

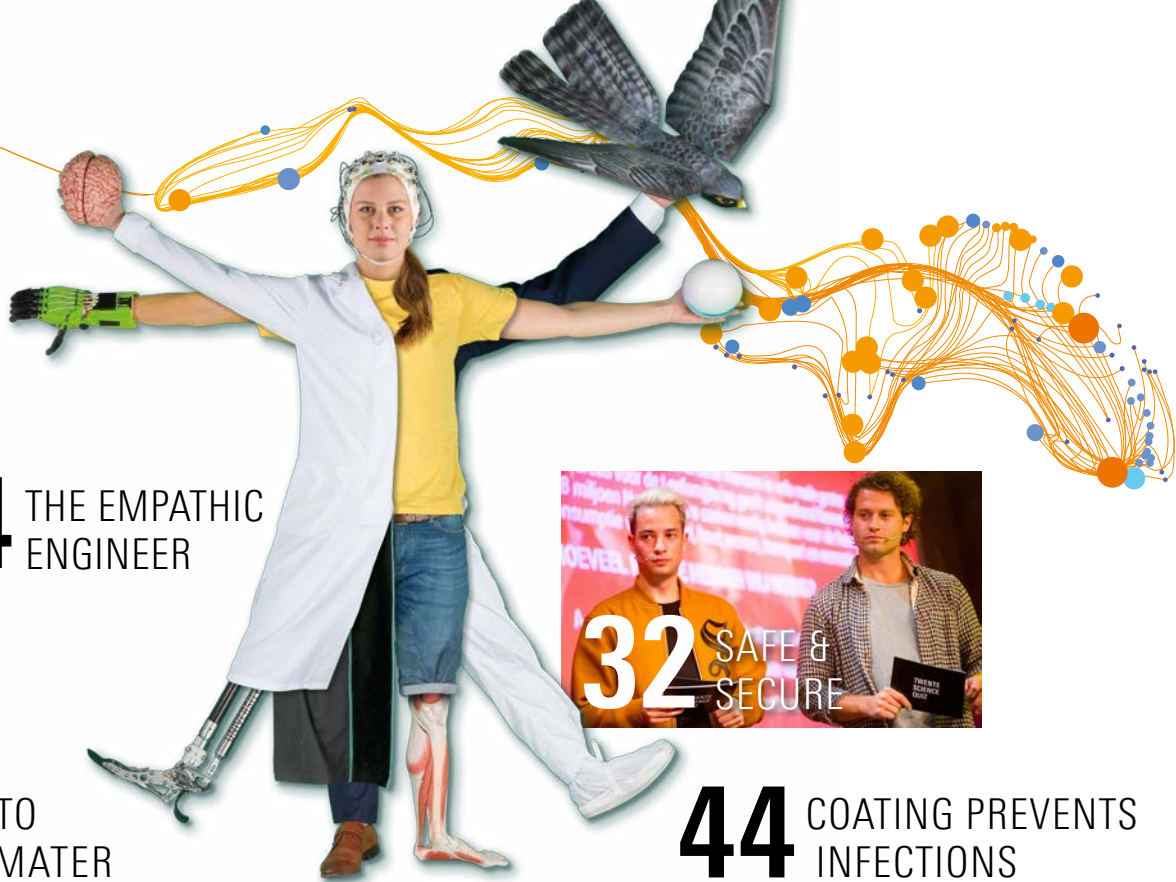
# UNIVERSITY OF TWENTE.



**THOM PALSTRA**  
The new Rector Magnificus

**A FANTASTIC JOB**  
Farewell to Ed Brinksma

**EDWIN DERTIEN**  
Empathy focused education



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## TALENT ATTRACTS TALENT

During the recent Dies celebration in late November, I had ‘the stage’ for the first time to introduce myself as the new Rector Magnificus of the University of Twente. Through this medium, I am also doing that for alumni and relations of the university. As Rector Magnificus, my primary ambition is to allow the UT to shine – in its own region, but also on a global scale. It is my conviction that this begins with individual talent: if that is given the opportunity and room to shine, that will echo throughout the entire organisation. Talent attracts talent.

Already as a young researcher at Bell Labs in Murray Hill, I wondered what the success is of this idea factory that produced so many discoveries. There, too, the success can be traced back to the individual, but always in the context. There must be interaction and discussion, an atmosphere of open innovation to further stimulate and accelerate the ideas of individuals. The management must encourage and facilitate this.

I also feel that energy and drive on the campus of the University of

Twente; the awareness that we are working to shape our future using high tech with a human touch every day. It is an honour for me to have the opportunity to support this in the coming years as an administrator.

But above all, let us not limit ourselves to our own campus or region. Working in the field of science grants you the privilege of operating in a global network. In that way, our students, employees and certainly also alumni are global citizens. They speak the same language as their colleagues all around the world. But they also see under which circumstances those colleagues conduct their work, with what drive. That is exceptionally educational and enriching.

At a time in which countries, or even superpowers seem to be becoming entrenched behind their borders, we as universities have the duty to sound a different note. We exist thanks to the international context and we welcome talent from all around the world. ●

“WORKING IN THE FIELD OF SCIENCE GRANTS YOU THE PRIVILEGE OF OPERATING IN A GLOBAL NETWORK”



SINCE 25 NOVEMBER 2016, **THOM PALSTRA** HAS BEEN RECTOR MAGNIFICUS OF THE UNIVERSITY OF TWENTE.





THE NEW  
ENGINEER  
IS SMART  
AND SOCIAL

The nerd is out, the empathic engineer is in. Our times demand that designers look beyond the end of their noses. The UT is going to educate them: socially intelligent engineers. BY Marc Laan PHOTOGRAPHY Gijs van Ouwkerk

## ACCORDING TO RECTOR MAGNIFICUS ED BRINKSMA, 'EMPATHIC ENGINEERING' IS THE FUTURE.

Ed Brinksma opens his laptop. The departing Rector Magnificus of the University of Twente shows a 17th century painting of a capsizing warship. "Look, this is the Vasa, the military showpiece of the Swedish King Gustaaf Adolph II. That impressive flagship capsized a half mile into its maiden voyage in 1628." Brinksma loves metaphor. The message is clear: "You think that major technological disasters are just a modern phenomenon. But history shows that many large projects literally capsize due to excessive added complexity. If engineers are unable to communicate with their customers, their structures will collapse."

### *Why did the Vasa capsize?*

"At a late stage, the king ordered that an extra deck be added to the design," Brinksma explains, "which made the centre of gravity too high. Moreover, the shipbuilders cancelled a stability test that went poorly out of fear of the king. It goes to show that advanced technology is sometimes a clay-footed giant, which has major social consequences. "We now live in a time of digital

disruption. We put software into everything these days to introduce radically new and improved products and services, with all of the major risks that entails. It is of the greatest importance for designers to manage those risks not only from a technological perspective, but also from an organizational and societal perspective."

### *Who will those empathetic smarty pants have to take into account?*

"Engineers increasingly must be able to talk with their clients and end users about the complicated technical solutions that they propose. Those customers are not only citizens and politicians, but also shareholders. And university colleagues from other disciplines.

"That demands empathic engineers: professionals that are not only smart in their technical discipline, but also communicate based on feeling with the people around them. Due to the increased complexity and the social importance of technology, soft skills and interdisciplinary cooperation is becoming increasingly important.



design: Buro Ten Dam

"If engineers are unable to communicate with their customers, their structures will collapse"

Our degree programmes must invest in that."

### *Are engineers unable to communicate?*

"Many failed innovations are essentially the failures of a sociotechnological system. Engineers are continuously improving technically, but the relationship with the real world is coming under pressure due

“Drawing inspiration from other fields”

EDWIN DERTIEN



Edwin Dertien, centre in the photo, instructs students

## CREATIVE TECHNOLOGY LECTURER

“In my field, creative technology, empathy has been a spearhead in the education from the start. The students work as designers not for themselves or for the programme, but for the users. That empathetic attitude does not play a very strong role in every technical field; that will also play less of a role in the design of an industrial robot than in creative technology. Nevertheless, it is important that every technical engineer realise what impact his/her technology has on the world.

“I am a mechatronic technician by training and I ended up in the world of creative technology by way of the theatre.

This field is exceptionally multidisciplinary, our students draw inspiration from other disciplines, where they gain knowledge and learn about new technologies. The foundation of our programme is building bridges: we make existing technology simpler for the users. We have produced interesting start-ups, such as Homey, with its speech recognition technology for domotics. Another collaboration project is AWE Goosebumps, an inflatable suit that gives you Goosebumps. The AWE goose bumps is a garment that measures and enhances your emotions and makes them visible. A mix of fashion, science and art.”



“Over the past years, the UT has produced 900 companies that have created more than 9,000 jobs”

to the increased complexity. We in the educational field must do something about that. In the architecture of the things that we design, the technical-scientific knowledge of the engineer must be integrated seamlessly with the use of those innovations in practical situations. Good design is becoming increasingly important. Architect Walter Gropius already warned about it in the 1930s: art and crafts have drifted too far apart.”

### *What qualities will the engineer of the future have to possess?*

“Over the past years, the UT has implemented the ‘Twente Educational Model’. The university education was traditionally geared towards cultivating good researchers. The assumption was that they would become good citizens on their own. That doesn’t work that way anymore. We encourage students to not only be a good researcher, but we also teach them to incorporate their knowledge into useful designs. And they must be enterprising. Those are the three things that we want to impart to our students: research, design and entrepreneurship.”

### *But the UT does not have much to complain about regarding en-*

### *trepreneurship among students and employees, does it?*

“Over the past years, the UT has produced 900 companies that have created more than 9,000 jobs. But we cannot rest on our laurels. Our university is a major economic factor in Twente. You can’t close your eyes to the fact that there is a social split in our region between people that are involved and people that lag behind. Twenty percent of residents are at the lower end of the economic scale and in fact are standing on the side lines. Those are often the same families that were left behind a few generations ago due to the closing of the textile factories. Those groups reap very few benefits from our scientific insights. I believe that the UT must combat that divide



Mascha van der Voort, third from left

“Don’t develop technology simply because you can”

## MASCHA VAN DER VOORT

### DESIGN LAB

At the UT’s DesignLab, Professor Mascha van der Voort teaches her students to think and to look at things like an ‘empathic engineer’. “We teach researchers to realize that everything that they do has an impact on society. To find out what customers want, whether they are customers of companies or governments. You must not develop technology simply because you can. So, don’t just fill in the answers for the users and think: ‘they’ll just make do with what I make’. Look beyond your own borders and work together with other disciplines. In the DesignLab, students and researchers from various disciplines design solutions for users such as dementia patients that continue to live at home. We also study how pedestrians respond to self-driving cars without a driver. But we also ask ethical questions regarding the use of drones in data research.”

by allowing those who were left behind to benefit from this. It is not only altruistic; it is also in the university’s own self-interest. Otherwise, over time, the social division will turn against us.”

***That social mission will not be easy.***

“We have the resources. The Twente region spends approximately a billion euros a year on social safety nets for residents. If you were to productively invest just ten percent of that in volunteer work, you give people the opportunity to be of good value for money. For example, in our region there are maker factories that put young people with disabilities to work. That helps them live their lives in a meaningful way.”

***Doesn’t technical analysis and social empathy get in the way of each other in our brain?***

“Every individual has a dominant half of their brain. Nevertheless, there is a growing need for engineers that combine both halves. That can be learned. I believe that it is a mission of educators to train that empathetic attitude in our students. And this is not just important for individuals. When putting together research teams, you must also ensure that the team includes people from various disciplines. That expressly includes social scientists geared towards technology.

## THEO VAN DER MEER

### PROGRAMME DIRECTOR OF THE SUSTAINABLE ENERGY AND TECHNOLOGY MASTER’S PROGRAMME

By his own account, Theo van der Meer made the transition from a physicist with little interest in the social and life sciences, to someone who sees that there is more to the world than technology alone. “After graduating in Delft, I felt that physics was the only science that was measurable, and therefore serious. I later reconsidered that. Take operators in industry, for instance: they have to be able to work with devices that we as engineers develop for them. Technical solutions have consequences for real life people. That demands a multidisciplinary approach, including science and technology and social science knowledge. As Programme Director, I teach my students that they must stay aware of their surroundings.

“Technology students must realize that social forces exist that prevent good technical solutions from succeeding, for example, in the area of energy. I therefore encourage technology students to get involved in politics. There are not enough technicians at the table in The Hague that bring together technology and society. Our students can do that.”



Theo van der Meer, fourth from left

“I would like to see more technicians in politics”

During the celebration of the 55th Dies Natalis – the birthday of the UT – four honorary doctorates were awarded. Traditionally, the UT rewards people every five years that have made extraordinary efforts to benefit science or society. Biomechatronicist Hugh Herr, former-politician Neelie Kroes, nanotechnologist Christoph Gerber and statistician Edward Tufte received this unique accolade on 25 November and can therefore hold the title *doctor honoris causa*.

# FOUR HONORARY DOCTORATES



The signature of the traditional 'Gaudeamus igitur'

Victor van der Chijs and Pieter van Vollenhoven

Hugh Herr

Christoph Gerber

Now former Rector Magnificus spoke about the *empathic engineer* in his Foundation Day speech. "It is someone that can be deeply moved, out of passion for their field, out of passion for humanity, out of passion for personal relationships. They are 'well-rounded people' that develop themselves broadly, and at the same time dare to delve deep."

Following his speech, Brinksma awarded four honorary doctorates (see page 8 and 9). The King's Commissioner and UT alumnus Ank Bijleveld had another surprise in store for Brinksma: he was made an Officer in the Order of Orange-Nassau. Then, it was time to hand over the title of Rector Magnificus. In his first speech, the new Rector Magnificus, Thom Palstra, discussed his personal drive to work in the field of science and to now be Rector Magnificus in Twente.

Also during the celebration, the Overijssel PhD Award was presented to Desirée van Dun, and the Professor D Winter Prize was awarded to Jeanette Hofmeijer.

## HUGH HERR

'Limited mobility is not the result of an imperfection of the body, but of technological limitations', is a well-known quote from Hugh Herr (1964). He is committed to removing these technological limitations. With his department, Biomechatronics, at the prestigious Massachusetts *Institute of Technology* (MIT), Herr focuses on the development of wearable robotics to increase human physical capacities. A tragic accident in 1982 determined a large portion of his career. Herr, a fanatical climber, lost both his lower legs after falling with a fellow climber due to a snowstorm. He developed special climbing prosthetics, with which he turned out to be able to reach an even higher level than before the amputation. An impressive scientific career then followed. His most famous inventions are a motorized foot prosthetic, the *BiOM ankle*, that he himself wears, as well as a motorized knee prosthetic. Herr has 72 patents to his name and is the founder of the successful company BionX. UT professor Herman van de Kooij is Herr's Honorary Promoter.

## CHRISTOPH GERBER

Christoph Gerber (1942) is best known for his major contributions to the invention of the *Scanning Tunnelling Microscope* (STM) and the *Atomic Force Microscope* (AFM). The STM enabled researchers to image conductive surfaces on the atomic level for the first





Ank Bijleveld and Ed Brinksma



## THOM PALSTRA NEW RECTOR MAGNIFICUS

Professor Thom Palstra is the new Rector Magnificus of the University of Twente. He succeeds Ed Brinksma, who served in that position since 2009. Palstra has an impressive track record as a scientist. His area of research area is at the cutting edge of chemistry, physics and nanotechnology, with electron transport as the major research theme. Starting in 1996, Palstra was affiliated with the University of Groningen. He was a professor of Solid-State Chemistry and held various management positions, including that of Adjunct Programme Director, Vice-Dean and Interim Dean. Until recently, Palstra was Scientific Director of the top institute *Zernike Institute for Advanced Materials*. According to Palstra, the UT is a young, lively university that sets itself apart nationally and internationally with its High Tech, Human Touch approach. "I look forward to working together with the students and employees on the further development of this university."



Edward Tufte

Neelie Kroes



Desirée van Dun



Jeanette Hofmeijer

time. The scientists that received the 1986 Nobel Prize for this finding thanked Gerber extensively for his contribution in their Nobel Prize Acceptance Address. The later developed AFM is even more versatile than the STM. For example, the AFM enables you to also study non-conductive surfaces and to manipulate molecules on the surface. The STM and the AFM – both inspired by the phonograph – are the most important instruments in the world for understanding the nano world. The UT uses this technology daily. Since 2011, Gerber has served as professor at the University of Basel in Switzerland. For the greater part of his career, Gerber was employed at IBM Research. Guus Rijnders, Scientific Director of UT research institute MESA+, is Christoph Gerber's Honorary Promoter.

## EDWARD TUFTÉ

The New York Times calls him the 'Leonardo da Vinci of data'. Business Week characterized him as the 'Galileo of graphics'. In his work, Edward Tufte (1942) combines the worlds of – as he puts it – 'high art' and 'high science'. Tufte has a long and impressive track record in the academic world. He studied statistics and earned his PhD in political science at Yale. After a period as a lecturer and professor of political science at Princeton, Tufte developed to become a specialist in the area of '*Information Design*'. Until reaching emeritus status, he was professor of

political science, statistics and computer science at Yale. Tufte published four books that would go on to become classics on data visualisation, more than two million copies of which were printed. A fifth book is on the way. He grew to become an example for everyone involved in information and data visualisation and geovisualization. The honorary doctorate for Tufte is a joint initiative of the Faculties of Behavioural Management and Social Sciences (BMS) and Geo-Information Science and Earth Observation (ITC). Tufte's Honorary Promoter is UT professor Menno-Jan Kraak.

## NEELIE KROES

Neelie Kroes (1941) has a long track record in politics and as an administrator. Among other things, she has served as a state secretary, minister and European commissioner, and to this day is strongly committed to supporting new entrepreneurs, digital innovation, the position of women and the inclusion of the programming course in the primary school curriculum. For many, Kroes is a role model due to her social commitment and her ability to initiate changes. Until recently, she was *Special Envoy* for StartUp Delta, in which position she paid frequent visits to the University of Twente. In this position, she was able to connect the Dutch start-up community and put it on the map internationally. UT professor Willem Jonker will serve as Honorary Promoter.

# MAKING A DIFFERENCE...

A reunion or a trip with former fellow-students is fun every now and then, for old times' sake. But giving something back to your university as an alumnus is perhaps even better. For both parties. Four examples. BY Esther Windt PHOTOGRAPHY Christiaan Krouwels & Gijs van Duwerkerk

## Guest lectures

**Thijs Westerveld** studied Computer Science from 1992 to 1997. "I was a unique computer science student. During the first years of my study, I didn't even have a computer – a fact that is absolutely unthinkable now, but was already a bit strange even back then. I ended up in that programme due to the puzzles, working with information and solving logical problems. I sank my teeth into that and I enjoyed it."

Westerveld worked in the science field for several years, after which the business community beckoned. Since 2014, he has served as Chief Science Officer at Wizenoze. "We want to make the online world more accessible to everyone, from children to people with literacy problems and seniors. Texts are often written in overly complicated language. With innovative technology, we classify the reading level of a text and we offer suggestions for simplification. This work fits perfectly with I what I enjoy: a mix of scientific challenges in a business setting with daily customer contact. I can also give my ideas a place outside the ivory towers of science."

Westerveld regularly supervises master's students and gives guest lectures several times a year at universities. "It is important to hear what is going on within the field of computer science, not only from students, but also from lecturers. What are they working on? What are the new technologies?" His lectures focus on the technology that Wizenoze develops and the problems that the company encounters. "Students are like my customers: practical users. They ask me questions that often lead to new ideas. It stimulates our innovation." And sometimes it leads to new developers and employees for Wizenoze.



"Students stimulate  
our innovation"



“The involvement of the business community is absolutely essential”

### Charitable fundraising

**Jan Dopper** In 1964, Jan Dopper was among the first class of students at the UT (still the Technical University of Twente at the time). “Everything was new. The campus was built for 2,000 students, but there were just 200 of us. The students will never have that kind of luxury again!” Dopper studied chemical technology and business administration, was co-founder of the

Drienerlo hockey club and the Twente Student Golf Association and sat on the board of the “Boerderij,” now the Faculty Club. “That was our bar, intended for professors, employees and those couple hundred students. The contacts ran through all levels.” In 1968, he moved into OD308, the first off-campus student house. “I am still in regular contact with the first three generations that lived there. Together with a number of them, we founded a Named Fund with the Twente University Fund, through which we support two researchers.”

Up until his retirement, Dopper worked in the oil and chemical industry – for many years at Continental Oil in America and later at DSM. Over the past years, he has been involved as an advisor in projects such as the founding of the International Business Administration study programme. For the past year, he has been a member of the UT’s Fundraising Committee. “We raise charitable funds for health-related research. This relates to research projects that can be of major social significance, can offer many people a considerable improvement in their quality of life and can sometimes even mean the difference between life and death. That’s a nice mission. Many people think that this type of research is financed entirely by the government, or that the business community invests heavily in this, but that is only partially the case. Some breakthroughs take years to achieve due to a lack of financing to take a crucial step that is not financed by the government, and when the business community believes that it is too early to get involved. Then you find that charitable funds worldwide can often make the difference. Private individuals that are prepared to take on the risk for ‘the good cause’ that market application will not immediately arise from the research, but that an important step forward will nevertheless be made. People that share the same passion as the researcher: to make the world a little better. This leads to nice conversations with prospects and between these prospects and the researchers. In fairness, though, we have a great deal to explain first. That is because charitable fund raising for universities is not yet commonplace in the Netherlands.”

# ...TO YOUR ALMA MATER

“Counselling students  
means learning from each other”

## Student counselling

**Arjan van Hoorn** Arjan van Hoorn studied Technical Business Administration and was one of the first students to graduate in the field of Operations Management in Healthcare in 2005. “My student days were brilliant. I lived in Questo, a men’s house in the city centre and I was involved in activities such as the Euros student sailing association. That’s also where I met my wife.”

Van Hoorn is Senior Policy Officer at division at UMC Utrecht’s division of Internal Medicine and Dermatology. He works on projects to improve the logistics, efficiency and quality of care in hospitals. In that capacity, he worked on rapid diagnosis at the UMC Utrecht Cancer Center. Now, his care paths and capacity management are focus areas.

Van Hoorn regularly counsels UT students. “For example, someone who is graduating on the topic of how we must set the process in our outpatient clinic so that patients can see one of our doctors at the medically desirable moment. The student learns, but the organization and I do as well. That’s what’s nice about student counselling. Through sparring with the student, you arrive at all sorts of new practical questions. Counselling students and doctoral candidates also offers us the chance to have subjects studied that we wouldn’t otherwise have time for. Moreover, the fact that we can make use of the tooling of the UT, such as simulation projects and quantitative analyses, is a nice bonus.”

The disadvantage: counselling takes time. “I have now become selective about when I put a student to work, because every subject takes time and a critical assessment is therefore important,” Van Hoorn says.



## Professional committee

**Mark Boer** studied Electrical Engineering and has positive memories of his days as a student. "I am still friends with fellow students and we have a tradition of going on holiday together for a week around New Year's."

Boer is Managing Director/Owner of AEMICS in Oldenzaal. The company focuses on making products smarter and on manufacturing and developing electronics, mainly measuring and control technology and analytical equipment. AEMICS has eighteen employees: university-educated staff for the engineering and ROC-trained employees in manufacturing.

Boer started his company in 1996 with a fellow student and with financial and business development support through the university's TOP scheme.

AEMICS is also involved in a number of subsidy arrangements: projects in which the UT and the business community work together to develop new technology. And for the past six months, Boer has been a member of the professional committee – also known as the Electrical Engineering Advisory Board – which is intended to promote the quality of the education and the connection with the business world. "I feel that it is important for this region, and very important for the business community here in particular, that the UT is offering outstanding education, that good students are produced and that students feel drawn to companies in this region," Boer says. And of course it is also important that the education connects with what we make here at AEMICS and what we want to develop."



"Education must connect with  
the business world"



Interested in also supporting  
UT education? Contact Joe  
Laufer Relationship Manager  
alumni ([j.laufer@utwente.nl](mailto:j.laufer@utwente.nl))

He calls it a fantastic job, but also a difficult one. Nevertheless, for Ed Brinksma, being Rector Magnificus was 'the best job' in his career so far. Now, a sabbatical abroad beckons, along with having control over his own schedule. BY **Maike Platvoet (UT Nieuws)** PHOTOGRAPHY **Rikkert Harink**

# REFUELLING AND

***How does that feel, your time as Rector Magnificus nearly at an end?***

"Well, it's certainly not very dramatic. But it was the best job I've had so far. At the same time, I'm a fairly curious person and I like to try different things from time to time. It is customary to stop after two terms [eight years, ed.]. Last year, I even raised the point that I would like to become a member of the supervisory board. What I specifically want to avoid is drudgery and that I start doing things that I've already done too often."

***What are your plans?***

"As Rector Magnificus, you have a right to one year of sabbatical. And that's what I'm going to do. I think it's a nice prospect: a year to further orientate yourself. I particularly want to look at whether (and if so, how) I can find a connection with the scientific research field, the applied mathematics of computer science. Moreover, I also get back control of my schedule. And yes, I'm looking forward to that. Mainly because there will be more room for spontaneous meetings and the exchange of ideas. Because with the exception of the summer months when it was a bit more calm on campus, as Rector Magnificus, I didn't have much time for that."

***Will it be science or administration?***

"Before becoming Rector Magnificus, I had a fairly successful scientific career, eventually becoming Scientific Director of an institute at TU/e. What I now want to ensure is that you don't



## ED BRINKSMA STEPS DOWN AFTER EIGHT YEARS AS RECTOR MAGNIFICUS

## WRITING BOOKS

automatically wind up in an administrator's role. But I also realise that I can't simply pick up the scientific thread once again. I'm focusing on subjects that I want to be involved with and I'm very enthusiastic about that. Moreover, the idea has been bubbling up to write a book about my scientific field AND to publish an essay collection under the title 'The University According to Brinksma', with a collection of my speeches and presentations."

***In the Netherlands or abroad?***

"I'll be spending part of my sabbatical at the Singapore University of Technology and Design and the Stevens Institute of Technology in New York. These are universities that – like the UT – are not very large, but that do have a special mission with multidisciplinary and innovative educational concepts. I mainly want to get caught up on my field there and work on my books in my free time."

***You have experienced various compositions of the Executive Board. Were there ever disputes?***

"I never experienced disputes in the EB. There are occasional differences of opinions. Certainly in the beginning, I had quite a few issues to coordinate with Anne Flierman over the role distribution. But I'm, afraid I'm going to have to disappoint the written press: there never were any real disputes. The joint will to share responsibility is namely very strong."

***Do the two of you as Board members also have contact outside of office hours?***

"Yes, you sometimes need each other day and night. So, you learn to get to know each other fairly well. That sometimes also leads to more interactions in your private life. Anne Flierman [former Executive Board chair, ed.] and I also visited each other's homes. Now that contact will decrease, because of course we are both busy with our own jobs."

***What disappointments have there been over the past 8 years?***

"Trying to reach the collective of the university. At times, I communicated until I was blue in the face. It was quite a challenge to promote the same message continuously and clearly. And you do that time after time after time... And then there are still people in certain remote corners that never hear that message. Often enough, I have thought that I had a good story, but then it turned out to be terribly complicated to communicate that story effectively. In any event, I know now that just by sharing, your message comes across."

***You will go into the UT history books as THE Rector Magnificus of Engineering, Design and Society [Techniek Ontwerp en Maatschappij, TOM]. What do you think about that?***

"Yes, I realize that. But TOM [the Twente Educational model, ed.] is not done yet; the education continues to develop. The world is chan-

ging rapidly and we must continuously adapt the education to that. A significant degree of the quality of the university is determined in part by your capacity to change. Moreover, people are becoming increasingly aware of how important education is. We are at the forefront in that area and that is something I'm proud of. I'm increasingly seeing the positive results of TOM, both inside and outside the institution. Someone recently told me that they're aware of the Twente model in Lithuania: they see in us an example that they can learn from. And when I recently gave a presentation about our model at the Ministry, that generated a lot of positive responses. That gives me strength."

***Will you stay connected with the UT?***

"I'd like to keep that option open. Answers soon lead to expectations and that is precisely what I want to avoid. That's something I also had to learn as Rector Magnificus. What is certain is that the UT has a special place in my heart. This university allowed me to develop into who I've become. And that will always play a role, no matter where I wind up."

*During the Dies celebration last Friday, 25 November, Ed Brinksma officially passed on the title of Rector Magnificus to his successor, Thom Palstra. That day, Brinksma was made an Officer in the Order of Orange-Nassau.*

## **BUSINESS SCHOOL PROFESSIONAL LEARNING & DEVELOPMENT**

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# BLENDED LEARNING

**Martin van Staveren**, core lecturer of the masterclass **Risk management in the public sector**. “Digital transformation; cyber risks and privacy; increasingly outspoken citizens with high expectations; health care and wellness in transition. The silver thread running through all of those themes is the uncertainty factor: there is a great deal of uncertainty about the impact of those developments on organizations and their stakeholders. That means that the usual risk management must also be adjusted to the demands of the rapidly changing and increasingly digital world.

We do this in the new blended masterclass Risk management in the public sector, with a great deal of attention for the role of the human factor, the related risk subjectivity and the context and culture of public organizations. That helps public managers to deal realistically and effectively with their current risks, and in that way to carry out their public duty in a sober and efficient manner. That is unique in the Netherlands.”

**Martine ten Voorde**, consultant at Technology Enhanced Learning & Teaching of the University of Twente on *blended learning*. “Studying at your own pace, at your own chosen time and place, without having to be sitting in a classroom at set times. That is possible in the updated masterclass Risk management in the public sector, thanks to the blended learning concept: a combination of teaching methods. At home or at their workplace, the participants can study literature, watch videos, partici-

pate in webinars, take knowledge quizzes, talk to one another in a discussion forum and complete assignments in which they apply their new knowledge. Everything is presented in an attractive and clear on-line learning environment. In addition, there are also traditional meetings: biweekly interactive seminars in which participants work on deepening, exchanging and applying the material.

“With great attention for the role of the human factor”

**Wim Kollen**, Team Leader Employment Support of the Municipality of Emmen, completed the executive masterclass **Risk management in the Public Sector** in 2016.

“I have a positive attitude and I think in terms of opportunities. There are risks, but I don’t want to focus on that; it’s a waste of energy because it blocks development. Those were my preconceptions. Nevertheless, I became curious about risk management during the masterclass Innovative Business Management, part of the Master’s in Public Management. Now that I have completed the masterclass Risk management in the public sector, my conclusion is that risk management is essential in what is at times an opportunistic environment. Martin van Staveren is an inspiring lecturer and we now use his methodology of risk-based operating in our municipality.”



# STUDENT TEAMS UNDER



BetonBouwers

Green Team

RoboTeam

Now, each of them is still working away at their own space: the builders of concrete canoes, solar vehicles and football robots. But not anymore: the plan for one central workplace is as good as done. The advantages? Better facilities for the builders, greater synergy and more exposure. BY Esther Windt PHOTOGRAPHY Arjan Reef

The UT currently has five innovative student teams: Solar Team Twente, Green Team Twente, Solar Boat Twente, the RoboTeam Twente and the BetonBouwers. The new central workshop must be able to accommodate ten of these types of teams. On assignment from the Executive Board, a work group examined the possibilities and mapped out five potential locations. Just when the teams will move into the new building is not yet known. This depends on the final choice of location and other construction and house moves on campus.

“In any event, it will be an attractive workplace, in which the work of all of the teams is clearly visible to students and relations of the UT,” says Nico Kloek of the Facility Department. That in turn can also create an incentive effect on other students to also start a project. The workshop will have separate assembly rooms – for example, in connection with sensitive information – but also common areas for meetings and for using shared machines.” The current teams are now still at work on and outside the campus. Are they somewhat enthusiastic about it, that move?

## Heating

They have been building canoes for years, the **BetonBouwers** of study association ConcepT. Their current workshop is in the Achterhorst building, next to the Green Team. “The building facilities at the UT are currently fairly limited,” says chairman and civil engineering student Daan Kampherbeek. “More room and heating would be nice. Heating is essential for building with concrete. Right now, we can’t do anything in the winter. Our ambition is to build a canoe of UHPC, or Ultra-High Performance Concrete. The advantage of that is that no reinforcement has to be used.” Every year, the team participates in the Betonkanorace (Concrete Canoe Race) in the Netherlands and, once every two years, in the European Championship in Germany. “Two years ago, we became European champion,” says Kampherbeek. “We have full confidence that we will win again in 2017.”

## “Sharing knowledge and equipment more easily”

The workshop of **Green Team Twente** is located in the Achterhorst building. “The offices of the teams are in the Bastille building. That is good for communication, but if the workshops were all in the same location, we could work together at a workbench and more easily share knowledge, materials and equipment,” says Bram ter Huurne, portfolio manager for external affairs and student of applied physics. His team participates in economy races in London and France. Last year, the goal was to get the car running, now they are focus-

# ONE ROOF



Solar Team

Solar Boat Team

sing on the competitive element. “The car must run even more economically than the last time,” says Ter Huurne. “At that time, that was an energy equivalence of 850 kilometres on one litre of petrol. Moreover, we want a vehicle that looks even more like a car. With windscreen wipers, headlights and boot.”

### “Better cooperation”

**RoboTeam Twente** is looking forward to having its own workshop. “It is particularly convenient if the various disciplines are in close proximity: electronics, mechanics and software development,” says chairman and advanced technology student Ewoud Croll. “That enables better cooperation.” The team hopes that in the new space, the 9x6 metre robot football pitch will be given a permanent location. “And if we also have workspace around that for a machine that can solder, laser print and laser cut, that would be great,” Croll says. “Building robots is not new. The challenge is to make them smart. How they should shoot and how they should play the game. With artificial intelligence, we are making very advanced robots.” With their mini-footballers, the team wants to raise eyebrows at the RoboCup world championship in 2017 in Japan.

### Too late

For the current **Solar Team Twente**, for one, the new workshop is coming too late. The team is settled at the event location at Enschede Airport Twente. “A workshop on campus would be better for the contact between workshop and the office, and for allowing

us to demonstrate directly for partners what we are working on,” says team leader and technical business administration student Olivier Berghuis. He believes his successors will benefit from the Dreamhal at TU Delft or the FabLab at Saxion. “That would have tremendous PR value for the UT. Just like building the world’s best solar vehicle for the World Solar Challenge in Australia.” The next iteration will take place in October 2017.

“Working together with a workbench and more easily sharing knowledge, materials and equipment”

### Room for the boat

**Solar Boat Twente** sees the benefit of a shared workshop. “We would like to work together more with the various teams,” says team manager and mechanical engineering student Jasper Admiraal. “And we also want to convey that to the rest of the UT.” Above all, a new workshop must be a place where there is room to put together the boat. So, just a workshop with basic tools. “It would be nice if other UT students could see where we work and become interested in taking on something similar themselves.” The recently formed team is hard at work on the design of the solar boat. “The aim is to produce an innovative boat and ending up in the top three during the World Cup in 2017 in Monaco.”

## IN THE LAB

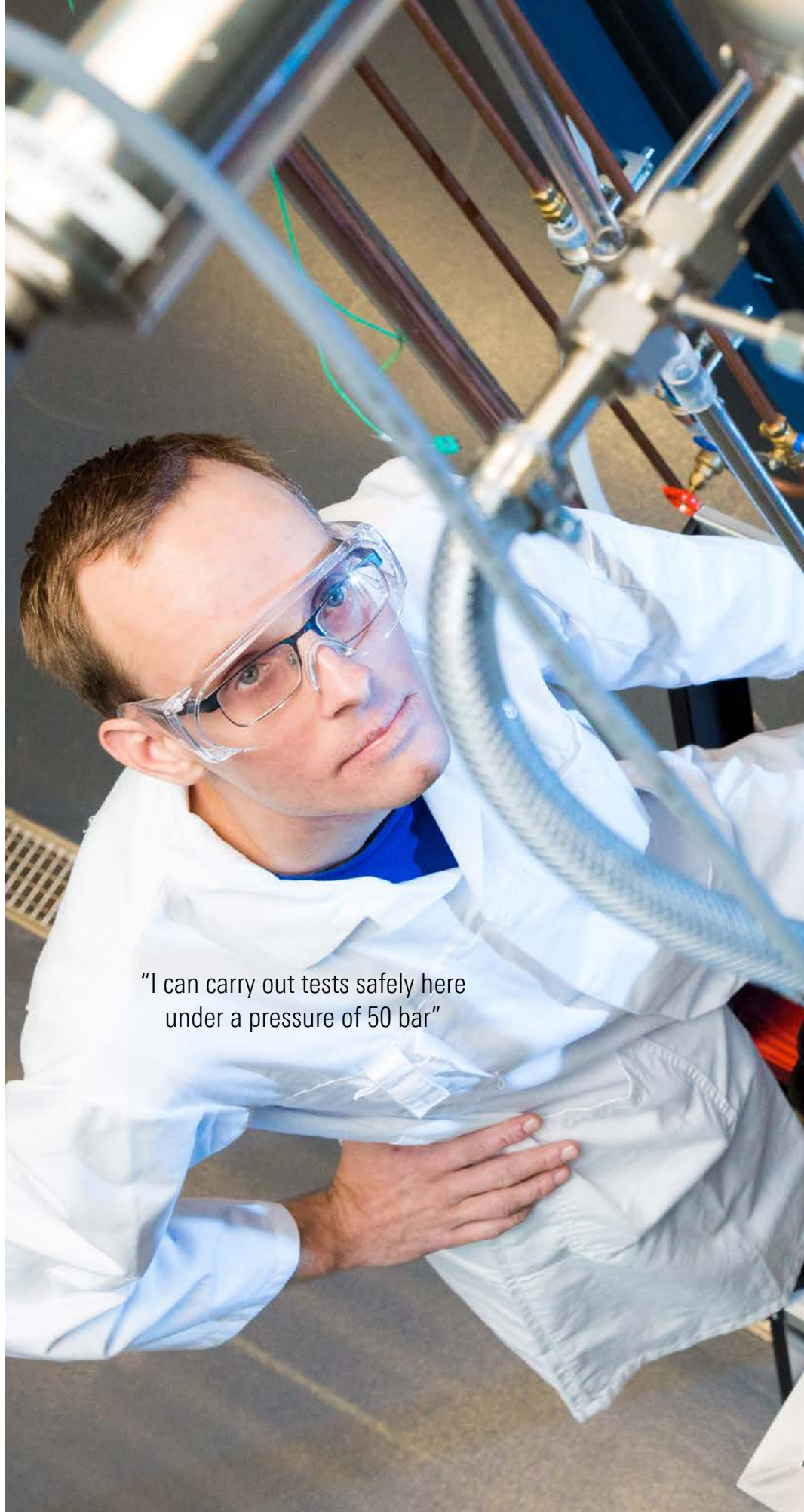
Name **Martin Bos**  
Age **27**  
Position **PhD student and lecturer in the Department of Sustainable Process Technology**  
Education **Chemical Technology**  
Lab **High Pressure Lab**

BY **Marco Krijnsen**  
PHOTOGRAPHY **Gijs van Ouwkerk**

When Martin Bos tests his reactor within the thick walls of the high pressure bunker, he sometimes thinks about the Sahara. Africa would be a good place for the sustainable, self-sufficient power plant that he is now working on in the High Pressure Lab. Bos hopes that it will one day become a reality: a solar-powered installation that produces methanol from CO<sub>2</sub> and hydrogen. "That makes methanol a CO<sub>2</sub>-neutral fuel that can replace petroleum. In my opinion, that is a contribution to the solution of the greenhouse gas problem."

Bos has developed a reactor that converts CO<sub>2</sub> and hydrogen into methanol more effectively than existing methods. The testing and optimisation of the reactor is carried out in the High Pressure Lab, which recently reopened following a thorough renovation. "I can conduct tests here safely under a pressure of 50 bar. But at least as important is that there are technicians at work here that can build everything in-house."

In the 6-metre tall process hall of the lab there stands another setup in which Bos is involved: a CO<sub>2</sub> catcher. The installation removes CO<sub>2</sub> from the air or from flue gasses, which is required for the production of methanol. Bos can also regularly be found in the hall in his position as lecturer. "The space is also well suited for practical education with large setups."



"I can carry out tests safely here under a pressure of 50 bar"



Martin Bos (left) and Rick Driessen at the reactor in the High Pressure Lab.



# FASTEST GROWING IN SPAIN

Technical Business Administration alumnus Marc Zinck moved to Barcelona to start his own version of holiday auction company VakantieVeilingen. This year, his company, Subasta de Ocio, was named the fastest growing start-up in Spain. BY Marco Krijnsen PHOTOGRAPHY Inez del Prado

Life in the Catalan capital is good. Still, Marc Zinck (at centre in the photo) still often thinks back to his time in Enschede. After all, it was there that he laid the foundation for his success as an entrepreneur – at first during secondary school, when he founded a company and web shop selling light and audio items together with a few classmates. A hobby that got out of hand and a good way to earn extra money, but above all a great learning project.

“Conducting business means doing, staying busy, trying things out and adapting,” Zinck says. “We worked on that every day.” I learned back then not to be afraid that something will go wrong, because that happened regularly. Above all, conducting business means: don’t be afraid.”

What Zinck also noted with his first company was that something beautiful can be created when you work together. And that such a process

does not always run smoothly. “Things can get heated on the shop floor, because you call each other into account for things that do not run well and things that must be improved. It is important that you keep business and pleasure separate. At the end of the day, you have to be able to sit down for a beer together. That is as true today as it was then. I still tell my people that, even though there are now about 40 of us.”



“Conducting business means doing, staying busy, trying things out and adapting”

### Student Media Award

Self-employment was not his childhood dream. Zinck went to study Electrical Engineering at the University of Twente. Nearby and therefore practical. It was not a success. Within two years, Zinck switched to Technical Business Administration, where he earned his bachelor's degree in six years. The penny finally dropped just before the finish line, when he conducted research into how students use social media for their study choice. That led to publication in a scientific journal and the Student Media Award. Zinck's appreciation for science grew steadily and he then quickly completed his master's in Innovation and Entrepreneurship. Cum laude.

In 2013, a Spanish family member suggested that he start a company

there. VakantieVeilingen was a success in the Netherlands, so why couldn't they replicate that success in Spain? Zinck immediately recognised the opportunities. “You have to introduce a disruptive model just as the economy takes a downturn. People still want to do fun things in their free time, but they are looking for different solutions.”

Zinck moved to Barcelona and started Subasta de Ocio, which translates literally to 'Auction of free time'. In May 2013, the website went live. “No, it's not a copy of VakantieVeilingen; the cultural context is different. The buying power of Spanish consumers is weaker than that of Dutch consumers, but they take trips more often. They are very short holidays with the whole family, the beach, good food. The technology is also different than ten years

ago when VakantieVeilingen was just starting out. Apps have become important. Eighty percent of the turnover comes in through our app.”

### Spanish headwinds

Within 3 years, Subasta de Ocio grew to 10 million euros in turnover and more than forty employees. This year, that earned the company the prize as Spain's fastest growing start-up. In the European field, Zinck's company ended up in third place. Whereas, according to Zinck, things aren't made easy for starters in Barcelona: “When I started with my first company in Enschede, after a morning spent at the Chamber of Commerce and the bank, we had everything arranged. In Spain, after six months you're still not finished. The bureaucracy keeps rumbling along, while you need all your focus to build and grow.”

“Above all, conducting business means: don’t be afraid”



## MARC ZINCK

- 1984 born in the United States
- 1996-2002 secondary school in Enschede
- 2002-2004 Electrical Engineering (University of Twente)
- 2005-2011 bachelor’s degree in Technical Business Administration (University of Twente)
- 2011-2012 master’s degree in Innovation and Entrepreneurship (University of Twente)
- 2012 innovator at TNO
- 2013 founding of Subasta de Ocio in Barcelona
- 2016 named Spain’s Fastest Growing Start-up

In Zinck’s experience, investors are also difficult to find. “We brought in a total of three million euros from Dutch investors over the past three years, including the co-founders of Booking, VakantieVeiling and payment platform Ayden. We didn’t have any luck with a single Spanish investor. It’s a like-knows-like world. Spanish investors prefer to invest in companies of Spanish owners that they know.”

### Continued development

To what does Subasta de Ocio owe its growth? “To the constant develop-

ment of the product,” says Zinck. “A final release no longer exists. You’re never finished. The service must always be better than last year. You must have a short innovation cycle and be flexible. You can do that with a small group, but with 40 employees that becomes slightly more difficult. Our organization is as flat as possible. Internal transparency: that’s what it’s all about. Everyone must be able to communicate with everyone and have access to information at all times. Data sharing is essential.”

Subasta de Ocio has reached a total of 1 million users. There is still room to grow, Zinck believes. He estimates the potential target group at 10 million Spanish users. There are also growth opportunities in other countries. “Our ambition is to double turnover every year.” And then? “At the UT, I was given a connection to the science. In future, I would really like to earn my doctoral degree. Perhaps in Twente, because that’s where my family lives. We want to move back to the Netherlands with our family someday.”



## SCIENCE IN TIMES OF POPULISM

Now that the British have decided to leave the EU, and the Americans have elected Donald Trump president, it appears that there will be exciting times ahead for the field of science. Not only because the participation of British colleagues in European-financed research has suddenly become uncertain, and because Trump is referred to as 'the first anti-scientific president', but above all because the growing influence of 'populist' ideas appears to run counter to a scientific approach.

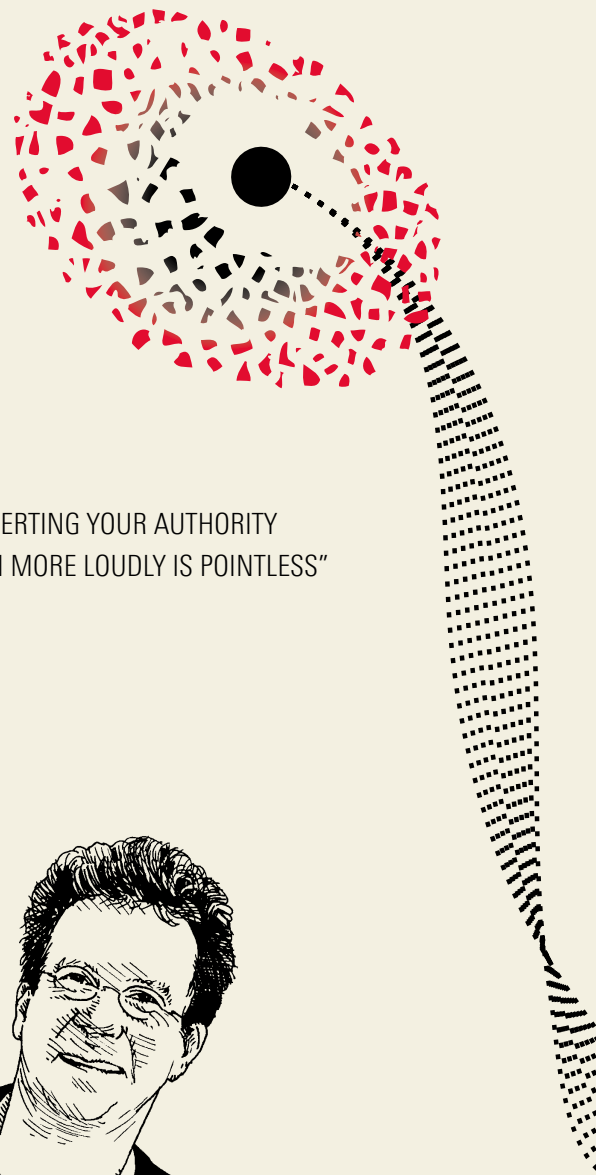
The examples of resistance to the scientific 'elite' are now piling up. Concerns about climate change are being dismissed as a leftist political conspiracy. Vaccination policy is in the self-interest of the pharmaceutical industry. Defending against criticism is impossible, scientists complain, because the value of scientific facts is simply not acknowledged. And in the meantime, anti-vaccination activists on Dutch news programme Pauw are given just as much speaking time as scientists, while they speak with very different levels of authority.

It is this word, 'authority', that I believe is the core of the problem. Because authority must be earned. Not just among colleagues in your field, but throughout society. And science can still learn a lot in this area from the medical world. After all, over the past decades, doctors have learned very well not to invoke their 'authority' too quickly. Patients do not believe the doctor by definition because he or she is the doctor, but take an empowered and critical attitude. When it comes to our health, it seems we are all populists. But that does not take away from the importance that we attach to scientific knowledge. If we want

a second opinion, that does not mean that we consider the doctor's diagnosis to be 'just an opinion', but that we want to collect as much information as possible to think along with them critically.

Interestingly enough, this critical attitude is entirely in keeping with a scientific approach. And looking at it in this way, the populism must actually be seen more as a form of emancipation than as unscientific stupidity. It is not resistance against the ideas of the elite, but against the elitist nature of science. Without people actually feeling heard, an elite group decides, based on assumed 'authority', that our consumption pattern must be altered due to climate change and that we must vaccinate our children while there is absolutely no opportunity to discuss it. In the opinion of populists, it is also impossible to give critique, because that is immediately decried by scientists as ignorant resistance against facts – even if they themselves try to contribute different scientific facts and insights to the conversation.

The response of science to climate sceptics and anti-vaccinators must therefore also follow the example of the doctors. Asserting your authority even more loudly is pointless. You must make that authority a reality by entering into a serious discussion based on arguments, and every argument must also be seriously discussed. That does not mean that 'ergo' climate sceptics and anti-vaccinators are right, but even less so that scientists by definition are always right. It is precisely in their shared critical attitude that science and populism can find shared ground. Therefore, let's hope that they actually do that. ●

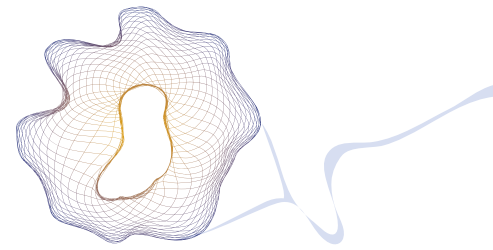


"ASSERTING YOUR AUTHORITY  
EVEN MORE LOUDLY IS POINTLESS"



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

# IN BRIEF



## 40 YEARS OF PUBLIC ADMINISTRATION

This year, the Public Administration programme celebrated its fortieth anniversary. The programme, which was founded in 1976, is the first full public administration academic programme in the Netherlands. The programme is now offered at various universities, but according to UT professor Bas Denters, the programme in Twente is distinctive.

“Because we in Enschede are working on the technology of the future, this is obviously the place to educate the administrators of tomorrow.” Since its inception, 4,375 people have successfully completed the programme. Twente administrators are active at all levels of public administration, science, the business world and various social organizations.



## DISPOSABLE CAMERA

Students of creative technology at the University have developed a ‘large dart’, using which you can safely throw a GoPro camera. The dart enables you to easily take spectacular photos and make film clips from the air. With a crowdfunding campaign, they wanted to collect funds to bring their product, called AER, to the market. And the campaign was a success: the students needed 70,000 euros, but using Kickstarter they were able to collect over 120,000 euros. The first customers received their dart in January.



## SYNTHETIC SKIN FOR SAFE ARTIFICIAL TURF

UT doctoral degree candidate Marina Morales Hurtado developed a synthetic skin with the same properties as human skin. In this way, you can examine the effect of sliding on artificial turf – knowledge that is relevant for the safety of artificial turf pitches. The industry has a substantial need for the synthetic skin. That is because sliding research is currently being carried out using test subjects or with removable skin surfaces, which raises ethical and practical objections. According to Morales Hurtado, her double-layer synthetic skin is indistinguishable from the real thing. “The mechanical behaviour of the skin, the physical and chemical properties, tribology, elasticity and hydration all correspond very precisely,” she explains. In future, her synthetic skin will be used in sliding tests by the FIFA and the UEFA.

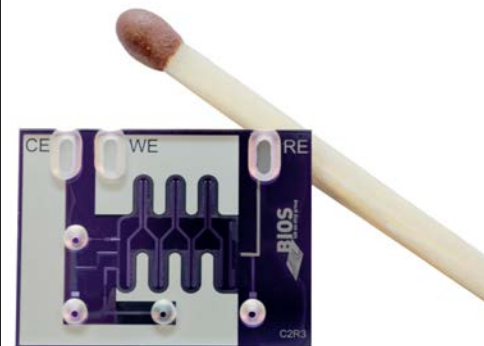
## HIGHEST TECHNICAL AWARD

Suzanne Hulscher, Professor of Water Engineering and Management, has been named Simon Stevin Master 2016. This is the highest distinction for technical research in the Netherlands. Hulscher received the prize, which comes with a monetary amount of 500,000 euros, in recognition of her innovative work in the field of river systems and coastal seas. STW, the organization that awards the prize, praises the manner in which Hulscher connects her research with the application of the research. "This ensures that the Netherlands remains at the forefront in the area of water management and hydraulic engineering." Hulscher considers the prize to be a "tremendous honour and recognition, not only for me, but also for my research group and the entire field."



## MICROMIXER

UT researcher Floris van de Brink has developed a fast and efficient mixer. Not a kitchen mixer, but an extremely small model, 0.1 square millimetres in size, intended for a minuscule laboratory on a chip. With this mini-laboratory, for example, you can test what the effect is of toxic substances on the protein haemoglobin in the blood. Foreign substances – such as poisons or medicines – sometimes 'live' so briefly that the effect cannot be effectively studied. The mixing of liquids, and very quickly as well, was very difficult at this scale. Van den Brink's mixer offers the solution: you can mix in liquids thanks to the innovative mixing technology within one second.



## AIR LUBRICATION

By injecting air bubbles near a ship's hull, you can reduce the flow resistance, considerably reducing the fuel consumption of a ship. In this process, the bubbles located between the hull and the water function as 'air lubrication'. Using a test setup, researchers from the UT were able to reduce drag by forty

percent. When they added a substance that ensured that the small bubbles in the setup remain small, the decrease in the friction was just four percent. The conclusion of the researchers: only large, malleable air bubbles can be used to sufficiently reduce the resistance of a ship.

## 15 YEARS OF NIKOS

NIKOS, the department for entrepreneurship, strategy, innovation, international management and marketing at the UT, recently celebrated its fifteenth anniversary. NIKOS is the first academic centre in the field of entrepreneurship in the Netherlands. The centre connects research and education with business development, consultancy and training. The anniversary was celebrated with a series of fifteen publicly accessible venture and master classes. The charity that was linked to the anniversary was the *Enschede Refugee Entrepreneurship Initiative*. In total, eighteen refugees pitched their own entrepreneurial ideas.



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



Own photo ENIAC (from left): Jarmo van Lenthe, Ralph Broenink, Sandra Drenthen, Evenynke Terpstra, Nils van Kleef

## LAND SAILING, SHEEP HERDING AND BUILDING SAND CASTLES

**ENIAC is the alumni association for former students of the departments of Computer Science, Telematics and Business and Information Technology. Among other things, the Board organizes graduation speed dates to bring alumni and current students in contact with each other.** BY Lidewey van Noord

whether they were interested.” “A major success,” says Drenthen. “The companies were keen to participate. The sign-up cap was reached in no time, which resulted in a few good matches.” In addition to the graduation speed date, ENIAC awards the ENIAC Thesis Prize each year to encourage graduates to produce a high-quality thesis.

### Dream

The alumni association organizes a cocktail party and activities four or five times a year, such as blokarting (land sailing), sheep herding, sand castle building or a CSI activity. In addition to relaxation and fun, the Board also aims to offer substantive activities. “Next year, we want to organize a mini-symposium”, Drenthen explains. We are now looking for people that are in a good position at an interesting company and would like to talk about that. In doing so, we hope to also reach members other than the core group that comes to cocktail parties and activities. My dream activity is a two-day symposium with overnight stay and various courses. But let’s start with one day and a course in the afternoon. Perhaps we can expand the activities in future.”

### Become a member

The treasurer of ENIAC, Evenynke Terpstra, is still a student and is following the master’s programme in Computer Science. “As a bachelor, you are already an alumnus and you can become a member. I often went along on activities and wanted to become active. Because so many alumni work at interesting companies, you build up a good network. You are often able to maintain contact with fellow-students from your own year, but with the cocktail parties and activities of ENIAC, you also regularly run into alumni from previous and later years. Additionally, people who already graduated some time ago often have interesting stories about their work.”

Sandra Drenthen is association chair. She graduated three years ago and now works as a consultant at Alten Nederland. “ENIAC is a fun association made up of a fun group of people. I like to organize things and I have been active on the Board since last August. Like me, my fellow Board members were all active with study association Inter-Actief.” That is also true for secretary Ralph Broenink. He works as an IT security consultant at the Ministry of Defence and is able to effectively combine his Board position at ENIAC with his work. “His work with the Board takes up just a few hours a month and is a nice way to stay in touch with other alumni.”

### Speed date

ENIAC (which refers to the world’s first computer) tries to bring alumni in contact with the current generation of students and vice versa. “One example is the graduation speed date for master’s students,” Broenink says. “We asked companies in our network if they had a graduation project available. Next, we invited fifteen entrepreneurs and fifteen master’s students and sat them across from each other at a table. They were given five minutes to chat with each other, after which they could then indicate

**Sandra Drenthen:**  
“My dream activity is a two-day symposium with overnight stay and various courses.”

## YOUNG ALUMNI NETWORK UNIVERSITY OF TWENTE

A new network was recently added to the UT: the Young Alumni Network, whose goal is to connect recent UT graduates throughout the Netherlands. The UT is not the first university with this type of initiative. Utrecht and Leiden were ahead of the UT. Board member Ivo ten Brinck (Industrial Design, IO '16) gives us a view of the plans.



From left: Ivo ten Brinck, Anke Renkens, Pedro Meyer, Ugur Bagci

Anke Renkens (IDE '12), Portfolio and Innovations planner - Unilever  
Pedro Bernardo Meyer (BA '11), Country Manager - Optimizely  
Ugur Bagci (EE '12), Analog Electronics Design - ASML  
Ivo ten Brinck (IDE '16), Looking for a new challenge!

## INTERESTED IN A REUNION?



Photo: André ten Damme

"The Board is composed of myself, along with Anke Renkens, Ugur Bagci and Pedro Bernardo Meyer. I think that I am an excellent example of someone that can profit from a network such as this. By means of a network of UT alumni, hopefully I can establish contacts to find a nice challenge as an environmentally conscious designer. "The Young Alumni Network was created mainly to assist recent graduates in finding their first job, or indeed to be a springboard for a new challenge. We would like to do that by bringing alumni together at events such as readings and workshops.

"A new network in addition to the existing one is needed because young recent graduates have different needs than, for example, retired UT alumni. That is why the YAN has an age limit (to be loosely interpreted) of 35 years. The new network offers events relevant for young graduates. This can include a workshop "How do I buy my first house?", or "How do I negotiate for the best conditions for my (first) job?" This events are held at unique locations where you otherwise would not simply be allowed in without the power of the network. Considering that all of us are former-students, we finish off with a good drink.

"We are currently hard at work on plans for the kick-off event. We have our eye on a cool, suitable location for this event and we hope to meet large numbers of you. In addition to the events that we ourselves organize, we also provide information on other alumni associations and circles of the UT and elsewhere.

"For the new year, we are also looking for four enthusiastic new Board members, preferably with work experience, under 35 years of age, with a UT bachelor's or master's degree. Administrative experience at the UT is a plus, but not a requirement."

**Interested? Do you have tips for an upcoming event or would you like more information about the scheduled events? If so, go to our website: [www.utwente.nl/young-alumni](http://www.utwente.nl/young-alumni) or contact Joe Laufer Relationship Manager alumni ([j.laufer@utwente.nl](mailto:j.laufer@utwente.nl))**

In the second weekend of September, "Eteje" House at Witbreuksweg 379-laag, organized their annual reunion. "Because this year was the thirtieth reunion, we felt that it was time for a unique location: back to our roots, back to the university, back to the campus," says one of the participants.

They are not the only UT alumni that had a reunion in the past year. Many student houses, study, student and sports associations linked up with each other. This inspired a number of former residents of Calslaan 5-1 to organize a reunion for all of the alumni that lived there in 1967. Are you one of these alumni, or would you like to organize your own reunion? Let us know and we will be happy to help you reach your former fellow-students and with planning a number of unique campus experiences during your reunion.

## UT ALUMNI ON THE MOVE

■ **Behnam Behroozpour (EE '12)** started in August 2016 as Research Engineer at the Bosch Research and Technology Center. Before that, he worked for years at the University of California, Berkeley.

■ Since September 2016, **Jethro Beekman (EE '11)** has held the position of Senior Engineer at Fortanix in California. In the past, he gained work experience at companies such as Intel and LSI.

■ **Wietze Beukema (CS '16)** started in September 2016 as Analyst Forensic Technology at PwC UK, after completing his dissertation internship at TNO in the field of Cyber Security Research. He had previously done an internship at PwC UK.

■ Since September 2016, **Peter Borman (PhD '93)** has worked as Vice President Research and Development at NKT cables Germany. Starting in 2002, he held various functions at SABIC Technology & Innovation, and since 2013 he has been employed at SABIC as Director Regional Technology Affairs Europe.

■ Starting June 2016, **Renzo Daemen (Industrial Engineering and Management, TBK '01)** now works as Manufacturing Trainer & Facilitator for Tesla Motors. Before that, he worked as Project Manager at Abbott Logistics for five years.

■ As of October 2016, **Jeroen Diepgrond (CT '89)** has been Global Photo Initiator Business Manager at IGM Resins. Jeroen has more than 20 years' experience in the industry and before coming to IGM Resins, he worked as Senior Marketing/Product Management Manager at BASF.

■ Since July 2016, **Kim Larisa Dimitrovic (ES '15)** has been Associate Relationship Manager for LinkedIn in Dublin. She had already worked in Ireland for Google, including as Google Apps for Work Online Sales Representative.

■ Starting September 2016, **Bob Haarman (CS '07)** is now Software Engineer at Google. Previously, he worked for as Software Engineer for Facebook for five years.

■ Since August 2016, **Wim Hersbach (BIT '10)** has worked as Senior Business Analyst at Hyperwallet Systems Inc. in Vancouver, Canada. Prior to that, he was Product Manager at companies such as EasyMarkit and Regiecentrale.

■ Starting 16 November 2016, **Marijke van Hees (BSK '90)** has been appointed chair of the Council for Culture, the main advisory body of the Cabinet for art and culture. Previously, she was employed in positions such as Alderman of the Municipality of Enschede in the area of culture, finance, economics and innovation.

■ As of August 2016, **Mohammed Khatib (PhD '09)** now works as Software and Performance Engineer for Facebook in California. After completing his postdoc in Twente, he was employed for NEC Laboratories America and Western Digital.

■ Starting in May 2016, **Somayah Malakuti (PhD '11)** has been a Scientist at ABB Corporate Research in Ladenburg, Germany. Since July 2013, she has worked as a postdoctoral researcher in the area of Software Architecture and Design at the TU Dresden.

■ **Zuzana Malicherova (PA '12)** has been employed since June 2016 at the United Nations Reliefs and Works Agency for Palestine Refugees in the Near East (UNRWA) with the EU Affairs portfolio. Prior to that, she worked for organizations such as the UNPO and the International Crisis Group.

■ Since 15 June 2015, **Lidewijde Ongerling (Public Administration, BSK '83)** has served as Secretary General of the Ministry of Infrastructuur and the Environment. Prior to that, she served as Director-General for Mobility and Accessibility at the Ministries of Transport and Public Works and Infrastructure and the Environment.

■ **Kingsley Obi (Geoinformatics '12)** has worked as Geomatics Technologist for Measurement Sciences Inc. in Calgary, Canada since July 2016. Prior to that, he was employed in Nigeria as Project Manager at the Federal School of Surveying.

■ Starting in October 2016, **Marissa Otten (CW '13)** has worked as Fundraiser at the Alumni Relations Bureau and University Fund at the University of Amsterdam. Prior to that, he worked as Account Manager Development & Partnerships for the NEMO Science Museum in Amsterdam.

■ In July 2016 is **Harm van Seijen (Science and Technology, TN '03)** started as Research Scientist at Maluuba in Montreal, Canada. Before that, he pursued a postgraduate education at the University of Alberta.

■ Since September 2016, **Charles Vincent (Mechanical Engineering, WB '90)** has been CEO of Meratus Line in Surabaya, Indonesia. Prior to that, he worked for many years at companies such as PwC and IBM in South East Asia.

■ Starting September 2016, **Jan de Visser (Applied Mathematics, TW '90)** has worked as Software Developer at Karos Health in Canada. Previously, he worked in various positions at companies such as Ericsson, Architel, Digital Fairway Corporation and Research in Motion.

■ **Anton Weijnsfeld (CS '95)** has been employed since April 2016 as Senior Business Process Consultant at LEGO Group in Denmark. Prior to that, we worked for many years for the Danish medical equipment company Widex.

■ Since July 2016, **Wout van Wijk (CW '05)** has served as Executive Director of News Media Europe. Prior to that, he was Senior EU Affairs Manager at Huawei Technologies in Brussels.

■ Since April 2016, **Paolo Zambon (PhD '97)** has been working as an Engineer at Apple in California. Between July 2011 and January 2016, he was affiliated as Senior Scientist at AOptix Technologies.

■ Starting in July 2016, **Felix Zschockelt (BA '09)** has worked at HR Manager at Continental Teves AG & Co. oHG in Frankfurt am Main. Prior to that, he worked for Hay Group and Heraeus Holding.

■ **Nynke Dalstra (Mechanical Engineering, WB '93)** has been appointed Chief Financial Officer at engineering firm Royal Haskoning DHV. She has been employed at the engineering firm since 2009 and has held positions including Corporate Director Finance and Interim CFO. Prior to her period at Royal Haskoning DHV, she was employed at the energy company Epon and Akzonobel.

■ Starting on 1 October 2016, **Herry Nijhuis (CT '85)** started as new Managing Director of STW. Prior to that, he was employed at the Netherlands Enterprise Agency (RVO) where, as Team Manager, he was responsible for the Agro & Food chains and Green Deal portfolios. Prior to that, he made a career at the then-research institute ATO DLO, Novem and Agentschap NL.

De meest recente personalia vindt u op [twitter.com/alumniUTwente](https://twitter.com/alumniUTwente). Zelf een nieuwe functie? Kent u iemand die iets bijzonders deed of een mooie prijs won? Tips zijn welkom via [alumni@utwente.nl](mailto:alumni@utwente.nl)

## COLOPHON ALUMNI NEWS

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**PROFESSOR DE WINTER PRIZE FOR JEANNETTE HOFMEIJER**

During the celebration of the Dies Natalis on Friday, 25 November, Jeannette Hofmeijer, neurologist and researcher at the Department of Clinical Neurophysiology, was awarded the Professor De Winter Prize.

Hofmeijer received the prize for the article *Early EEG contributes to multimodal outcome prediction or postanoxic coma* that was published in the scientific journal *Neurology*. The research shows that, using EEG measurements, you can more effectively predict the recovery of brain activity during a coma as a result of oxygen deficiency. Current methods only make a correct estimate quickly and reliably in just ten percent of patients. Using the new method – in which you conduct a continuous EEG measurement and look at the speed of recovery of the brain activity – that estimate can be made in approximately fifty percent of cases. Hofmeijer demonstrated that recovery over time is a better indicator for the seriousness of the brain injury than one short-term measurement at one point in time, as is the current practice.

**Connecting link**

The jury stated that Hofmeijer is an ideal connecting link between medical practitioners and the academic world. “Her research not only translates fundamental research into medical practice; it also uses a practical problem from clinical practice as a starting point.”

**Professor De Winter Prize**

The Professor De Winter Prize, named for the professor who died in 2005, is an international publication prize for top female talent. The prize, which consists of a monetary amount of 2,500 euros and a certificate, is funded by the Professor De Winter Fund, a named fund established with the University Fund Twente. This is the tenth time that the prize has been awarded.

**600 DONORS CAN'T BE WRONG!**

More and more alumni and relations are showing their commitment to the University of Twente by means of a donation to the annual campaign of the University Fund. Since 2014, the number of donations has grown from 250 to nearly 600 a year. And with your help, we want to continue this growth in the new campaign that will kick off in December. Students and scientists of the UT are pleased with all of the contributions and the incredible involvement!



**YOUR CONTRIBUTION COUNTS, YEAR AFTER YEAR**

We have selected four projects for the 2017 annual campaign. In addition to the annually recurring Kipaji Scholarship Fund, this year's projects are: study trips for students, RoboTeam Twente and the research into Parkinson's. For more information, go to [www.utwente.nl/maakhetverschil](http://www.utwente.nl/maakhetverschil). We also ask that, this year, you once again support our ambitious students and scientists by means of a contribution to one of these projects. The more donors, the more students benefit and the sooner researchers can make their breakthroughs. If we have your contact details, you will receive a personal donation request in December.

**FUNDRAISING CAMPAIGN JOS ALFERINK**

One example of a unique fundraising effort comes from alumnus Jos Alferink (Chemical Technology, 1987). On his fiftieth birthday, he took up a collection to benefit the research of professor Robert Passier into 3D bioprinting of miniature models of a heart. This resulted in a gift of 500 euros! As a token of gratitude, Jos, along with his daughter, were given a tour of the laboratory by Robert Passier.



**DONOR RECEPTION 2017**

All donors will be invited for the annual donors' gathering, where students and researchers will report on their project and show how the donations are being well spent. The donors' reception will be held on Friday, 13 October 2017. Save the date! We hope to have the honour of welcoming you there!

**WOULD YOU LIKE TO DONATE?** Haven't received a donation request? Or would you like to immediately make a donation? Go to [www.utwente.nl/maakhetverschil](http://www.utwente.nl/maakhetverschil) or make your contribution by bank transfer to IBAN NL 09 ABNA 0592 7191 89 in the name of University Fund Twente, specifying annual campaign and the project.



**KICK-START 'MUIRVAST'**

There are plenty of squash-playing UT students. For years, they could be found in droves in the Twentehallen, where they can get in for free with a UnionCard. But they still did not have their own association. That is about to change now, thanks in part to a contribution from the University Fund Twente: Muurvast Student Squash Association. The main added value of our own association is finding fellow squash players, offering training and organizing tournaments. And there is still no squash court on the campus. But, according to Mechanical Engineering student and Muurvast secretary Koen van Haren, that can change: “In other university towns, the squash association is one of the larger associations. Who knows, maybe if we grow, the UT will decide to build squash courts in the Sports Centre.”



**UTOBERFEST**

The tent at the event site of the UT was nice and full on 28 September: approximately 450 students took part in the first Utoberfest. Visitors dressed in keeping with the theme and sang at the top of their voices to the sounds of the duo Gipfel Power. Conga lines also snaked their way through the tent. Several study associations have been organizing an Oktoberfest party for their own members, but this year it became a joint UT-wide event. W.S.G. Isaac Newton, ConceptT, S.V. Paradoks, I.C.T.S.V. Inter-Actief and S.G. Daedalus handled the organising and the University Fund Twente provided a financial contribution.

The fact that the Utoberfest came about in this form – including unlimited alcohol for a fixed price – was not simply a matter of course. The Executive Board initially had quite a few reservations. In close consultation with the UT Event Agency and the Municipality of Enschede, a thorough disaster plan was prepared and the party was given the green light.

## PENGARUH STUDY TOUR

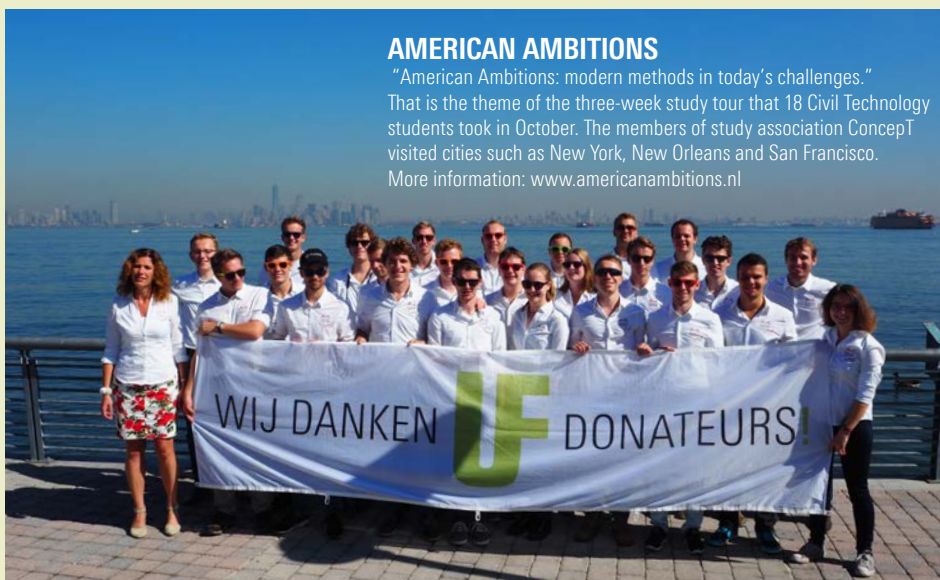
Alembic, the study association of the bachelor's programme Chemical Technology and the master's programme Chemical Engineering, travelled through Indonesia from 15 July to 5 August with a 25-person group. The study tour brought 21 students and 4 guides to two islands and five cities.

The first destination was the city of Palembang, on Sumatra. The students visited a rubber plantation, rubber processing companies and the largest fertilizer production location in Southeast Asia. Next, it was time to head to Java, where the group visited cities such as Cilegon, a small city with large industries in steel production, polymers and chlorinated chemicals. Next, the capital city of Jakarta awaited. The traffic there is often at a standstill, but an even greater problem is the ground subsidence, as a result of which the city faces major water problems. The participants visited several international companies and a university in the surrounding area. After Jakarta, Bandung was next, with a stopover in Bogor for a visit to the famous botanical gardens. In addition to visiting a company or two, there was room for cultural excursions, such as to a tea plantation, a volcano and a performance with bamboo instruments. The final destination was Yogyakarta, where the group visited another university, as well as the temple complex at Prambanan and Borobudur. More information: [www.alembic.utwente.nl/studiereizen/buco2016](http://www.alembic.utwente.nl/studiereizen/buco2016)



## AMERICAN AMBITIONS

"American Ambitions: modern methods in today's challenges." That is the theme of the three-week study tour that 18 Civil Technology students took in October. The members of study association Concept1 visited cities such as New York, New Orleans and San Francisco. More information: [www.americanambitions.nl](http://www.americanambitions.nl)



## ROBOTTEAM

The RoboTeam Twente, which builds football-playing robots, wants to take part in the RoboCup World Cup in July 2017 in Nagoya, Japan. The University Fund Twente is supporting this new initiative. The student team consists of thirteen members, twelve men and one woman. Eight of them focus on the team full-time. "We want to make it into the small size league," says team member Iris Weijers. Our six small autonomous robots and substitutes will then compete with other teams. Our ambition? We want to win in this category within three years." The team members believe that they have an advantage, because they are the new kid on the block. "We look at the robots with a fresh perspective. Most teams have already been working with the same hardware for years. We can come up with something new in terms of both hardware and software." Right now, a mechanical prototype is ready for testing. Weijers and her team are still looking for companies interested in investing in the team. "One of the benefits is that the robotics research is one of the showcases of the UT."



## 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)

### Universiteitsfonds Twente

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T.n.v. Stichting Universiteitsfonds Twente, Enschede

Safe & Secure was the theme of the Twente Science Week, held from 28 September through 1 October. How safe is your information on the internet? Must we be concerned about natural disasters? And all of those drones in our airspace: isn't that dangerous? The science week focused on these and other questions.

# TWENTE SCIEN

For this, the Old Market and surrounding areas were transformed into a location where there was a great deal to do, see and experience in the area of science, culture and entertainment. In two large dome tents, the best of science, technology and art were brought together.





WERE YOU THERE?



# CE WEEK



# ESSENTIAL PUZZLE



Amidst the equipment of Solmates, Arjen Janssens of Solmates (left) and Arne Leinse of LioniX examine an optical switching chip.

# PIECE FOR 5G

Three Twente spin-offs, LioniX, Satrax and Solmates, are developing optical switching chips that use a million times less energy, thus contributing to the next standard for mobile internet: 5G. The spin-offs received a European subsidy of 1.6 million euros to do so. BY Hans van Eerden PHOTOGRAPHY Arjan Reef

5G is developing rapidly in projects such as the European research project HAMLET, which focuses on a new generation of even more efficient optical chips. The developers hope that the chips will offer a solution for the energy-guzzling data traffic of mobile internet. The three UT spin-offs LioniX, Satrax and Solmates are playing a full role in that process.

The three companies have their roots in the UT research institute for nanotechnology MESA+. LioniX is the global leader in the manufacture of optical chips in silicon nitride. Satrax is a spin-off of LioniX for specific radio frequency applications, such as antennas that can transmit and receive very precisely using optical chips. Solmates is a specialist in *pulsed laser deposition*, the application of ultrathin layers on various surfaces.

## Switching chips

The internet traffic runs via glass fibres to antennas that convert optical signals into radio signals for smartphones, tablets and other devices. The switching chips utilize a thermal principle: using rapid heating, they transmit briefly and in that way become 'tuned', which enables them to switch signals. That works, but efficiency is another matter.

Solmates builds machines for applying piezo layers. For the 5G

application, it is a piezo layer that handles the switching function: an electrical voltage on the piezo material generates a mechanical tension that can tune the optical chip. This works a thousand times faster than thermal and is more than a million times as energy efficient.

"Other companies are developing the applications for that, we are helping optimize those layers," says Solmates CEO Arjen Janssens.

If we adjust the settings of our machine or the material specifications, that will have an impact on the chip beneath. You cannot simply put a roof on a house willy-nilly; it has to fit. Based on that, you can see the importance of the cooperation with the other two spin-offs."

"Thankfully, we have known each other for many years," says Arne Leinse, Vice President at LioniX. In these types of projects, you are dependent on each other's contribution; in that case, it is good if you are close together. You must conduct open discussions and sometimes look at each other's cards. That is only possible in a trusted environment."

## Incubator

Such as the High Tech Factory, the incubator on the campus. Solmates builds its machines there. "We can focus entirely on our technology, because all of the facilities are already there," Janssens says. "We

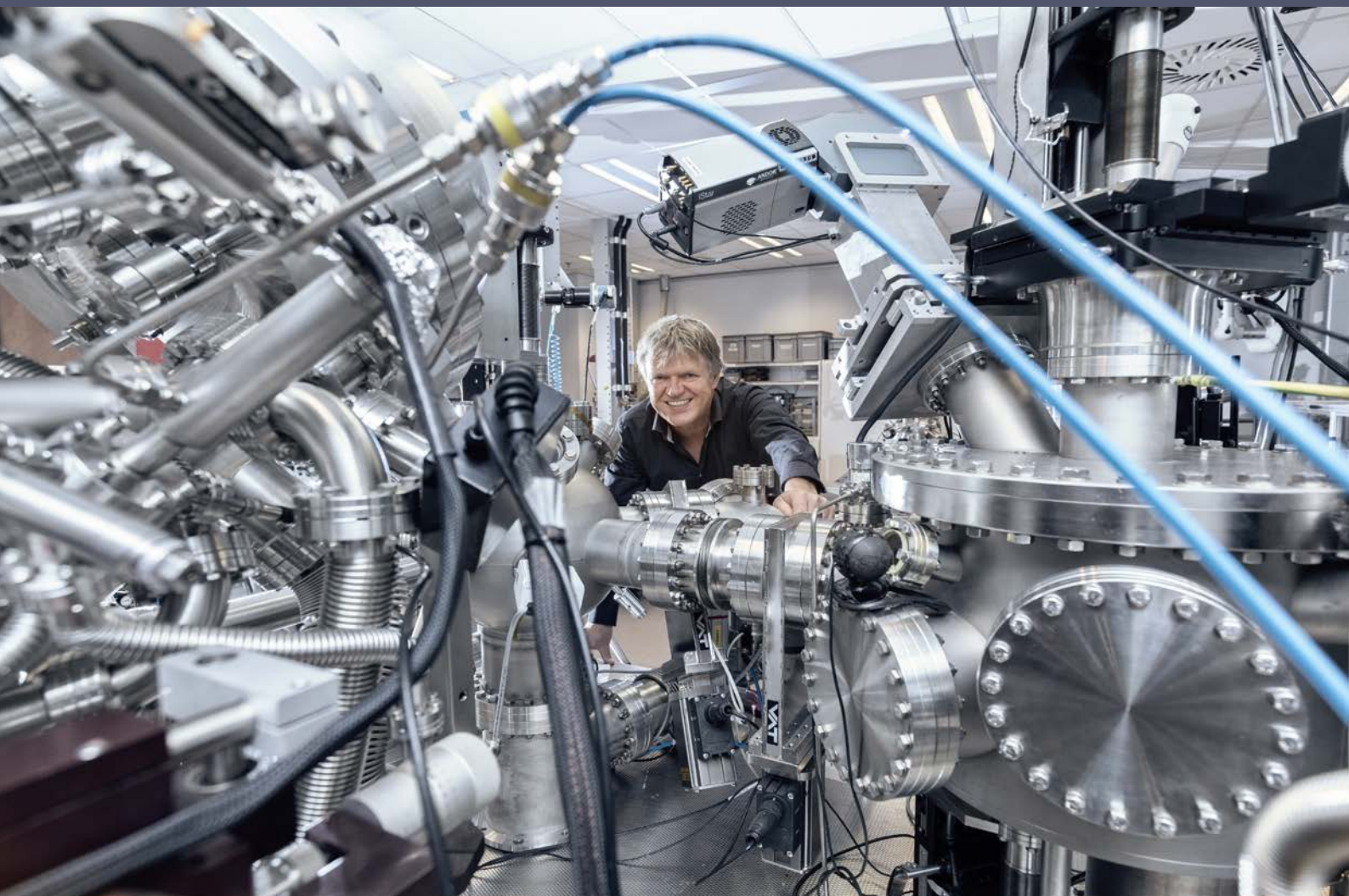
are slowly branching out now, but we always stay close to MESA+." LioniX and Satrax also started out in the High Tech Factory, but are now housed in The Gallery, a short distance away on the campus. "Close to the NanoLab, the MESA+ cleanroom," says Leinse. "There must not be any obstacles whatsoever for our engineers to go to the lab."

"There must not be any obstacles whatsoever for our engineers to go to the lab"

## Showcase

The first chips have been produced. "Now, it's important to improve their performance," says Leinse. In a few years, LioniX International hopes to deliver the first products to the large telecom companies, Leinse reports. "The rollout of 5G will begin in 2020, and our modules will have to already be hanging on the masts." A huge market is beckoning: there are now 18 million antenna masts worldwide in which these chips can be used. "Yes, you can say that an essential puzzle piece for 5G is being made only in Twente," says Janssens. "If we get this product stable, large numbers of chips will be going through our machines. This can become a wonderful showcase."

Guus Rijnders is known in his department as 'the tinkerer'. He started as a laser technician in the precision mechanical workshop and he is now professor of nanoelectronics and is working on a molecular breathalyser that detects lung cancer. BY Marc Laan PHOTOGRAPHY Rikkert Harink



# TINKERER BUILDS BREATHALYSER THAT DETECTS LUNG CANCER

Guus Rijnders is a true educator. We have barely entered his workspace on the campus and already he is giving a lecture in his field of study: research into non-organic materials. "You can find a lot of inorganic substances, for example, in your smartphone. That has dozens of sensors and electronic components made of glass, iron, ceramics. And silicon oxides, or in other words: sand. Those materials are necessary for various functionalities of the device."

The problem is that data traffic is increasing enormously due to smartphones, tablets and PCs, as a result of which worldwide electricity consumption is growing. "At some point, that increase in electricity consumption must stop," says Rijnders. "You cannot continue to build new coal-powered power stations."

#### *What solutions are there for that energy problem?*

"We are working on that. Electronics manufacturers are stuffing increasing numbers of components into a square centimetre. To be able to continue that trend of miniaturization, they need new substances, particularly if you want to build energy-efficient sensors and electronics.

Our department looks for materials such as these, usually complex oxides on a nanoscale. We also hunt for materials that are suitable for use as piezo elements, with which for example, the inkjet printers made by Océ fire their ink droplets onto the paper. That printer head must be made ever smaller, more precise, faster and more energy efficient.

"Piezo materials are in everything: they play a role in lighters, distance sensors in a car bumper and in an ultrasound scan of a child in the womb. We conduct fundamental research into new materials that deliver the best piezo effect on an atomic scale without using too much electricity."

#### *Have you already succeeded in doing that?*

"Piezo elements still contain many PZT connections: lead, zirconium, titanium and oxygen. This is a ceramic that consists largely of harmful lead. A great deal of research is being carried out worldwide into materials that replace PZT. Together with researchers from Groningen, we are conducting research into lead-free quartz for piezo elements. We suspect that you can change the atomic structure of quartz to enable it to deliver the piezo effects. If we are successful, we will have fundamentally demonstrated that you can change the structures of non-organic materials."

#### *Fundamental research or applications for industry?*

"In the lab, we experiment fundamentally with materials on atomic nanoscale. We want to know whether they can produce energy-efficient piezo effects. At the same time, we are working with companies such as Océ, Philips and ASML on applied research into energy-efficient printers and health applications with piezo switches.

"I believe that valorisation of scientific research is important" During their studies, our students must come into contact with fundamental research into materials, but they must also conduct applied research. Most students end up in the business world. Which is why I encourage them to seek public-private collaborations."

#### *You like to refer to yourself as a tinkerer.*

"After my HTS, I was given a final thesis project at the University of Twente. I soon became a laser technician and I built mainly devices. It apparently soon became obvious that I work with an academic view. That resulted in my earning my PhD and an appointment as a university

lecturer, which grew into a professorship in nanotechnology. But I'm still a tinkerer, too. While working on my PhD, I built a device that can stack atoms. I still benefit from that practical knowledge.

"I only give lectures a few times a year. I try to sow the seeds with students to allow them to excel. In addition to my research, administrative work takes up about half of my schedule. I am the Chair of the Department of Anorganic Materials, as well as Scientific Director of the MESA+ Institute. That comes at the expense of my tinkering drive. But tinkering on a new organizational structure for the university is also satisfying work."

"I believe that valorisation of scientific research is important"

#### *An example of a good application?*

"Early next year, we'll be carrying out a trial with a breathalyser that detects diseases such as lung cancer in the breath of patients. Doctors now have very few devices that can measure that. They operate mainly based on bodily signals. In our lab, we have gotten piezo sensors working that can detect various molecules in a very sensitive manner. Your breath and your urine contain molecules and DNA traces that are known to be markers for various diseases. You can build a sensor that recognizes these marker molecules for conditions such as asthma and cancer. We are now going to test that clinically in cooperation with the MST in Enschede and the AMC in Amsterdam. Within one or two years, we will know whether we are searching in the right direction. Our goal is a breathalyser that can detect diseases such as lung cancer with 99 percent certainty."



BOET KREIKEN, TOP MANAGER AT KLM AND UT AMBASSADOR:

# “I RECEIVED A BROAD RANGE OF TRAINING THAT I GREATLY BENEFITTED FROM”

An international career. That was what Boet Kreiken wanted when he began his Public Administration study in Twente in 1976. And he succeeded: for years, he has travelled the world as a top manager at KLM. BY Marieke Vroom FOTOGRAFIE Personal photo

Kreiken was born with international ambition in his genes. His parents lived and worked in various countries and he spent the first year of his life living in South Africa. His father was a business economist and later Rector Magnificus of the Technical University of Twente, the predecessor of the UT. Together with his father, the young Boet began paying visits to companies at an early age: “As a child, I was allowed to accompany my father on his business trips to cities like London and New York. I would go along with him to his meetings and waited in the hallway at large organizations until he was finished with his meetings.”

## **Economics, people and politics**

Kreiken was among the first class of public administration specialists in the Netherlands. Early on, he found his study difficult: “It was an entirely new programme and we were actually guinea pigs. I found the cohesion between the courses to be lacking. We were taught mathematics by a mathematics professor, law from a law professor.” Nevertheless, as his studies progressed, Kreiken learned to make connections more effectively and he found the direction that interested him: the combination of economics, people and politics. “I received a broad range of training that I greatly benefitted from.”

Kreiken built up an active student life for himself. He lived in Huize ‘t Pott on Oldenzaalsestraat, where he made life-long friends. They still go on holidays together every two years. “Preferably to places that are somewhat less obvious: Iran, Spitsbergen, Papua New Guinea.” As the drummer in a band, the student Kreiken played regularly at the Vesting Bar and at parties. He is still a drummer, but no longer at student parties. He recently performed with his jazz band, The Watermelon Men, at the Carré Theatre. “Well, in the foyer.”

## **Various functions**

At Airbus Industries in Toulouse, he graduated in international industrial cooperation. He has not left the



aviation industry since. He served in the Dutch Air Force and then ended up at KLM, where he held various managerial positions: from Cargo, IT and Pricing & Revenue management to Chief Information Officer and Area Manager for Asia and Central and South America. "At that time, I could literally say: I was born in Africa, I live in Europe and I work in Asia and South America."

### Good connection

Now, Kreiken works mainly in Europe as Managing Director of KLM Cityhopper. The largest regional airline company on the European continent offers roughly 100,000 flights each year to 58 European cities. He is also President of the European Regions Airline Association,

the trade organization of 195 regional airlines and other players in the aviation industry. Kreiken believes that a good connection between cities is crucial for the development of Europe: "It ensures that even isolated places can remain culturally and economically attractive. I think it's really cool that I can contribute to that. Aviation is already a wonderful industry to work in. At a large international company like KLM, you literally breathe in unison with the world. I work with top professionals, I deal with the customers, the technicians, the cockpit and cabin crew members and partners throughout Europe. Thanks to my education, I can respond to that. I understand politics and I understand how it works in the EU and

what economic, technical and social developments are underway. It's challenging work. It's even difficult at times, but I enjoy it very much."

### Footsteps

Since recently, Kreiken has also been one of the official ambassadors of the UT. In that position, he is following in the footsteps of his father who, after leaving the UT, also continued to be involved at his university for many years. "It is important to keep each other on our toes about what is happening and what opportunities and developments arise. This means we can keep innovating constantly. I feel very honoured being able to do that, and I would like to make a meaningful contribution to the university."

# AT HOME IN





Unlike all the other student houses: the ITC International Hotel, in the heart of the city. Colourful accommodations for 400 students from more than forty countries. A look inside the hotel that is home. BY Esther Windt PHOTOGRAPHY Arjan Reef

# THE HOTEL

The hotel lobby: deep blue walls and lamps, purple, orange and green lounge chairs, a permanently staffed reception area, a table with computers. Receptionist Marieke Engelbertink explains that, at this time, students from 42 countries live in the hotel. "We facilitate the residents as much as possible so that they can spend all of their time on their studies," Marieke says. "The rooms are cleaned weekly, there is free Wi-Fi in the lobby, there is a study area and every floor has a communal kitchen."

The hotel has fifteen floors and has 398 single rooms. Nearly all of the rooms are occupied. The students sometimes stay here for less than a year, but often much longer. They are not only students that are earning their master's degree at the Faculty of Geo-Information Science and Earth Observation (ITC) or are working on a PhD programme, but they are also students of other faculties.

At the Globe, it is peaceful in the communal study area. Goncalo Silva comes from Portugal and is sitting together with a fellow student and countryman working diligently. He has been in the Netherlands for just a month and a half and says he quite enjoys living in the hotel. "It's a little expensive, but the rooms are good and I enjoy the contact with other residents on my floor. They are people from Mexico, France, Turkey, Uganda. That international character appeals to me. We sometimes cook and eat together." He is a bit homesick. In particular, he misses the Portuguese climate and the food. He is impressed by the Dutch landscape and he is amazed by the fantastic infrastructure for cyclists.

In the room with the washing machines, Faried Rahmany from Indonesia is standing behind an ironing board. Wearing his flip-flops and sports trousers, he looks like he feels right at home. "This is a nice hotel and everything is within walking distance." He will stay here for approximately 19 months while he earns his master's degree. Thanks to the internet, he does not miss his wife and child too badly. "We can communicate very well online and they might come

visit me someday, although that's very expensive." In the short time that he has been here, he has already made new friends, all from his homeland. "I consider them to be my new family, we cook and eat together. To be honest: they cook and I eat with them, because I've never cooked in my life," Faried laughs.

Other fellow countrymen also seek each other out at this hotel. A group of Chinese students sit together, Portuguese students are studying together, two people from Bahrain are in the lift. It is nice to speak your own language and to associate with people of your own culture, the students confirm, but all of them also say that in fact they enjoy very much associating with people from all around the world.

"Truly a 'deluxe' student house"

Five students from Ethiopia are sitting in the lobby. They all met at the hotel. All of them have been here since the start of this academic year. Siefu says he likes everything about his stay in the Netherlands: "Everyone is helpful and willing to work together. And everything is incredibly well-organized, that's very different than in Ethiopia." The others nod in agreement. The fact that the five countrymen are now sitting together is a coincidence, the group says. "For example, there are people from China living on my floor and I actually enjoy integrating." Siefu and two of his comrades show their room on the eleventh floor. "Take a look at that wonderful view," laughs Siefu. His room looks neat and tidy. It is a simple, neat room, including a large desk, a few chairs, a small TV and a bathroom.

The location of the kitchen on the floor can be smelled from afar. A spicy aroma, unfamiliar to Dutch noses, finds you from some distance away. Is the kitchen filled with dirty or half-filled pans and used plates? No: it looks spic and span. And it's no wonder: the kitchen is cleaned daily for the students.



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

# ACTING INSTEAD OF DREAMING

"I did a project for Lego without them knowing it"



For a year, Jonathan Bennink set everything aside to make his dream a reality: to work at Lego. The perseverance of the alumnus in industrial design was rewarded: with a job as a senior concept designer in Denmark.

BY **Marieke Vroom** PHOTOGRAPHY **personal photo Jonathan Bennink**

Immediately after completing his studies, Jonathan Bennink started his own design agency. But after a few years, the challenge had worn off. When the alumnus bought himself a Lego set for himself for Christmas 2012, as he does every year, he decided that he would go to work at Lego. "I have been a fan of Lego all my life. Except during puberty of course it wasn't cool to play with Lego. But now I can do it again!"

It is difficult to get into the Danish company, Bennink says, because vacancies are responded to en masse. Which is why Bennink took a thorough approach. "I did a project for Lego without them knowing about it: for a year, I worked on ideas for combining the physical Lego with video games."

### Designing toys

Through LinkedIn, he got into contact with the company's marketing director. After multiple attempts, Bennink was invited to present his design in Denmark. The presentation was a success. "I didn't know anyone at Lego and I also had no experience with designing toys. But, if you act instead of dream, you can do it." Bennink is now further elaborating his original project with products such as the Lego Dimensions products. "In that way, we create one reality experiences, in which there is no longer a division between the physical and digital environment. Using special chips in the blocks, Lego figures come to life in a video game with the help of the Toy Pad. In that way, children can play with their self-built Lego figures on the Xbox, PlayStation or Wii. In the future, we would like to expand this so that, along with the figures, other Lego constructions can also influence the game. But that is still a major challenge."

### Central hub

During his UT education, Bennink learned that, as an industrial designer, you are the central hub of various disciplines. "That is now indeed the case in my job. For example, I work with story writers and game developers, but also with people from the security and production departments. As a generalist, this job suits me perfectly."

# AGENDA

**Wednesday March 1st & Thursday  
March 2nd**  
Career Fair, Bedrijvendagen Twente

**Saturday April 29**  
45th edition of the Batavierenrace  
The world's largest relay race

**Wednesday May 3**  
Create Tomorrow  
The largest national student thinktank

**Thursday May 25**  
Final UT Entrepreneurial  
Challenge & Innovation Day

**Sunday August 13th till  
Tuesday August 22nd**  
Summer school CuriousU

**Monday September 4th**  
Opening Academic Year

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

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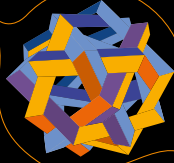
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# COATING PREVENTS INFECTIONS

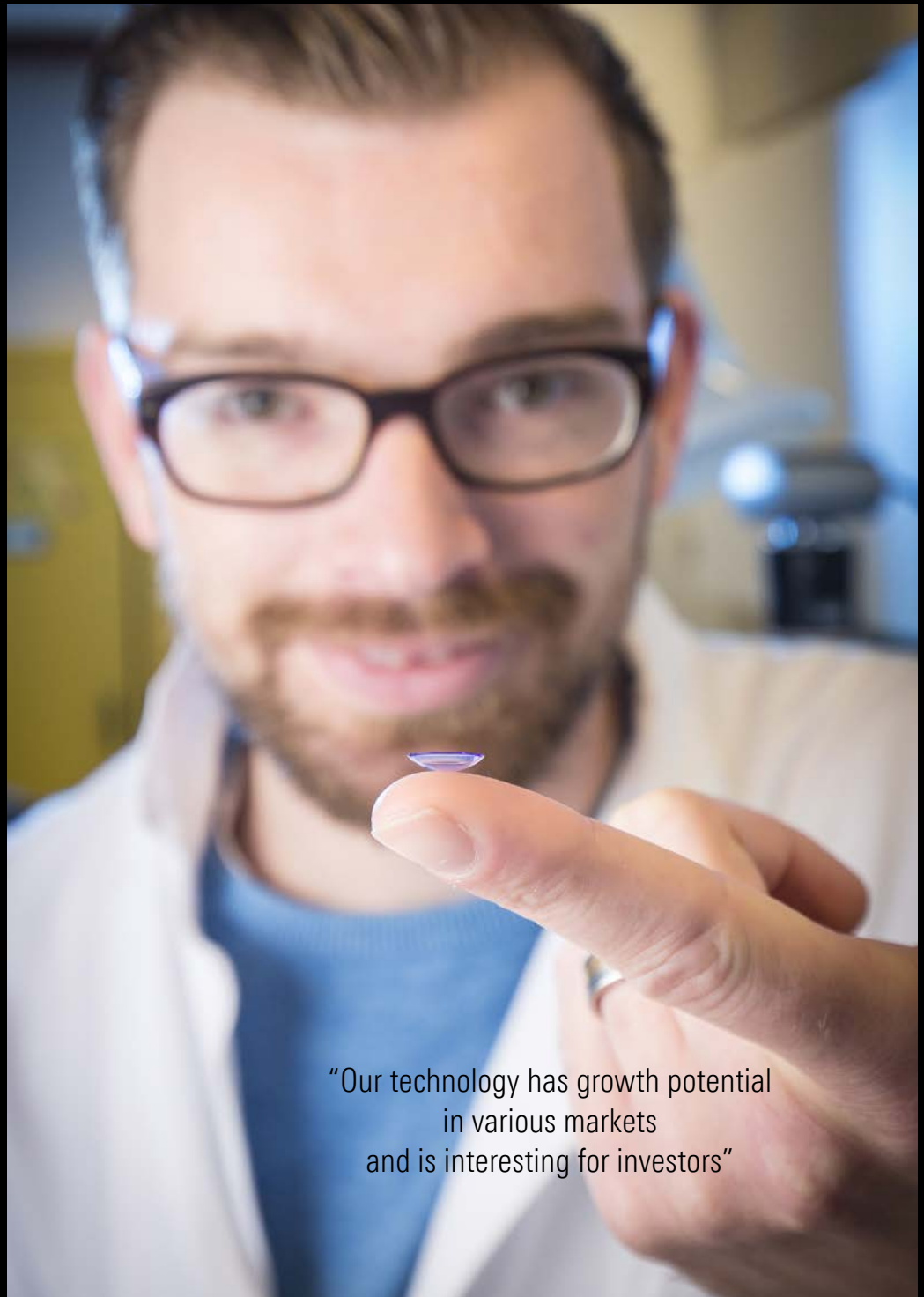
BY Hans van Eerden PHOTOGRAPHY Rikkert Harink

Many biomedical devices have trouble with proteins, bacteria and other contaminants that attach to their surface. This causes health risks and inconveniences that users of catheters and contact lenses will be familiar with. Jasper van Weerd obtained his doctoral degree at the UT for a coating technology that can prevent this, and now wants to market his patented discovery with LipoCoat.

LipoCoat develops coatings that fight infections for various biomedical applications. After being pre-treated, the object to be coated is 'dipped' in a natural raw material. A single layer automatically forms, approximately five nanometres thick. LipoCoat is developing the process in such a way that it fits in the existing production lines for biomedical devices.

Using funds from the national research programme NanoNextNL, Van Weerd created a prototype. Now, LipoCoat is headed to the market with the help of an early phase loan and start-up financing from the UT Dutch Student Investment Fund. "We are still looking at other UT funds. I talk about the business case regularly with Knowledge Park Twente. Our technology has growth potential in various markets and is interesting for investors," says Van Weerd, who bases his business model on the sale of raw material. He hopes to generate his first turnover late next year. "We are now relying heavily on the lab facilities of the UT. The tipping point for us is the start of production under our own flag and our own quality system. Then, we will have to have our own lab."

For more information: [www.lipocoat.nl](http://www.lipocoat.nl)



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in various markets  
and is interesting for investors"