Bright minds, better future

HIGHLIGHTS

SPRING / SUMMER

PEOPLE OF PETROTOPIA "A post-fossil future needs imagination." the field.

Maarten Hajer

Distinguished Professor of Urban Futures

The largest international commons meeting ever Citizens taking matters into their own hands.

Utrecht Professors awarded the Spinoza Prize A huge pat on the back from colleagues in

Summer School Junior Showing children how broad the field of science is.



Utrecht University



"Much work is taking place within new relationships of interdisciplinary collaboration."

Utrecht University is an institution where staff, students and alumni are bound together in their ambition to build a better world. We aim to be an outward-oriented organisation, to know what is going on in the world around us. Digitisation, shortages of food, water, energy and natural resources, changes in the global balance of power... today's societal challenges are of such complexity that they exert increasing pressure on knowledge institutions.

These highlights illustrate a number of the investments made by Utrecht University in the last six months in helping to build tomorrow's world. It is striking just how much of this work is taking place within new relationships of interdisciplinary collaboration, including parties from outside the university. This is the direction in which we want to develop further in the coming years.

The Executive Board,Bert van der Zwaan, Anton Pijpers

■ Group portrait taken during the Utrecht
University Dies Natalis celebrations in March.
Among those shown are the honorary doctors
(with red gown), the honorary supervisors and
the members of the Executive Board (at the fifth,
seventh and ninth place from the left)

In the Rector's chair

"So what should I decide, guys? Should people be allowed to eat meat and fries in the university's canteen?" Rector Bert van der Zwaan asks two Group 8 children from a Utrecht primary school. Eric and Felix are participating in the Bosses of Tomorrow project, in which a number of primary school pupils have the opportunity to sit in an executive's chair for a day. Bosses of Tomorrow is a nationwide project in which around a thousand businesses and institutions and more than 40,000 children took part. "Well, I think meat should be allowed in the canteen, but only if it's organic", says Felix. And what about fries? "Only on Friday afternoons; that way they remain a treat." Van der Zwaan thinks there's something in that idea. After their visit to the Rector, the pupils were chauffeured to the University Museum in an official university car.

www.jinc.nl/baasvanmorgen







Albert Heck Spinoza Laureate

Utrecht Professors Albert Heck and Alexander van Oudenaarden have both been awarded a Spinoza Prize by the Netherlands Organisation for Scientific Research – the highest Dutch academic honour. Both men have an international reputation as pioneers in the field of biomolecular sciences.

Quotations sourced from the Digital University Magazine DUB

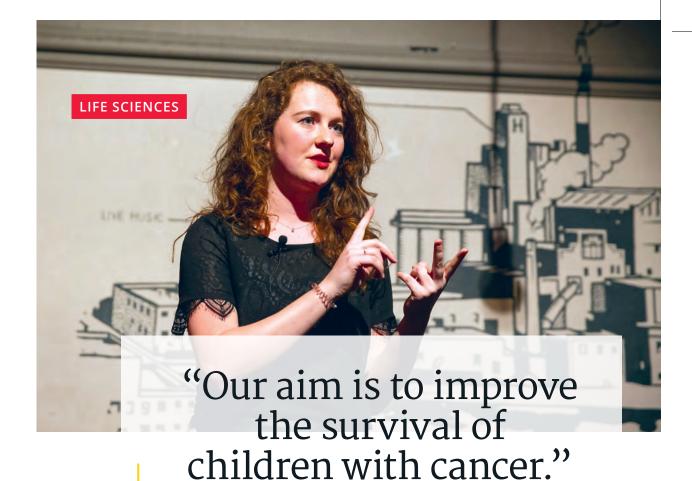
Professor Heck is an expert at identifying different proteins and the role they play within cells. Professor Van Oudenaarden researches how cells in living tissues develop into different variants with specific properties and functions. "In Utrecht, we are particularly good at quickly applying innovative techniques to research questions in biology and now, in recognition of this, we have received this prize", says Professor Heck (on the left of the photo).

"My goal is to get the knowledge that earned the prize to a point where it has a real impact on treatments for patients in the near future", says Professor Van Oudenaarden, who in 2012 exchanged a professorship at the Massachusetts Institute of Technology in the US for positions at the Hubrecht Institute, the University Medical Center Utrecht and Utrecht University.

Heck, whose full title is Professor of Biomolecular Mass Spectrometry and Proteomics, says: "For me, it's not about achieving one major scientific breakthrough; my main focus is on pushing the limits of technology. I might be working on cancer research one day and on the immune system or on plants another."

Professor Van Oudenaarden is delighted that this year the Spinoza Prizes were awarded to scientists who are interested in multidisciplinary collaborations and technological advances. "I truly think that is where the future lies: we have to work together and we'll need the best technology to do so."

uu.nl/en/news/spinoza-prizes-for-albert-heck-and-alexander -van-oudenaarden



Lianne Wellens

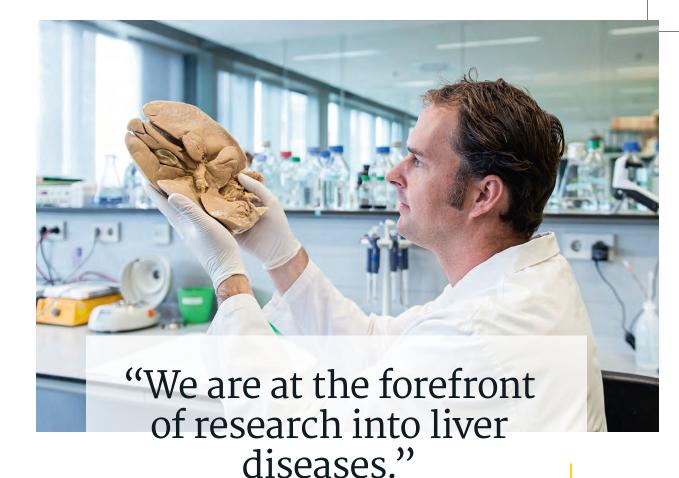
PhD Candidate Princess Maxima Center for Pediatric Oncology

Which young scientists can win over the crowd and judges with a scientific talk of just three minutes?

This question was answered in March during the scientific pitch competition Breaking Science of Utrecht University. Twenty-four young Life Sciences researchers took to the stage, armed only with their wits and a few props.

To prepare for their talk, all contestants had taken part in a so-called pitch training, offered by Utrecht University. A jury assessed all pitches. Researchers Lianne Wellens (Princess Maxima Center for Pediatric Oncology) and Selma van Staveren (UMCU) impressed the judges most. They were chosen to represent Utrecht during the national final of FameLab in May, in which Selma van Staveren won the Audience Award with an engaging presentation about microplastics.

uu.nl/breaking-science



Bart SpeeAssistant Professor

Around 10% of drugs developed today fail due to unexpected side effects. This has an enormous impact, both on patients and on the drug company's balance sheet. Dr Bart Spee and his colleagues at the Hubrecht Institute and the UMCU are developing specialised liver cells to better predict the effectiveness and toxicity of pharmaceuticals. Dr. Spee has been granted a €653,000 subsidy from the Netherlands Organisation for Scientific Research's STW Technology Foundation.

"For Bart, the STW grant is a major milestone for our Regenerative Medicine, Stem Cells & Cancer programme. This award will enable us – for the first time – to print 3D human and animal livers containing many different types of liver cells and matrix components, like a real liver", says Programme Coordinator and Professor of Pathobiology Alain de Bruin.

uu.nl/en/news/the-pharmaceutical-industry-has-an-urgent-need-for-models-to-predict-liver-toxicity



Tine de Moor

Professor Social and Economic History

Professor Tine de Moor and her team organised the largest international commons meeting ever: the XVI **Biennial IASC-Conference**: *Practising the Commons*, last July. The conference offered a platform for solutions to these questions by bringing together practitioners, academics and other stakeholders from all over the world.

The number of citizens' collectives in Europe is rising exponentially. This trend is visible in other parts of the world too. Citizens are making themselves heard through what is often referred to as *commons*. They are taking matters into their own hands and organising themselves in sectors such as health care, infrastructure and energy. A growing number of collectives means a growing demand for knowledge and knowhow, but also an exchange between theory and practice. How do you organise the governance of a collective in a sustainable way? What are the rules of the game that can best be agreed between parties? And how should governments respond and participate?

iasc2017.org

GRAVITATION GRANT

Cooperation is the key to a resilient society

SCOOP

The SCOOP research programme

(Sustainable Cooperation: Roadmaps to a Resilient Society) has been awarded funding of €18.8 million from the Netherlands Organisation for Scientific Research's prestigious Gravitation programme. SCOOP is an interdisciplinary research programme in which sociologists, psychologists, historians and philosophers work together to identify new solutions for sustainable cooperation in the fields of healthcare, employment and integration. Utrecht University (Institutions for Open Societies) and the University of Groningen (Resilient societies) collaborate closely on SCOOP, alongside academics from various other universities. The researchers are investigating why it is that individuals are able to achieve certain results by working together that they never could have alone. Also, why do some partnerships fall apart, while others continue to function very successfully over long periods of time? "This Gravitation grant is recognition for our interdisciplinary collaboration in the social and behavioural sciences", says Institutions for Open Societies Programme director Prof. Bas van Bavel.

uu.nl/en/news/eu188-million-grant-for-research-into-sustainable-cooperation

OIKOS

The OIKOS research school has also received an €18.8 million Gravitation grant to conduct research into successful innovations in Greco-Roman antiquity in the fields of science and technology, art and literature, and politics and economics. How did these innovations come about? A number of universities, including Radboud University in Nijmegen, will collaborate on the project. Utrecht University will be represented by Professor of Ancient History and Classical Civilization Josine Blok and Professor of Ancient Philosophy and Medicine Teun Tieleman.

uu.nl/en/news/classicists-receive-188-million-euros-for-research-on-succesful-innovation



Janneke Gerards

Professor of Fundamental Rights Law

According to Professor Janneke Gerards, fundamental rights such as freedom from discrimination and freedom of religion are coming under pressure in all sorts of different ways. Moreover, populism and increasing nationalism can also threaten fundamental rights, for example if they result in Muslim refugees no longer being permitted to enter the country or a ban on religious expression. But there are also more insidious threats arising from, for example, the emergence of the sharing economy and the rise in civic participation. These are useful developments in themselves, says Gerards, but they also pose certain risks to basic rights such as freedom from discrimination and freedom of expression. "It may occur that a specific group of people is excluded from helping at a communal vegetable garden", she offers as an example. "Or that people with an Islamic-sounding name are not allowed to rent a place on AirBNB." This spring, Gerards gave her inaugural lecture on the occasion of her accepting a professorship in Fundamental Rights Law. In her inaugural lecture, she called on people to be aware of the downsides of these developments.

uu.nl/nieuws/oratie-janneke-gerards-grondrechtenonder-spanning



TIME Magazine has named Professor by Special Appointment Guus Velders as one of the 100 most influential people in the world. Velders was honoured by TIME for his work in establishing the basis for the global climate agreement that was signed in Kigali, Rwanda in October 2016. Guus Velders works at the National Institute for Public Health and the Environment (RIVM) and was recently appointed Professor by Special Appointment of Air Quality and Climate Interactions at the Institute for Marine and Atmospheric Research Utrecht (IMAU) of Utrecht University. "The effects of climate change and climate mitigation actions will have a profound impact on society in the coming decades. Understanding the interactions between climate change, air quality and other subjects is of paramount importance. It is my ambition to understand the interactions and provide scientific insights for political decision–making", Velders explains.

time.com/guus-velders

"Smart Solar Charging is a complex puzzle of energy streams and mobility questions"

Wilfried van Sark

Associate Professor of Photovoltaics

Utrecht Science Park is one of the five testing grounds for research into Smart Solar Charging. In Smart Solar Charging, a smart recharging station stores locally generated solar energy in electric shared cars. This energy can be released at a later time, when the demand is high. After a successful experiment in the Utrecht neighbourhood Lombok, the Utrecht Sustainability Institute initiated an expansion of the project to five neighbourhoods in the region. "I expect that the application of the concept of Smart Solar Charging can make a neighbourhood significantly self-reliant in terms of energy and mobility", says Dr Wilfried van Sark of Utrecht University, who leads a part of the research.

smartsolarcharging.eu/



Maarten Hajer

Distinguished Professor of Urban Futures

Imagine a city that is not addicted to fossil fuels. How would that change the way we live, work, and move around the city?

The *Urban Futures Studio* proudly presents the Post-Fossil City Contest, calling on artists, designers, architects, urbanists, authors, photographers, filmmakers and all-around creative thinkers to imagine a city that is no longer reliant on fossil fuels.

"In order to make the post-fossil future, we first have to imagine it", says Professor Maarten Hajer, initiator of the contest. "We received 250 submissions from people in over 40 countries, ranging from architects to physical scientists, from designers to musicians." The 10 most innovative, inspiring, and imaginative ideas were featured in the *Post-Fossil City Exhibition* at Utrecht's Stadskantoor.

uu.nl/en/research/urban-futures-studio



Digital University Magazine DUB has shone the spotlight on a number of budding young talents at Utrecht University. One of these is Eva Vriens (25), who recently won an NWO grant for talented young researchers. As a PhD candidate, Vriens investigates the popular 'bread funds' which increasing numbers of self-employed workers are using to mutually arrange their own disability insurance. "Early on in my studies, I realised that I really enjoy going into the finer details of a matter. There is probably a lot more scope for that in a doctoral programme than anywhere else."



Another 'young talent' highlighted on the DUB site is 24-year-old Laura Cromzigt. Cromzigt won both the jury and the audience prize at the *Students Research Conference* for her Bachelor's thesis on systems that take responsibility for themselves by means of artificial intelligence. Everyone shudders at the thought of evil robots that take over the world. Cromzigt is the mother of two little boys and, in addition to her parenting commitments, is completing a pre-Master's Mathematics programme and a two-year Master's in Science Education and Communication. Ideally, this course of study ultimately links to a PhD programme, in which she would like to investigate how great a part artificial intelligence could play in children's learning. "That will bring everything together: my Bachelor's thesis, the maths, my Master's degree, and motherhood."



The Living Lab is a project of *Green Office* Utrecht, in which students collaborate with lecturers to conduct research on sustainability-related topics put forward by university staff. Last June, *Green Office Utrecht* organised the fourth Living Lab Symposium, during which students present the results of their Living Lab research. A jury then selects the best research project.

This year saw the first prize awarded by public vote, which was won by a project entitled 'Printing behaviour of students and staff'. Psychology student Lotte van Neer investigated ways of influencing people to change their printing behaviour in order to reduce their impact on the environment.

The jury prize was awarded to Environmental Biology student Zóra Tamás. Tamás investigated the impact of the construction work at De Uithof on the local bat population. Living Lab Coordinator Briede van Bemmelen said: "The jury chose Zóra's research because it demonstrates our impact on the ecosystems we inhabit."

uu.nl/livinglab

Golden SustainaBul ranking for Utrecht University

Utrecht University has scored gold on the *SustainaBul* ranking of Dutch higher education institutions in the area of sustainability. The ranking was initiated by student network organisation 'Studenten voor Morgen'. Utrecht University is positioned fifth in the overall ranking of all participating higher education institutions (universities and colleges) in particular recognition of the university's research and integral approach. This year's ranking was announced on Friday 19 May at the National Day for Sustainability in Higher Education conference (NDDHO).

President of Studenten voor Morgen Hanna Lubbers says: "SustainaBul is not just a ranking system; it is increasingly becoming a knowledge-sharing platform to accelerate the transition to sustainable education practices."

studentenvoormorgen.nl/sustainabul





Why is this so? "Children don't have enough life experience yet. They assess situations differently to adults, who have gained wisdom through trial and error, heartache and lived experience. But it also has to do with brain development." As it turns out, although children recognise perfectly well what the consequences of an action will be, their brains do not display the same response to information as adult brains.

A great deal of brain research assumes the average within a group, but in this study Assistant Professor of Psychology and Developmental Psychology Matthijs Vink and his research group examined individual participants for the first time. How do individuals react in different situations based on both environmental cues and what they themselves think will happen?

Their published research made the list of the top ten most frequently cited articles from the European Journal of Neuroscience. And how does Vink explain his success? "This is the first time anyone has taken this approach. I expect that, in future, more researchers will conduct analyses in this way."

www.uu.nl/brainresearch

"In spite of a divorce, children are still able to build a world in which they can be themselves."

In spite of the negative consequences that high-conflict divorces have on the lives of the children involved, the children themselves rate the quality of their own lives as fairly positive. However, children do in fact suffer considerably from daily confrontations resulting from divorces, including trauma symptoms from serious conflicts between parents. Professor of Youth Studies Catrin Finkenauer says: "Children may have a good relationship with each parent individually, but tension and stress seem to arise when the parents are together."

www.uu.nl/divorces



Chantal Kemner

Professor of Biological Development Psychology

"To understand how people develop, you need to consider the environment in which they grow up. A lot has already happened in the life of a ten-year-old. If you want to find out the root cause of certain problems, you need to start small – with babies." Researchers working on the YOUth cohort study do not examine specific disorders, but focus rather on the development of the brain and certain behaviours. Their ultimate aim is to put together the most complete picture possible of all the factors that can influence children's development. Principal researcher Chantal Kemner says: "Our focus on brain development is actually quite innovative. We are looking not merely at the shape and size of the different parts of the brain, but also explicitly at how the brain functions."

uu.nl/youth

Jeroen Pasterkamp

the lab, too."

Professor of Translational Neurosciences

Utrecht University and UMC Utrecht recently opened the MIND Facility, an innovative research centre which gathers together the world's foremost expertise in the field of brain research. Here, the most advanced stem cell technology and microscopy will open the way to a better understanding of the origins and development of the human brain. The MIND Facility aspires to attract researchers from a wide range of disciplines.

Professor of Translational Neurosciences and Director of the MIND Facility Jeroen Pasterkamp says: "Working together, we'll be able to unravel how the immature brain develops and, in the case of disorders, discover what goes wrong."

uu.nl/openingmindfacilitylab

From Synapse to Society

Utrecht University recently launched a Massive Online Open Course (MOOC) on 'Understanding Child Development: From Synapse to Society'. It is intended for anyone interested in learning more about child development. Associate Professor of Clinical Child and Family Studies Jorg Huijding, who is leading the MOOC team, says: "I hope that this MOOC will inspire people to think more holistically about development, and perhaps even surprise them with some new angles for approaching developmental issues."

uu.nl/doymooc

Master's research leads to a publication in *Science*

During her studies at Utrecht University, Ana Benítez-López completed a research project on the impact of infrastructure on biodiversity at the Netherlands Environmental Assessment Agency. She then produced a Master's thesis which concluded that hunting leads to an 83 per cent decline in the abundance of tropical mammals and to 58 per cent fewer birds. Her results put her among the handful of students to become lead author of a publication in the prestigious Science magazine. "For the first time on this scale, we have been able to quantify the effect of hunting on shrinking mammal and bird populations", says Benítez-López, who is now working at Radboud University Nijmegen.

science.sciencemag.org





"It's exciting to venture outside of your own little circle."

Tom Wennekes

Member of the Utrecht Young Acadamy

The first 24 members of the newly-established **Utrecht Young Academy** (UYA) were introduced during the university's anniversary celebrations in March. They are all outstanding, promising researchers, who completed their PhD recently but are nevertheless eligible for a 'tenure track' towards a professorship.

One of the UYA members is chemist Dr Tom Wennekes, who is conducting research into the complex sugar coating around cells in the Faculty of Science. "We have now finalised our mission: the UYA intends to offer a critical perspective on how research and teaching are run both within and outside of the university, as well as the relevant underlying policies and communications with society in this regard."

uu.nl/uya

On te photo: Diederik Jekel

Rowing thanks to the crowd

The Utrecht University Fund has set up its own crowdfunding platform to fund various projects in the field of outreach and information provision to the general public. For example, the Utrecht student rowing clubs Triton and Orca have received a contribution towards a new training area in the city of Vianen, now that the increasingly busy Merwede canal no longer meets their needs. As elite rower Sjoerd Hamburger aptly puts it: "Trying to have a training session on the Merwede canal is like Dafne Schippers running a 100-metre sprint race and having to stop and tie her shoelaces."

www.steunuu.nl



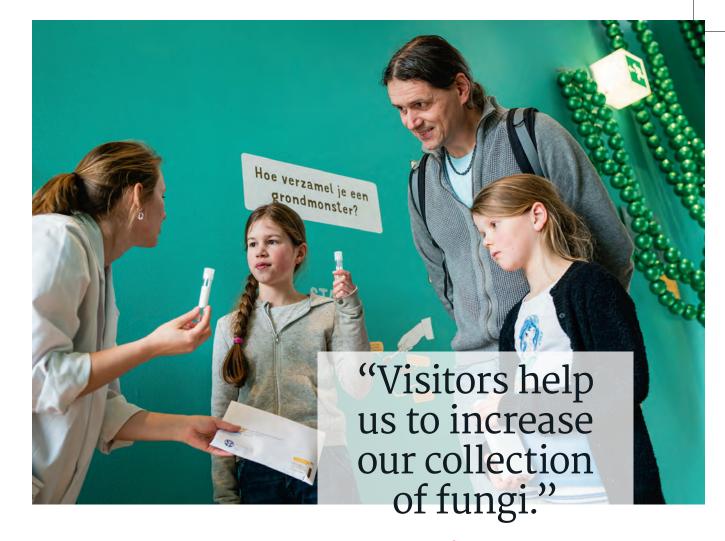


Maarten Reichwein Summer School Director

Over the past summer months, Utrecht University has hosted some 550 primary school pupils for the **Junior Summer School**.

Around 80 students took the children on a tour through the Science Park to conduct research into their own DNA or into how rivers, hills and mountains are formed, for example. Summer School Director Maarten Reichwein says: "Many children only have an image of science that relates to something bad: they know that you go to a doctor when you are sick and to a lawyer if something has gone amiss. With the Summer School, we hope to help them see that science is much broader than that, and show them what researchers do and how they do it." One of the participating students, Anne Kruijt, says: "The kids' enthusiasm and fresh perspectives were contagious and as a result everyone – the participants and the volunteers – had a great time these weeks. It was like a party!"

uu.nl/summerschool-junior



Pedro Crous

Director of the Westerdijk Institute

On 10 February 2017, it was precisely 100 years ago that **Johanna Westerdijk** gave her inaugural lecture at Utrecht University, as the first female Professor in the Netherlands. She was a Professor of phytopathology (plant pathology).

www.westerdijkinstitute.nl

In February, Utrecht University, together with the Westerdijk Institute, started the citizen science project Wereldfaam, een schimmel met je naam (World fame, a fungus with your name). Visitors were invited to bring soil samples from their own garden, which were then sent to the Westerdijk Institute.

Pedro Crous, director of the Westerdijk Institute and Professor of Fungal Biodiversity in the Biology department in the Faculty of Science: "Our aim is for this citizen science project to increase our collection of fungi, which is already the largest living collection in the world. We are really pleased with the large number of samples we have received, and we have already discovered many new fungi. These new fungi are named after the finder. "

universiteitsmuseum.nl



Lecturers as initiators of educational reform

The Centre for Academic Teaching, the central service desk for everything relating to professionalising lecturers' teaching skills, opened its doors this year. The centre for Academic Teaching is based in the University Library at the Science Park. "It should first and foremost serve as a meeting place for sharing knowledge across faculties", says Academic Director Manon Kluijtmans. "Under this umbrella various existing initiatives and trajectories in the field of educational innovation and lecturers' professional development are brought together." Educate-IT, the programme for assisting lecturers with the transition to blended learning, is also part of the Centre for Academic Teaching.

uu.nl/cat

Marc van Mil

Lecturer in Biomedical Genetics

Marc van Mil, lecturer in Biomedical Genetics, has won the national Higher Education Teacher of the Year award. The award, to the value of €15,000 and established by student organisation ISO, was presented by Education Minister Jet Bussemaker this spring. Van Mil intends to use the prize money to develop a serious game on ethical issues surrounding DNA testing. He previously produced a mobile DNA lab with which university students can give classes to school pupils and in 2014 carried off the Utrecht University Teaching Talent Award.

"It's nice when students tell you you're a fun teacher, but I still think it's more important that they understand the subject you're teaching them. I particularly enjoy interacting with students, above all that moment when you can see the penny drop."

iso.nl/persbericht/marc-van-mil



Joop Schippers

Professor of Labour Economics

Just before the start of the summer holiday, President of the Executive Board *Marjan Oudeman* bade Utrecht University farewell. "We must of course continue to invest in the quality of our teaching and research," she said on the occasion of her departure. "However, in my view, we have only just begun to forge a proper connection with the outside world. There is so much more to be gained from collaboration."

As a parting gift, a mini-symposium was held in Oudeman's honour on the theme of *The University and the Job Market*. One of the speakers was labour economist Joop Schippers, whose remarks included that the workers of the future will require more knowledge than previous generations because they will change jobs more often and knowledge will become obsolete more quickly. They will also need to continue to gain new knowledge longer as they will retire later. All are reasons enough to encourage lifelong learning. "It doesn't end with an MA or a PhD certificate; rather, continuing professional education must become part of the standard package of university education", argued Professor Schippers.

AGENDA

TUESDAY 12 SEPTEMBER

Philosophical Café

Beauty is in the eye of the beholder.

Dr Chris Meyns and Dr Tom Giesbers explore how meaningful it is to speak of 'beauty'?

Hofman Café, 8.15 pm

Pholosophical Café also on 10 october, 14 november and 12 december. sg.uu.nl

TUESDAY 29 SEPTEMBER

Betweter Festival

What is fact and what is fiction? Is the line between the two really so clear?

The Betweter Festival is packed with scientists, artists, writers and designers. Visitors can take part in experiments, watch performances and listen to music. Art and science go hand in hand.

betweterfestival.nl sg.uu.nl

7 AND 8 OCTOBER

Science Weekend

How do you know how an animal is feeling? How can you examine an animal internally, without an operation? Do pets suffer from obesity?

As part of the Science Weekend, the Faculty of Veterinary Medicine is opening its doors to the public. Look behind the scenes at more than 200 companies, institutes, universities and museums throughout the Netherlands. hetweekendvandewetenschap.nl

SATURDAY 7 OCTOBER

Harness racing on Maliebaan

Part of the 85th anniversary celebrations of the Veterinary Medicine study society DSK. Alongside the harness racing, the students are holding a market in which they will present every aspect of the Veterinary Medicine degree programme. Free entrance. dskonline.nl/lustrum



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