Africa."

Venus appreciates the efforts of experts such as Nikolet Zwart, who offers local entrepreneurs legal and financial advice. Support also comes from the ITC's Natural Resources Management department and from Novel-T. "They help us develop business models that allow local independent entrepreneurs to create an impact. In doing so, they also facilitate the ITC faculty's transition to an entrepreneurial faculty."



"The app Cheetah, which tackles loss of food in Africa, has already won several awards"

For more information:  
[ramani.ujuizi.com](http://ramani.ujuizi.com)