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## Living in Längenloh



A relaxed student atmosphere: Flatmates in house no. 2 gather in the kitchen. PHOTOS: INGBORG LEHMANN

### We visit students and refugees sharing a residential complex on the northern edge of Freiburg

by **Stephanie Streif**

Längenloh – it sounds like some idyllic Swedish log cabin scene, with gnarled fruit trees and waist-high grass. Like Bullerby or Lönneberga, Längenloh could be some Astrid Lindgren children's paradise. But it's not. Längenloh Nord is located in the Freiburg district of Zähringen, on Gundelfinger Strasse. There's a supermarket and a gas station across the road. A lot of traffic goes through the area. If you are going into the industrial zone which borders the residential area, you don't need to push open any white garden gate. A few stone steps lead up and along a metal fence. Welcome to Längenloh, one of 21 refugee shelters in Freiburg. It is also the only refugee shelter in town where students too are allowed to live.

Längenloh is a pilot project. Student Services Freiburg-Schwarzwald and the Helferkreis Zähringen cooperating to make it work. The idea is that integration starts with where you live. There is already more than enough container housing where refugees live on the periphery of society. "Längenloh is meant to show we can do this differently," says Renate Heyberger, deputy business manager of Student Services. Last August 150 refugees moved into the apartment buildings - among them, many children.

The 72 students, who live in two of the seven buildings, moved in

just before the start of semester in the middle of October 2016. This social project was originally meant to end when the winter semester did. In January 2017 the city authorities gave their approval for the students to stay another semester. But no longer than that, says the city. The reason - New regulations mean that the state of Baden-Württemberg has to provide refugees with about seven square meters more living space per person.

#### Plan with room for the unplanned

There is an atmosphere of student coziness in the huge open-plan kitchen on the first floor of house no. 2. Dishes are piled up on the sink. Four young women are sitting on a sofa on one side of the room. One of them has her legs pulled up. It's warmer that way. Two more are sitting at the kitchen table. They talk about how happy

they are to be allowed to stay in Längenloh - for the time being. "We like it here," they say. Are they afraid of the refugees? "No, never were." Nina Allard says people here don't just live in the same place, they live together. The others nod and talk about parties they've had with their new neighbors - housewarmings, for St. Nikolaus' Day, or even just for the hell of it. "And we made Christmas cookies with the kids," Chiara Möser adds. Suddenly six children had appeared in the kitchen. They came to help with the baking but then decided they'd do the dishes instead. Nobody minded that the washing-up water also ended up on the kitchen floor. A lot of the contact between students and refugees in Längenloh is a spur of the moment thing. For instance, they strike up a conversation on the way to the tram stop or receive a spontaneous invitation to dinner with a refugee family, Allard says.



Playing and making things: Volunteer students work with refugee children one afternoon per week.

That happened after the cookie-baking adventure. "We really only wanted to see the children home - and before we knew it, we were sitting with the family around the table, being served a delicious dinner." She says it was a lovely experience. "So open, so spontaneous." But other meetings in Längenloh are not left to chance. Social involvement is part of the project. Students give German lessons and handicrafts, go along to official appointments with the refugees, and organize games afternoons for the children in the project. There are groups for gardening, soccer, and drumming, and of course - this being Freiburg - a bicycle workshop. The Zähringen volunteers planned and launched most of the projects in Längenloh. The student join in - some because they have committed themselves to do so, others because they have the time and inclination.

For instance, Chiara Möser is one of five tutors and organizes child minding. When she moved in, she undertook to do 20 hours of coordination work per month. For this she receives a small volunteer's payment from Student Services. She says she was active in helping refugees even before she came to Freiburg. So was Jana Zickler. While she was still in Bonn, looking for a place to live in Freiburg, she found Längenloh by chance on the internet.

Her first thought was "That's what I want." So she applied to live here. 25 of the 72 students went through a special selection process to be volunteers. Gernot Kist, of Student Services, says the organi-

zation received more than 400 applications. Students were chosen who had experience in aid to refugees or in other voluntary work. "We also considered students who had very good reasons for wanting to live in Längenloh," Kist adds.

#### It ends in summer

The tutors coordinate the student volunteers' work. They also have to meet with Student Services, the volunteers' association, and with the Caritas social service on location. But there are more students who have been helping out in Längenloh even though they don't have to. Like Jessi Nicholson. Her place in the student accommodation is not linked to volunteer work. But she assists with German lessons for mothers and children or with the mobile games bus which comes to the project every second Wednesday. There is no longer any great difference between official and unofficial volunteer students, Möser confirms. "We're all working side by side."

One wonders what will happen when the students have to move out after summer semester 2017. Möser doesn't think she would come to Längenloh often then - purely because of the distance; after all, this is the very edge of town. But that doesn't mean it was all for nothing. All the volunteers have a guaranteed place in student accommodation after the Längenloh project ends. That is part of their contract. And the city of Freiburg is considering the inclusion of student apartments in its plans for a new refugee housing complex. Because of Längenloh.

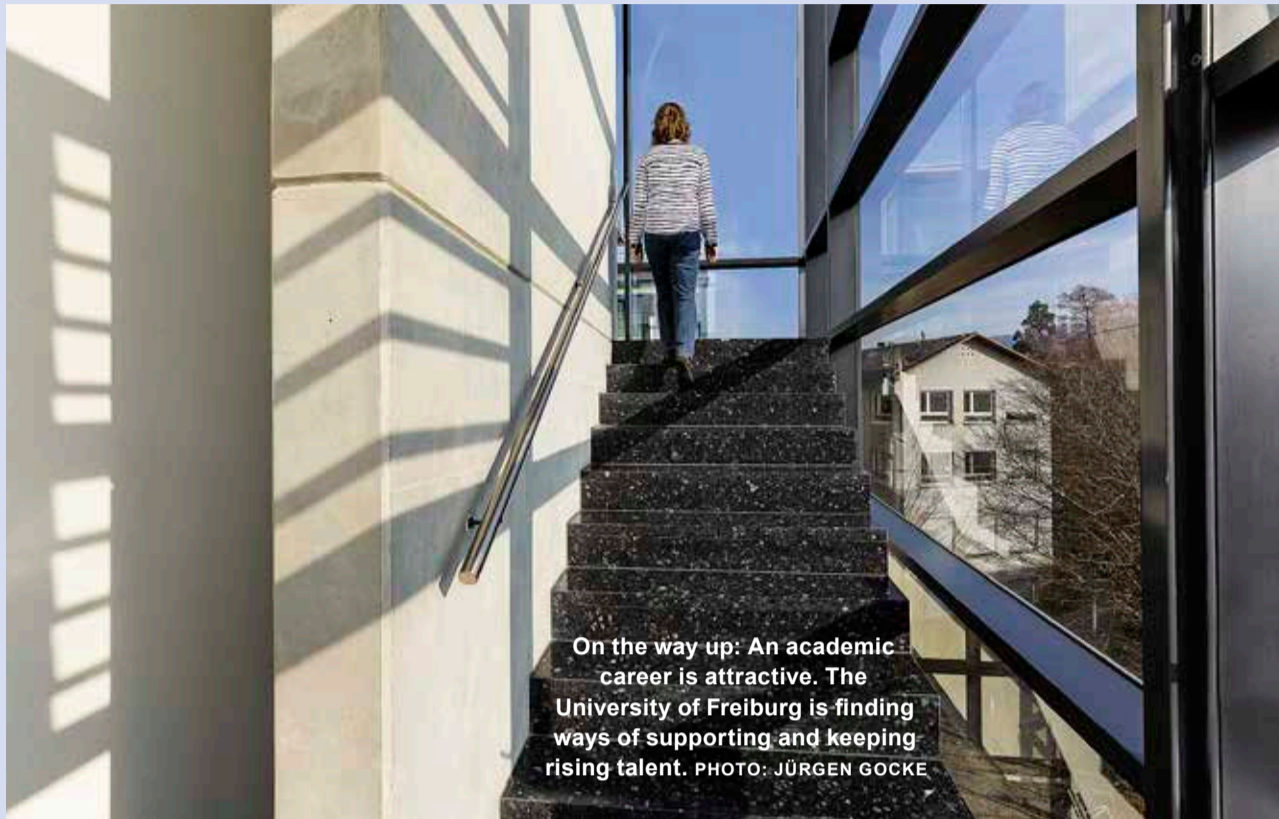
# Paths to academia

The University of Freiburg works out a personnel development plan for various career models

by Nicolas Scherger

Making it easier to plan a career, prospects apart from professorship - these are two of the central goals of the academic personnel development plan the University is currently working on. "We want to encourage our young men and women in research to embark on academic careers; to show them the risks and opportunities that entails, and to accompany them on that journey," says Rector Professor Hans-Jochen Schiewer. A keen focus is placed on the postdoc phase. After establishing the International Graduate Academy and many Graduate Schools as part of a comprehensive infrastructure for doctoral candidates, the university now aims to increase its measures supporting the period following doctoral studies (see interview).

Tenure track is one of the key building blocks; aimed at postdocs, it provides for a direct transition into a full professorship following a successful probationary phase. The personnel development plan is part of the application the university will make to the German government



On the way up: An academic career is attractive. The University of Freiburg is finding ways of supporting and keeping rising talent. PHOTO: JÜRGEN GÖCKE

program to promote junior researchers in June 2017. The program is set to finance 1000 new tenure track professorships across Germany. Freiburg has had tenure track professorships for eight years. "The clear advantage is that early in their careers, we can offer promising talents a path to full profes-

sorship, with their help and depending on their performance," says Schiewer. There are currently ten tenure-track professors at the University of Freiburg; five more have already transitioned into full professorships (see portrait). The university now plans to establish the "Freiburg model," which links head-

ing a junior research group with a tenure track professorship - something which until now was only possible within the German Research Foundation's Emmy Noether Program.

The university is also planning to make it easier to create unlimited-term

jobs which will be an attractive alternative to a professorship. "We aim to develop new staff categories which young researchers will not regard as a 'failure' in the attempt to become a professor, but will define as their career goal," Schiewer explains. Possible models include that of lecturers, who will primarily teach; academic managers, who will take on leading functions in faculties, academic centers, and in other institutions; and Core Facility managers to oversee technology platforms and major instrumentation.

But the university is not thinking about only academic careers. At the start of 2017, the Rectorate launched a new staff development office to manage a comprehensive personnel development plan including the academic support staff.

#### Tenure track position paper

In a League of European Research Universities (LERU) position paper the University of Freiburg evaluates experience with tenure tracks in Europe.

[www.pr.uni-freiburg.de/go/tt](http://www.pr.uni-freiburg.de/go/tt)

## Promoting women in research

Professor Gisela Riescher, Vice-President for Research Integrity, Gender and Diversity, describes University of Freiburg measures to support rising female researchers.

uni'leben: Professor Riescher, why is it important to provide special support to young women researchers?

Gisela Riescher: Some 25 years ago there were 3.7 percent women professors in Freiburg; today, thanks to a great deal of work in equal opportunities and the promotion of women, it's nearly 25 percent. But we can't afford to wait another 25 years before it's 50 percent. We must continue to make every effort in equal opportunities policy. We need to pay special attention to the postdoc phase following the PhD. That is the time when many women abandon



One of the innovations launched by Vice-President Gisela Riescher - a coaching program for young women researchers. PHOTO: INGEBORG LEHMANN

their academic careers - for reasons including the uncertainty of career prospects and because they want a family.

How does the University of Freiburg help in that phase?

We have overhauled two formats in particular. We have raised the amount of our bridging scholarship "STAY!" and we have expanded our target group to international women researchers and German women researchers who've worked abroad with "Come and STAY!" In parallel we offer a coaching program in which professional, specially selected coaches advise and support individual women researchers. In addition the university takes part in external formats such as the state of Baden-Württemberg's Brigitte-Schlieben-Lange Program and the Margarete-von-Wrangell postdoc program.

Ideally that is followed by a professorship. How can we ensure fair appointments procedures regarding gender?

A central aspect are our appointments guidelines, which are binding. The Equal Opportunity Representative plays an important role in the appointments procedure; there are more women on the appointments board than there used to be, and there are equal numbers of men and women among the external reviewers. There is a principle that we promote equal opportunities - that means that, given equal qualifications and performance, the woman researcher will be preferred.

What message would you like to send to young women researchers as they move towards an academic career?

I would tell them they have made a good decision. Being a professor is one of the best careers. Where else can you choose so freely to work on issues which interest you and which are important to society? They should do everything they can to stick with it, get advice from experienced colleagues of both sexes, and not be discouraged by setbacks; instead, they should be motivated by the many positive moments.

#### Contact STAY! and Coaching Program

Mariana Vargas Ustares  
Gender and Diversity Office  
Phone: 0761/203-9053  
Email: [mariana.vargas-ustares@zv.uni-freiburg.de](mailto:mariana.vargas-ustares@zv.uni-freiburg.de)

## Freiburg's tenure-track pionier

Six years of writing a postdoc habilitation thesis with no prospect of a professorship - that was not an option for Stefan Günther. Nevertheless, he decided to stick with academia and not to go into industry. And that is due to a new model for which he was the pioneer. In 2009 he was appointed to the University of Freiburg's first tenure-track professorships. He now recommends this path to other young researchers. "If you turn in good work, you have long-term perspectives at your university," says Günther. He has been Professor of Pharmaceutical Bioinformatics since 2015.

Those who start as tenure-track professors have their work cut out - research and publications, heading

a working group, teaching classes, managing staff, applying for grants, and maintaining academic self-management. Yet, he says, all those tasks are valuable; "It is very good preparation for what you will later face as a full professor." But he says all the time he had to take for administration he would rather have spent on research; the services of a secretary would have been helpful. But he stresses that his academic work did not suffer. "I enjoyed being responsible for my own research," he says.

Does this model really offer more security - when you have to successfully get through two evaluations? Günther says yes - "It's up to me whether my performance is up to scratch or not." Yet when he started, it was not yet clear what the criteria

for assessment would be. "The Rectorate set out guidelines, regulating the process before my interim evaluation." In a classic road-to-professorship model, you can't be appointed at the institution you studied at. "Even if you do everything right in your postdoc qualification, you could be certain you had no prospects at your own university." That means that even outstanding researchers - if they are unable to get a professorship elsewhere - are forced to leave the academic path quite late in their careers. Günther says it's better to set the course earlier - by competing for a tenure-track professorship.

Stefan Günther is grateful to his faculty colleagues, saying "I had the feeling from the start that I was accepted as a full member." He advises researchers who take this path to



Greater career certainty, independent research - for Stefan Günther, these were the biggest advantages of a tenure-track professorship. PHOTO: KLAUS POLKOWSKI

take on the job with confidence, to represent the interests of tenure-track professors in the committees, and to develop their own research profile.

"You don't have to listen to everyone; you can decide carefully for yourself which advice to take. And then it is a lot more fun."

# Obelix and the ethics of robots

A new building at the Faculty of Engineering is home to robotic research

by Sonja Seidel

A new research center started work at the Faculty of Engineering in February 2017 – the Integrated Robotics Center. Researchers from Microsystems Engineering, Medicine, Philosophy, Biology, Informatics, and Law will be working together there in the future. The focus is on technical development of robots – but also on the ethical and legal issues which arise when humans and machines come in contact.

“The Integrated Robotics Center will be an exemplary project at the University of Freiburg,” says Professor Wolfram Burgard. His working group, Autonomous Intelligent Systems, is based at the Department of Computer Science and located in a new building under one roof with the excellence cluster BrainLinks-BrainTools, a new professorship of Neurorobotics, and the Graduate School of Robotics. Burgard’s team works on robots which perceive their environment and can move independently. Eleven doctoral candidates are now at the Graduate School and supporting Burgard’s research; seven

of them are from technical and engineering subjects; four from medicine, philosophy, cognitions sciences, and law.

Engineering, biology, computer science, and medical researchers in the excellence cluster have been investigating the man-machine interface since 2013. The results of their work may help patients who use prostheses. To this end, the researcher are developing techniques to enable artificial limbs to be steered by nerve cells in the brain. “This can only work if you cooperate closely across the different disciplines,” Burgard says, stressing

the importance of communication between the Center’s institutions. “We plan workshops and lectures in which our researchers can present their work and maintain a continuous exchange.”

## Help around the house

Forty staff are already at work in the 800 square meter building, which has space for 65. The university has invested some two million euros in the building, and the state of Baden-Württemberg topped that up with an additional half-million. The new tenants include the robots Obelix, Nao, and Marvin. Obelix became known across Germany when he drove himself from the Faculty of Engineering into the center of Freiburg in 2012. Nao is programmed to carry out small household tasks. So far, it can do things like opening a cupboard; Burgard’s team aims to develop the robot further so that it can help humans in their everyday lives.

Scenarios like that lead to frequent public debates over the ethical and moral repercussions. What if a self-driving car crashed into a group of people? If a machine had the choice of having to injure a child or an elderly person, what would it do? The researchers plan to address issues like this. “People mustn’t forget that so far, we are just playing around with ideas,” Burgard explains. “Today’s robotic systems simply don’t have the data and computing capacity to make such a moral decision. And certainly

Obelix is already a media star. Wolfram Burgard and his team will keep developing the robot. PHOTO: PATRICK SEEGER

not in a split second. A human being driving a vehicle or flying a plane can respond by making more mistakes and may be a greater threat than a robot.” Burgard says one of the trickiest issues is the legal situation when there is no human being behind the driver’s wheel.

Among the things at the heart of Burgard’s own research is “deep learning” – a technique in which large amounts of data are fed into a computer. The computer is then meant to recognize patterns, form categories, and in that way learn more about the world the way a human brain does. Burgard’s robots are to get smarter. Because Burgard is sure of one thing – that robots will be a fundamental part of our everyday lives in the future.



800 square meters for up to 65 people to work - The Integrated Robotics Center is the newest building at the Faculty of Engineering campus. PHOTO: INGEBORG LEHMANN

# European Label

Special status for research and teaching projects within the European Campus

by Sarah Nieber

Whether it’s a joint seminar with the University of Basel, a research project with colleagues from the Université de Strasbourg or a colloquium for doctoral researchers from the Universities of Freiburg and Haute-Alsace... Eucor – The European Campus puts a common label on cross-border projects. The European Campus announces which project has received the label on its website or in its monthly newsletter. It also makes it easier to apply for subsidies toward travel expenses which arise when groups work collaborate across the borders.

Bi- and trinational cooperation on the Upper Rhine didn’t just start a few months ago, neither in teaching nor in research. “The European Campus did not come from nowhere. The many different forms of collaboration between our universities has existed for several

decades,” says Florence Dancoisne, coordinator of Eucor – The European Campus at the University of Freiburg. “But with our label, we aim to make visible the fact that various projects belong to the European Campus.” It’s hoped that this will help create an awareness at the universities that the European Campus is an active reality and not just an abstract idea.

## Who gets a label?

The label may be given to educational and academic projects as well as for cultural and sporting ones. The chief requirement is that the project takes place at one of the universities in Eucor – The European Campus. On the German side, those institutions are the University of Freiburg and the Karlsruhe Institute of Technology; in France they are the universities of Haute-Alsace and Strasbourg, and the University of Basel in Switzerland. Depending on the type of project and depending on whether ECTS credits are given for it, at least two or three member institutions from two countries

must be taking part. Other national or international partner institutions may also be involved.

## How to apply

If you think your project qualifies for a label, send an application to the coordination office at the Université de Strasbourg. Include a description of the project, details of the people responsible at the Eucor member universities, and a budget outline.

## What must project organizers do?

If your project receives the label, you are obliged to use the logo for that project. In addition the coordination office and the European Campus contact person at your location – in Freiburg it is Florence Dancoisne – should be informed about events and



Eucor’s seal of approval  
PHOTO: PIRELOT/FOTOLIA



any changes to the project so that, for instance, university newspapers can report on them.

## Applying for the label

Eucor – The European Campus coordination office  
Université de Strasbourg  
Maison Universitaire Internationale  
11 presqu’île André Malraux  
67100 Strasbourg  
France  
Phone: +33 (0)3 68 85 82 95  
E-Mail: info@eucor-uni.org

> [www.eucor-uni.org](http://www.eucor-uni.org)

## Deputy administration chief Walter Willaredt

The University of Freiburg has a new deputy head of administration. At the start of the year, Walter Willaredt, head of the Organizational Development department, succeeded Barbara Windscheid, who was head of Finances and Controlling until her appointment as Executive Vice-President at the University of Mannheim. Willaredt has worked at the University of Freiburg since 1982 in various administrative areas. He is responsible for a number of major areas including information management, administrative organization and room distribution, process development and quality management, as well as for controlling and statistics.

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# Goggles and gray matter

Study shows connections between shortsightedness, education, and intelligence

by Sarah Schwarzkopf

As late as the start of the 20th century, ophthalmologists believed that shortsightedness was a sign of intelligence. A research team headed by neuropsychologist Professor Josef Unterrainer, director of Medical Psychology and Medical Sociology at the University of Freiburg, sought to discover if there was any truth in the idea. The researchers conducted a study at the University of Mainz under the supervision of ophthalmologist Professor Alireza Mirshahi. "Our aim was to clear up once and for all the preconceived ideas about shortsightedness and intelligence," Unterrainer explains.

That there is a connection between intelligence and myopia - the medical name for shortsightedness - has been demonstrated in several studies. But while intelligence is partially determined by genetics and on average changes only slowly, shortsightedness is becoming more widespread. Other investigations show a link between myopia and education. The Mainz study was intended to find out whether shortsightedness is more closely connected with intelligence or with education.

To do this, the researchers analyzed the data of 3,452 people between the ages of 40 and 79. Their myopia numbers show how great a correction is



The researchers analyzed the data of 3,000 people between the ages of 40 and 79. PHOTO: KZENON/FOTOLIA

required for them to see clearly. Unterrainer also measured how well the test subjects did in what's called the Tower of London test. The test subjects have to thread colored beads in the right order onto three vertical pegs as quickly as possible. This allowed Unterrainer to establish their visual-spatial cognitive performance, and their abilities to apply logic and to plan ahead - all skills which are closely linked to intelligence.

Initially the findings of the study did in fact indicate the expected connection; those who did well in the Tower of London test tended to be more shortsighted. But when the researchers included other data in their evaluation, such as how many years the test subject had invested in formal education - school, work training, and studies - the apparent influence of intelligence lost relevance. "The longer the test subjects had been in education, the

higher their myopia values," Unterrainer reports. It is therefore the time spent in education and not the level of intelligence which is closely linked to shortsightedness.

"But we can't draw any causal conclusions from these findings - for example, that education leads to shortsightedness," Unterrainer adds. "So far we have merely shown that there is a connection - not which connection." There

are many possible explanations. It may be that the shortsighted prefer to read and therefore spend more time in education. Perhaps a lot of frequent study increases the likelihood of developing myopia. And some people may tend towards hobbies which promote shortsightedness, and independently of that, also tend towards more years of education.

## Get out in the fresh air

The research group says the most likely explanation is that, during their years of education, people spend long and intensive hours over books and computers - things which are close to their eyes. That means they frequently only focus on a nearby field of vision, thereby influencing their eyes in the long term, according to Unterrainer, and become susceptible to myopia. "On top of that, they seldom go outside. According to our theory, the eyes adjust to long, intensive close work, so that after a while it is more difficult to focus on things in the distance. We will have to examine whether that is true in further studies," says Unterrainer.

In that is the case, people who don't have many years of education behind them but who work a lot in offices or spend their time on computer games should also frequently be shortsighted. Higher myopia values have already been demonstrated in children who often spend their time on things in a close field of vision. The Mainz ophthalmologists say it helps to give the eyes an alternative. They advise children to limit their screen time and to go outside for long periods.

# Incentives to do good



If people had been told it was cool to have LED lighting, they would not have put up such resistance to the abrupt ban on incandescent light bulb sales in 2009, says Bettina Kalmbach. PHOTO: JÜRGEN GOCKE

Using LED lighting as an example, a team seeks ways of encouraging consumers to make the right choices

by Verena Adt

Then there's the story about the fly in the urinal at Amsterdam airport. It's one of Bettina Kalmbach's favorites. The facility management there got the idea of sticking a life-like image of a fly onto the porcelain to encourage users to aim better. It worked. Cleaning costs in the men's toilets fell by 80 percent, and the idea

has been copied worldwide. Kalmbach says this is a good example of "nudging." It's being used to describe policies which give people a friendly nudge in the direction of a desired behavior - without issuing bans or threatening punishment. Kalmbach is writing her doctoral thesis on it, in a multidisciplinary research project which aims to move consumers to buy environmentally-friendly LED light bulbs - without patronizing them.

The team is currently calculating the strengths and weaknesses of the

method; then they will create a group of test persons. The question of when a nudge becomes paternalism and manipulation is important to the researchers. The idea is to urge responsible consumers to make a particularly choice, yet at the same time to leave him or her with the full freedom to choose differently. "Libertarian paternalism" is what the US professors Richard H. Thaler and Cass R. Sunstein call it. Their findings on the architecture of decision-making and nudging strategies are what inspired the Freiburg team.

While nudging methods have been part and parcel of commercial advertising and marketing strategies for years, they are only now starting to be used in government policymaking. When LED light bulbs were introduced, the potential of fearful and irrational - but all too human - reactions to change were underestimated, Kalmbach says. The European Commission decided to ban incandescent light bulbs; the abrupt announcement in 2009 saw alarmed consumers storming hardware and electrical goods stores and buying up all the energy-gobbling light bulbs. "If they had said to people: 'We want to do something for the climate - let's get to it!' and had sent the message that it's cool to have LED lighting, the resistance to the new bulbs would surely have been lower," Kalmbach says.

Kalmbach contends that nudges are different from sales gimmicks used in commerce because they urge consumers to behaviors which benefit society as a whole. "Our social nudging policies aren't about the well-being of the individual; they focus on socially-relevant issues," Kalmbach stresses. A further criterion, she says, is that nudging does not necessarily serve the profit motive of any one participant in the market.

There are many different kinds of "incentives to do good," as Thaler and Sunstein describe libertarian paternalism. They can be playful, like the fly in the urinal, or they can appeal to a consumer's environmental conscience. Kalmbach aims to show consumers the sustainability of LEDs

with "energy-efficient" seals, punchy slogans, and visual stimuli. On top of that, in the age of the smartphone, "energy" apps can help to positively influence individual energy consumption. The researcher sees a big potential for energy saving in "smart" LED systems. The public sector must do its bit in changing our energy habits, she says. The town of Emmendingen has switched nearly 40 percent of its street lighting to LEDs. Its energy consumption has already fallen by 20 percent. The University of Freiburg is also using more and more LEDs, preferably in places where there are long working hours, for instance in sports halls, main corridors, lecture theaters and seminar rooms, outdoors on parts of the grounds, and for safety lighting.

## SusLight

The state of Baden-Württemberg is promoting the SusLight project at the Sustainability Center. Taking part are the University of Freiburg's Department of Economic Policy and Constitutional Economic Theory headed by Professor Bernhard Neumärker at the Economics Institute, the Department of Microsystems Engineering, and the Department of Public and Non-Profit Management - Corporate Governance and Ethics headed by Professor Jörg Lindenmeier. Further partners are the Fraunhofer Institute for Applied Solid State Physics and the Hahn-Schickard Society.

> [www.wipo.uni-freiburg.de/suslight](http://www.wipo.uni-freiburg.de/suslight)

# Police, paramedics, garbage disposal

Microglial cells are the brain's jack of all trades - Researchers shed light on their role in keeping us healthy

by Jürgen Schickinger

**B**eware: Something is feeling its way through your brain. It is the tentacles of microglial cells, which divide the brain up into territories. Each microglial cell guards its own little empire of neurons. With fine tentacles which stretch out and contract these guard cells are constantly pacing the beat of their neuro-networks. Are communications working right? Are the cells healthy? If an infection is spreading or something else goes wrong, the guard cells take action. "They are the brain's immune system," says Professor Marco Prinz, medical director of the Institute of Neuropathology at the Freiburg University Medical Center. Prinz is the spokesman of the new transregional collaborative research center (SFB) NeuroMac. Freiburg is coordinating this research effort to investigate the properties of microglial cells. They fulfill important tasks in almost all illnesses and disorders of the brain, as well as in its growth and maintenance. They are the brain's building supervisors, police, nurses, paramedics, and garbage disposal.

## Getting an appetite for Alzheimer's

"In a healthy brain microglial cells even feed the cells," Prinz says. Everything has to be shipshape in a microglial cell's territory. Sometimes that

means doing more than stretching out a tentacle. When things get rough, the entire cell moves to the trouble-spot and divides, creating an army of identical guard cells. They gobble up pathogens, dying cell parts and proteins which get into the brain via bleeding or are created by multiple sclerosis and other inflammatory processes, or which form plaques similar to those of Alzheimer's disease. Unfortunately, microglial cells can get enough. After a few weeks, they tire of eating Alzheimer's plaques and other undesirable material. "The cells are exhausted and aged," Prinz explains. He is testing ways of replacing the population, for instance by replacing the bone marrow where the micro-

glial cells can grow. The 46 year old believes that fresh microglial cells eat up far more Alzheimer plaques than older ones and could - maybe - heal sufferers. But he says it is too soon to get our hopes up: "That is still a far-off goal."

In adult brains microglial cells coordinate reconstruction, and in embryo brains they supervise development. They encourage young neurons to form functional networks. Faulty construction of the brain can lead to disorders such as autism and schizophrenia. Is it just a supervisor's mistake? "We don't know the cause," Prinz says. Yet severe viral infections during pregnancy raise the risk of such developmental illnesses - and alter the shape and function of the microglial cells. For example, they are bigger and look deformed in mice with no intestinal flora. The animals sometimes behave oddly. Prinz be-

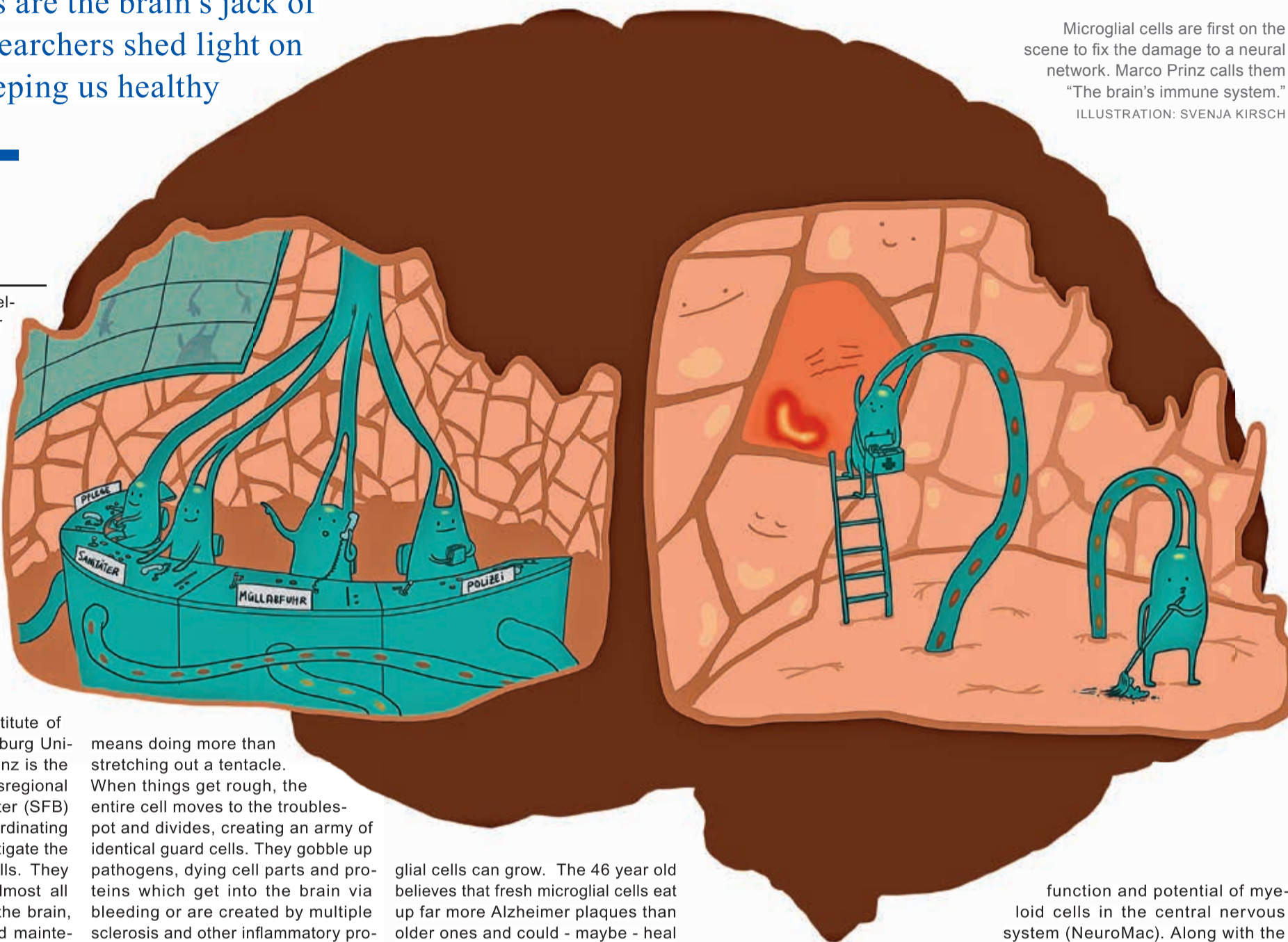
lieves that nutrition plays a role in the risk of developing autism or Alzheimer's. Because food determines which bacteria flourish in the gut. "We replace certain bacterial strains and see what happens," Prinz says. He aims to discover which types are good, which are bad, and what signals gut bacteria send to the brain. Researchers are testing various bacterial products to find out if they can be used as messenger molecules.

## 4.9 million for Freiburg

Many exciting findings and many unanswered questions. It's hoped some of them will be answered by the SFB/Transregio 167: Development,

Microglial cells are first on the scene to fix the damage to a neural network. Marco Prinz calls them "The brain's immune system."

ILLUSTRATION: SVENJA KIRSCH



function and potential of myeloid cells in the central nervous system (NeuroMac). Along with the experts from several University of Freiburg institutes and the Medical Center, researchers at Berlin's Charité and Max Delbrück Center for Molecular Medicine and scientists at Israel's Weizmann Institute of Science in Rehovot are investigating what makes microglial cells tick. They will receive nearly 10.9 million euros from 2017 to 2020. Some 4.9 million of that will come to Freiburg. The long-term goal is the development of new treatments for conditions such as Alzheimer's, strokes, depression, and multiple sclerosis. But Marco Prinz is careful to dampen expectations: "I will be happy if we come up with a definite new approach to treatment."

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## Support for exciting habilitation projects

Biologist Dr. Julia Jellusova and chemistry Dr. Anayancy Osorio-Madrado of the University of Freiburg are to receive support from the Margarete von Wrangell Habilitation Program for women. The two researchers will develop their own projects over the next five years and write their habilitation theses on their work. The state Ministry of Science,

Research, and the Arts and the University of Freiburg are providing some 400,000 euros. Jellusova's project examines how human immune cells and cancer cells survive under difficult conditions. Osorio-Madrado will develop hydrogel biomaterials to promote regeneration of intervertebral disk tissue.

## The search for dark matter

The European Research Council (ERC) has selected physicist Marc Schumann and his plan, ULTIMATE, for a Consolidator Grant of two million euros over the next five years. Marc Schumann, Professor of Experimental Astroparticle Physics at the University of Freiburg, is seeking to improve the search for dark matter and to con-

duct studies on a large, underground detector. The biggest challenge is to reduce the background "noise" caused by natural radioactivity. The ERC grant was decided while Schumann was at the University of Bern, Switzerland; ERC grants are among the most sought-after prizes for European researchers.

## Research alliance launched

The Baden-Württemberg Ministry of Science, Research, and the Arts has approved an application for the "Upper Rhine research alliance on the technical foundations of sustainability." The University of Freiburg, the Karlsruhe Institute of Technology, the Furtwangen, Karlsruhe, and Offenburg Universities of Applied Sciences are working together on the three-year project. Among the researchers' plans is to design stable constructions for vehicles using biological materials and to raise the effectiveness of solar cells. The ministry is investing 900,000 euros, a sum the alliance partners together will match. The project spokesman is Professor Leonhard Reindl of the Department of Microsystems Engineering and one of the directors of the University of Freiburg's Centre for Renewable Energy.

# Can do anything – but don't have to

A cultural history of leisure explains why doing nothing is sometimes helpful

It's not laziness, can't be equated with free time, and it's certainly not boredom: What, then, is "leisure"? At a Freiburg collaborative research center (SFB), academics from the fields of Philosophy, Literary Studies, Theology, Art History, Sociology, Psychology, and Cultural Anthropology worked on a cultural history of the phenomenon from 2013 to 2016. Rimma Gerenstein spoke with medievalist Rebekka Becker, English Studies specialist Pia Masurczak and psychologist Minh Tam Luong, all of whom completed their doctorates in this SFB.

How did monks and nuns experience leisure? Did peasants, who worked in the fields all day, also have leisure time? How do works of literature from the Middle Ages to the 20th century present leisure? And what role does it play in today's world, when the words "deceleration" and "mindfulness" appear in almost every self-help book? The SFB researchers have found one and the same pattern over the centuries. Leisure may last a minute or an hour and happen anywhere - at the beauty spa or at your desk or at a busy railroad station. It serves no purpose, neither recovery nor relaxation. Yet it may create a space which enable us to filter out the demands of everyday life for a moment and to become inspired. Yet leisure cannot be forced or held onto. And sometimes it is feared. After all, it could allow people to stop caring - to lose their ambitions and neglect their duties.

## The temptation of indolence

The Middle High German poets Hartmann von Aue and Gottfried von Strassburg, were skeptical of such repose. They thought it was too close to indolence - even sin. Certainly, leisure is not to be expected in courtly novels. The Middle Ages remind us rather of the "ora et labora" maxim, or "arbeit umbe ðere" (effort to obtain recognition) propagated by the legends of King Arthur around 1200. "It was chiefly the job of the knights to go out into the world and to fight.



Paradise of leisure: Tristan and Isolde live in their grotto, telling tales of yearning love; Isolde's husband, King Marc, remains at court, disgruntled.

SOURCE: WIKIMEDIA COMMONS

Nothing was allowed to hold them up on their quests," says medievalist Rebekka Becker. Returning from their adventures bearing dented shields brought them recognition from the nobles at court. That was the ideal.

But knights could swiftly lose that recognition the moment they abdicated their responsibilities. This is reflected in the literature of the day, Becker explains. "Whenever the characters experience leisure it is always away from society. For instance, the knight Iwein loses his way and wanders through a garden of linden trees, springs, and birdsong - a place of freedom and latitude which can be seen as a contrast to the strict, representative culture at court." But idle tarrying is followed by punishment. The "idlers" are held in contempt, and they are talked about behind their backs - and their guilty consciences torment them. When the prince, Erec,

withdraws for weeks with his wife Enite to indulge in lovemaking, his subjects become restless, and the happiness at court threatens to disappear. Negatively and sometimes with an ironic undertone, the narrator comments on what happens when you never get out of bed.

Becker stresses the inconsistency in the novels. "When the ruler withdraws, the entire court is up for grabs." At the same time, leisure consolidates the status of the elite. "In medieval court culture as described in these texts, the nobility were the only class to enjoy such moments."

## The north-south divide?

So if you had power you also had leisure? If you look to the 18th and 19th centuries, the tables appear to be turned. English studies researcher Pia Masurczak examined travelogues by British colonists living in India and working for the East India Company. In the eyes of these businessmen, aristocrats, and politicians, leisure was often a synonym for idleness, she says. "They could not understand, for instance, why their Indian house servants were so unproductive." A water-bearer was simply responsible for carrying water and did not also make dinner - a sign of laziness, scolded the ladies and gentlemen. "Yet it was due to the strict division of labor in the caste system."

The question of who was thought to get through the day in a leisurely fashion and who industriously kept society running was also dealt with in academic treatises of the day. Some said the high temperatures were the reason that "southern peoples" were slower and more lackadaisical, they said. Northern climes produced more capable people, it was thought. "The English used theories like this as legitimation of their colonial power,"

Becker says. In the summer, the entire colonial administration moved to Simla, a town in the foothills of the Himalaya. At nearly 2000 meters above sea level, the temperatures were significantly lower, and the officials noted keenly in their diaries how "refreshingly English" the climate was; at last they could work properly again with a cool head.



Eighty-one high school students completed mindfulness training which helped them reduce stress in their final years of school. PHOTO: GERHARD SEYBERT/FOTOLIA

Despite this, Masurczak says, the British were not always above leisure time. Their descriptions of India and its natives swung from aversion to the "naked black creatures squatting at the doors of their huts," as noted by writer Emily Eden in the 1830s, and the longing for a life far from the constraints of civilization. "The pleasurable smoking of a hookah for example," Masurczak points out, "many Englishmen even in the 18th century considered that a lost cultural technique, which they themselves adopted and

with which they took a small step towards the foreign world.

## Breathe in, breathe out

Whether it's hatha yoga or transcendental meditation - stressed, big-city-dwelling Westerners like to imitate foreign cultures so as to decelerate and relax. But can you meditate yourself into a state of leisure? Psychologist Minh Tam Luong shakes her head. "Individuals are told that stress is an individual problem for them to solve: 'Do something, make an effort, so that you can keep up with the competition.' Yet the stress itself is usually due to the individual's attempts to live up to external demands and expectations." And they are getting bigger.

Luong pitched her research tent at a place once considered to be a place of leisure - schola, the Latin word for school. There, she worked on leisure's modern sister, mindfulness. But it was not so easy to find. "You can define it as a state, a personal trait, or as a program. The important thing is a attitude of presence and non-judgement." Luong wanted to find out whether mindfulness could help high school students to cut their stress levels in the final years of school. For eight weeks she practised the Mindfulness Based Stress Reduction Program (MBSR) with 81 eleventh-graders at three Freiburg schools. The program was developed by mindfulness pioneer Jon Kabat-Zinn in the late 1970s. "It was important to us that this was not about doing even more work. Instead, we wanted to encourage the young people to reflect more: What is important to me? How do I want to learn?"

The results demonstrated the effectiveness of the exercise, Luong says. The students who took part in the mindfulness courses felt less fearful and stressed than other students - even as many tests and exams approached. Their social and emotional skills improved, too. Luong sees mindfulness training "as a bridge which can lead to moments of leisure. For someone with high stress levels, that is not even possible."

## Into the second round

The German Research Foundation is sponsoring the collaborative research center 1015 Leisure: Borders, Temporal and Spatial Character, Practices with nearly 6.5 million euros over the next four years. This is the second round in which the collaborative research center received funding; it was launched in 2013. New subjects have been added, strengthening the contemporary link to leisure. The collaborative research center incorporates disciplines from the Faculties of Philology, Humanities, Theology, Economics and Behavioral Sciences, Environment and Natural Resources, Medicine, and the university hospitals. The computer center and the university library are also involved. The group is also helping to establish a Museum of Leisure and Literature in Baden-Baden. The speaker is Professor Elisabeth Cheauré of the Slavisches Seminar.

> [www.sfb1015.uni-freiburg.de](http://www.sfb1015.uni-freiburg.de)



The nautch girls danced traditional Indian dances. For many British employees of the East India Company working there, these performances were a sought-after amusement at which they could experience leisure time. PHOTO: LIBRARY OF CONGRESS/LC-USZ62-35125

# Uniform standards

An internet platform and practical exercises help medical students learn the right ways to examine a patient

by Petra Völzing

Today, Janine Traut and Jan-Luca Penner have the practical course, "Introduction to clinical medicine." The two medical students are in their third semester and, in this preclinical phase of their studies, are taking five modules to learn the basic patient examination techniques - how to examine a patient's head and neck, abdomen, spine, and joints. Today they're learning to check neurostatus. At the direction of student tutors Kathrin Hanke and Philip Keye, the members of each group practice the techniques by examining one another.

That's not easy without at least some basic knowledge. For students who've grown up in the digital age, since summer 2015 there has been an open-access online platform, [www.ukurs.uni-freiburg.de](http://www.ukurs.uni-freiburg.de), to accompany the lecture and the printed manual. These doctors of the future can use it to prepare for each module and to practice afterward. "It is a tight, compact summary of everything that may come up in the course," says Penner. Traut worked through the module prior to the course, too. They are particularly enthusiastic about the videos, which show the examination techniques in detail. Now they are swinging the reflex hammer themselves.

Doctors Marit Stenzel and Dr. Paul von Pöllnitz created the material in five months under the guidance of Dr.



Here's looking at you! Students practice patient-examination techniques on each other.. PHOTO: JÜRGEN GOCKE

Irmgard Streitlein-Böhme. They used the manual as their guide. Producing the videos was a great deal of work. "Moving pictures are necessary to understand the techniques better than if you're looking at the photos in the manual," says Streitlein-Böhme, specialist doctor and teaching specialist in General Medicine. After each

section, students can solve a case-quiz to test what they have learned. But it is not just the lower semesters who use the site; more experienced students also refer to it when preparing for their state exam. Other programs such as Nursing Science also work with the platform.

Petra Jung is a regular user. The lecturer is supervising the eight parallel examination technique course groups, along with the student tutors. "The examination technique courses aim to teach uniform standards so that all the students are at the same level when they finish," she explains. Previously, lecturers had taught the tech-

niques more or less as they saw fit, she says. The online course makes it easy to understand the standards. Lecturers and tutors can demonstrate the course requirements in an uncomplicated way. "That is also important for examiners," Jung adds.

## Better results in the exams

The development of the preclinical practical course - including the online platform - has a long history. "The university made it a goal some years ago to link the preclinical and clinical phases of studies more closely," Streitlein-Böhme says. So in 2012 the Faculty of Medicine overhauled the preclinical phase practical course "Introduction to clinical medicine" with new material. Until then, practical units did not start until the clinical phase of studies. The development of uniform standards for the basic patient examination was a long process, too. "In a working group we worked through which examinations need to be in there and which can be left out at this stage," Streitlein-Böhme explains. Now students have a well-rounded program at their fingertips. And the first evaluations are already in. "We have found that the results of student exams in this area have improved by ten percent since we introduced the new course." A pilot questionnaire of 60 students showed two-thirds were using the online platform. In 2016 the platform was even singled out for the Teaching Prize for outstanding teaching at the Faculty of Medicine.

[www.ukurs.uni-freiburg.de](http://www.ukurs.uni-freiburg.de)

# It's about finding answers

A Master's program teaches students how to find engineering and scientific solutions

by Stephanie Heyl

Natural disasters, climate change, and dwindling resources all create problems for society which academia and industry must find solutions. The Institute of Sustainable Technical Systems (INATECH) at the University of Freiburg in winter semester 2016-17 introduced the Sustainable Systems Engineering (SSE) program, which is taught in English. Building on the three pillars of "sustainable materials," "energy systems," and "resilience," Master's students from the sciences and engineering sciences learn to explore technical advances and to put them into practical application.

The University is cooperating closely with the five Fraunhofer Institutes in Freiburg. Lecturers from all those institutes are active at the SSE; a total of 14 professors are taking their expertise into the lecture halls and laboratories. Professor Stefan Glunz of INATECH and section head at the Fraunhofer Institute for Solar Energy Systems says the idea is good: "The contributions the parties make in the

field of sustainability complement one another. The university is much stronger in basic research, and the Fraunhofer Institutes are very good in applied research." Glunz himself lectures on Solar Energy and has been in the program since the get-go. This cooperation has another advantage - students can get student assistants' jobs both at the university and at the Fraunhofer Institutes, allowing them to get the feel of work in the laboratory.

What are the students' expectations? "Firstly - classic, solid, basic training in the engineering sciences," Glunz explains. That means a lot of materials science - from electrotechnology, informatics, physics, and chemistry. "It's not a lightweight program," he says.

## Safe cars, stable power grids

"We don't just skim the surface of the problems - we go into the technical details."



How can you build a car to be light and also safe? At the Fraunhofer Ernst Mach Institute researchers at the crash-test center use various technologies to find out what happens when a vehicle hits something. PHOTO: FRAUNHOFER EMI

It's about finding answers. How can you build a car to be light and also safe? How can functional products be made cheaply and sustainably? How can electricity produced by renewables be sensibly fed into the power grid and stored? Resilience is a bit topic. "Put simply, it is the ability of a system to return to its ground level state despite a massive disturbance - after a natural disaster, for example," Glunz explains. How can we reduce the physics of failure as far as possible? How can we construct a power grid to prevent a blackout? To answer such questions, the students also learn to examine the socio-economic, legal, and psychological aspects. "We have to understand how society responds to challenges, what the effects will be on the economy and the law," he adds.

## Not a sea - an ocean

The program has proven popular. There were 280 applications for the first round; more than 40 students were chose - "the pioneers," Glunz calls them. A Bachelor's program is being considered for winter semester 2018-19; it would be in German as well as English. Most of the students came to Germany especially to take the Master's program. For some, it is their first time abroad. Puneeth Jakkula, an engineering student from India, is proud to be in the program. "I have

learned more in these courses than ever before," is his comment. But he wishes there were more lively discussion with the professors.

Graduates have a broad choice of potential professions. Yupak Satsrisakul completed a Bachelor in electrotelecommunications, has worked for some years in rail transport in her home country, Thailand, and wants to do a Master's in the area of sustainable design and resilience development. Nissanth Kumaman from India went looking for a Master's program in Europe so as to explore sustainable energies. "Before I came, I thought the subject was a sea. In fact, it's an ocean."

## Sustainability Center

The Institute of Sustainable Technische Systeme (INATECH) at the University of Freiburg is the third and newest Institute at the Faculty of Engineering. At the same time it is the engineering core of the Sustainability Center founded by the University of Freiburg and the five Fraunhofer Institutes in March 2015. The head of INATECH and co-director of the Center is Professor Stefan Hiermaier.

[www.pr.uni-freiburg.de/go/master-sse](http://www.pr.uni-freiburg.de/go/master-sse)

# For those in a hurry who hunger for knowledge

If you want new ideas for teaching, drop by the Hochschuldidaktik breakfast!

by Alexander Ochs

Hochschuldidaktik + breakfast = Hochschuldidaktik-breakfast. The sum works out. But if you think this is all about food, you're wrong. Input in the new short format is largely focused on subject material and method. Silke Weiss launched the new format. She is director of the lecturer-training Hochschuldidaktik section at the University of Freiburg. The idea is simple. Regular university-teacher training courses and workshops usually run for one or two days. They take up a lot of time. That's time which teachers at the university and at universities of applied science rarely have. The breakfast format is like a pitstop - for those in a hurry. It's been on offer once a month since winter semester 2016-17 and is to continue this summer semester 2017.

On this Friday morning, the initiators have decorated the room in Bismarckallee 22 with a bunch of pink and cream-colored flowers and have put up words of welcome on the flipchart. Some 15 lecturers and tutors have come - both from the humanities and

social sciences and from the scientific subjects. Today's topic is the "sense and nonsense of discussions," an issue lifted from everyday experience in classes.

But before taking in knowledge, the participants can take in some nutrients; they rush to the buffet, where bread rolls, pretzels, butter and jam await, and apples, mandarins, bananas and grapes add dashes of color, along with yoghurt, various teas, coffee pots, water, and orange juice. With a mug of coffee and a bite to eat, participants return to their seats. For teacher it's an odd situation - themselves being taught.

## Discussion in teams of two

The teachers' teacher is PD Dr Ulrike Hanke, herself a graduate of the University of Freiburg, neat-casually dressed in jeans, pale blue blouse, timeless spectacles. Her motto for the morning - "I want you to have a good breakfast without me spoiling your appetite," she jokes. Then she asks - "What do you use discussions for when you're teaching?" The participants are given five minutes to discuss the question in teams of two. They put down answers on reference cards.

The spectrum of about 20 concepts runs from "opening gambit" to "promoting critical reflection." Hanke pins the orange cards onto the corkboard in a kind of word cloud and summarizes the results. But then she spins the thread further,

distinguishing between learning discussions aimed at repetition from problem-solving discussions, in which further development and transfer are paramount. She also adds a third form - the "let's dance" discussion aimed at training the ability to give and take criticism. "So I urge

you to think more carefully in the future about where you are and where you want to go," Hanke says.

In 45 minutes the teacher has given the participants a lot to think about, and at the end of it, appropriately, there is a lively discussion. The tutors and lecturers exchange their own observations and experiences, on methods like fishbowl or reframing, or simply the banal recognition by one of the teachers that: "Biology students just have a very great need to talk things over!" Relieved laughter all round. Not a bad start for a Friday morning. And if that wasn't enough, you could still grab a croissant on the way out.



PHOTOS: MAGICPITZY, PETRA DAISENBERGER, ALENKADR/ALL BY FOTOLIA



All pinned up: The widely-differing aspects of using discussions in class, brought together in a word cloud. PHOTO: THOMAS KUNZ

## Topics and transparencies

This format was approved by the University of Freiburg student council in the Innovative Studies 2016 project competition. The transparencies and diagrams used at the breakfast program are available online:

[www.hochschuldidaktik.uni-freiburg.de/angebote/fruehstueck](http://www.hochschuldidaktik.uni-freiburg.de/angebote/fruehstueck)

# Participation at the museum



## University of Freiburg provides training unique in Germany

by Eva Opitz

What does modern, communicative museum work look like? How do you reach out to new groups of visitors and get them to participate in planning an exhibition? These were questions under discussion at the "museOn" training event in late January 2017 in Freiburg. The University of Freiburg event happens mainly online, but now

and again, real live meetings are held - "contact events," you could call them.

The students come from all over Germany and the German-speaking countries. Experts from universities and museums, those coming or returning from other disciplines, and culture workers. "It's a colorful mixed group today," says Dr. Christian Wacker, academic head of the training project. He describes them as "test subjects" - for this is a unique thing in Germany and was in its test phase until the end of the 2016-17 winter semester. After that,

it was to be reviewed, adapted, and made a part of the official classes on offer. Experts from the university and the museums helped develop the project, because practical work plays a big role," says Wacker. The students can choose what they focus on according to their individual interests. Currently there are 40 courses on offer, including topics such as museum ethics and digital object documentation.

This afternoon, 16 test subjects are taking part in the "participation" module. "The world of museums is changing.

What would a school student, an immigrant, or a sponsor think of an exhibition at the Augustinermuseum? The students used role plays to discover why it's important to get the participation of the visitor from the start. PHOTO: MUSEON

We are in an exciting phase of transformation," says Angelika Zinsmaier from the Museum communications section. A museum is no longer purely a temple to the Muses, but a place for learning, she says. Exhibits are still important, but in the foreground there should be events which invite visitors to join in, Zinsmaier says. Lecturer Sabine Jank from the szenum Berlin agency supports this user-oriented approach. Museum planners should integrate interaction and dialogue into an exhibition from the start, she says.

Johannes Sturm of the Zentrum für Kunst und Medien in Karlsruhe says in these courses he learns a lot which goes above and beyond his own professional remit. He also appreciates the opportunity to talk with other colleagues. Petra Schwarz, head of the Loki Schmidt Haus - a botanical museum at Universität Hamburg - works in a small team and is "the curator and press officer rolled into one." She says that has its pros and cons. She would like to start trying some of the approaches for participation in her small museum. "I'm getting enough ideas here for several years," she says happily.

## More space, less text

Some of the ideas are illustrated in the practical part of the course. The students stroll through the "Freiburg in National Socialism" exhibition, which opened late last year at the Augustinermuseum, and put themselves into

the role of a school student, immigrant, or sponsor. "As a school student, I might not know much about religions," says Sibylle Kobus, sculptor at the Deutsches Museum in Munich. "There is not much space, and there is an awful lot of text."

The participants unanimously criticized the many exhibits in Sütterlin script, saying hardly anyone can read it these days; they also said there should be more translations into English and French. They felt that the personal accounts could have been told in shorter, easier language, which would have placed the focus more clearly on the complex personalities. The debriefing after the visit showed that participation in advance could make a big difference.

## Certificates and degrees

The museOn training course is a project by the Freiburger Akademie für Museums-, Ausstellungs- sowie Sammlungswissen (FRAMAS) at the University of Freiburg. After a test phase it will be on offer as an official unit from winter semester 2017-18. There will be one-off courses as well as the qualifications: Certificate of Advanced Studies, Diploma of Advanced Studies and planned for the future a Master of Advanced Studies.

[www.museon.uni-freiburg.de](http://www.museon.uni-freiburg.de)



# Awooooooooooooooooooooo!

“Wolf tracks” game lets players hunt and howl in a pack

by Rimma Gerenstein

In the “Abgezockt!” series, members of the uni'leben editorial team meet with University of Freiburg researchers to play a game. The aim is to shed light on board games from an academic perspective. Or something like that.

## The game

Raising cubs, hunting, fighting - players dice their way through the five phases of a *Canis lupus*. But the cliché of the lone wolf doesn't escape without a few scratches. The game requires all parties to cooperate, for example to hunt down a bison or a moose. And howling together is more fun, anyway. But you can't always avoid problems in the pack; there are fights to see who's top dog. This puts social behavior to the test.

## The players

Professor Gernot Segelbacher, Wildlife Ecology and Management; Felix Böcker, Forest Research Institute

Sonja Seidel, Press and Public Relations Office

## How to play

“We are all multiple personalities,” says Gernot Segelbacher. Each player has three wolves. A roll of the dice determines who is a leader and who a follower. Felix Böcker is on top - he has the parents, the alpha male and the alpha vixen. “Ah, these are clearly North American timber wolves,” says the expert as he looks at his cards. They show two big animals with shiny brownish-black coats. “At last - a game in which I can impress you with my boundless knowledge,” he jokes. Segelbacher follows with another pair and becomes the beta male, the pack's deputy leader. It's not Sonja Seidel's lucky day; she has omega, the runt of the pack.

The game begins with a correction. “We don't call them alpha and beta males any more,” Böcker explains. Those terms arose in the mid-20th century, when researchers observed wolves in artificial enclosures. “The animals were all tossed in together and had no way of separating. So that kind of structure formed.” Nowadays researchers know more, Segelbacher assures us. “We know that a pack is made up of the parents and their cubs. The parents get food and teach their young everything they need to know. A lot like we humans do.” When a cub is old enough, it is sent out into the big wide world - that can mean trotting a few thousand kilometers from Germany to eastern Poland - to find its own territory and a mate. A wolf may live



At a roll of the dice - Felix Böcker (left) draws the alpha wolf card, Gernot Segelbacher is the runner-up with the Beta wolves - but the two experts say these terms are not in line with the current state of research. PHOTO: THOMAS KUNZ

five to six years alone and waiting for the right wolf to come along. Pretty much the way humans do.

The next step is - looking for food. A wolf can catch small prey, such as rabbits and voles, by itself. For bigger

menu - a white-tailed deer which will cost the pack 24 points, and a caribou for a full 40 points. “The wolves wouldn't attack the strongest male; they'd look for a weaker animal which can't defend itself so well,” is Segelbacher's comment. The pack plays it

acoustic signal. Wolves also use the howl to tell neighboring packs - “We're here, there are a lot of us, stay away!”

The next phase includes hierarchical battles - a chance to move up the pecking order. The experts have some correction here too. “Of course wolves fight among themselves, but not within their own families. That is very rare.”

The players draw battle cards with the numbers one to ten, which they use against one another. A higher number beats a lower one. All this baring of teeth, growling, and snapping shifts the ranking. Segelbacher's beta wolves put their tails between their legs, while Seidel's runts move up. Böcker's alpha wolves remain unchallenged but lose vitality points. However, nature compensates for the losses. After more than an hour, three cubs strengthen the pack. But the end of the game is nowhere in sight.

## The analysis

The game would be helpful in giving players an insight into the world of wolves - however it is not up to date, the two wildlife ecologists agree (regarding hierarchy battles and alpha males). “You could certainly use it to make students find out where the differences from the current research are,” says Böcker. “For instance, they could think about setting up the different phases so that they were more like the real life cycle of a wolf,” Segelbacher suggests.

Segelbacher and Böcker would find it interesting to add the aspect of wildlife management to the game. “It would be fascinating if the players had to solve problems - for example, if the wolves started killing sheep.” It would also be possible to include the relationship with farmers and hunters in the game, says Segelbacher. “We work according to the motto ‘We don't manage animals but people.’ It would be possible to integrate research findings - such as the question of when it's worth putting up fences, or when the state should compensate farmers for stock killed by wolves.”

The game's overall focus is on North American animal life, Böcker says. “Not until the last decade was the influence of research there on the central European image of the wolf pushed aside by our own experience.” The scientific community here has caught up, and there would be plenty of material for a game to suit the European experience. “But the principle is very much in line with the matter close to our hearts, which is to tell the public about wolves in a neutral and factual way, and to dispel their fears.” The big bad wolf only exists in fairytales.



Players can make decisions about the phases of a wolf's life by playing their action chips and strength tokens.

PHOTO: MAX ORLICH

game, like caribou or elk, wolves need to work together. Seidel goes hunting. A lemming bites the dust. “For a wolf that's barely an entrée, a snack at most,” says Segelbacher. Great. Now everyone's tummy is rumbling. Make way for the hunting pack! The players lay down their action chips, face down. They determine how active the animals will be during the hunt. Böcker is thinking “My alpha vixen needs enough strength to raise her cubs. The whole group benefits from that. So I won't exhaust myself hunting.” On the

safe. “The small deer is enough.” The animal is brought down. The card says it yields nine servings. The wolves eat according to their pecking order. Alpha starts first, then it's Beta's turn, and Omega is unlucky again - he goes hungry and loses points on strength.

That job done, it's time for the next phase... Awooooooooooooo! That gives you recognition points. Howling is more than just team building, the two researchers explain. For instance, if a wolf loses track of its family while hunting, it can find them again using this

## Diversity on film

Capturing diversity in seven minutes - A new film goes with members of the University of Freiburg as they travel to work. They have roots in Armenia, Korea, Romania, Argentina, Indonesia, and Germany. They drive, cycle - or simply walk. They teach, work in the administration, or are writing a doctoral thesis, and as they go, they tell us how they see the university, the city, and the country. The film

was made for the 2016 Day of Diversity. The event, which is held every year by the Gender and Diversity Office, shines a light on the issue of origins. Nadine Zacharias, a University of Freiburg alumna, produced the film with her company “Moving Ideas - Filme für Forschung und Kultur.”

> [www.pr.uni-freiburg.de/go/film-vielfalt](http://www.pr.uni-freiburg.de/go/film-vielfalt)

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 Rombach und Walthari

## Foundation launches first funding round

Doctoral candidates and postdocs at the University of Freiburg can now apply for scholarships from the Grünwald-Zuberbier Foundation. It sponsors extended research and study stays at a university or academic institution abroad. It is the first dividend paid out by the Foundation, which was founded and is administered by the University of Freiburg. Members of the Medical Faculty and the Faculty

of Biology may apply via their Deans' Offices. In order to support the university's internationalization, the Foundation is making available a sum of 21,000 euros in 2017. The Foundation's capital is drawn from the estate of Professors Karl Gerhard Grünwald, who died in 2013, and his wife Erika Grünwald, née Zuberbier.

„Wolfsspuren“,  
 Spieltrieb  
[www.spiele-entwickler-spieltrieb.de](http://www.spiele-entwickler-spieltrieb.de)

# A piece of fruit every day

Philipp Weigel and Philip Kapitzke walk to North Cape. They set off at Epiphany – in Ulm

by Martin Jost

Philipp Weigel and Philip Kapitzke walk from Ulm to the northernmost point of the European continent. They have been going since 6 January 2017. Swabian Jura, Franconian Switzerland, Thuringian Forest - fairytale winter landscapes, outdoors 24 hours a day, with nothing between them and the horizon but the earth and sky. What was the best thing they have experienced on their hike so far? "In Gunzenhausen I tried my first Bayrische Krapfen [jam doughnut] - what they call a Berliner in Freiburg," says Weigel. "I ate six all together that day."

## 4,700 kilometer to the finish line

Kapitzke, 24, and Weigel, 23 were born and bred in Ulm. They have known each other since they were in kindergarten and have often gone on long walking tours together, like the eleven days they spent rounding the Montblanc massif. Kapitzke worked most recently as a building finance advisor and after his walk to North Cape, he plans to complete a Master's degree in Economics and Philosophy to go with his Bachelor's degree in Business Studies. Weigel is studying Mathematics and Sport at the University of Freiburg Mathematics and Sport; later he is going to teach. He is taking a semester off for the walk to North Cape. The two men aim to finish the journey in a little over six months.

The route they've planned is 4,700 kilometers long. They are not just walk-

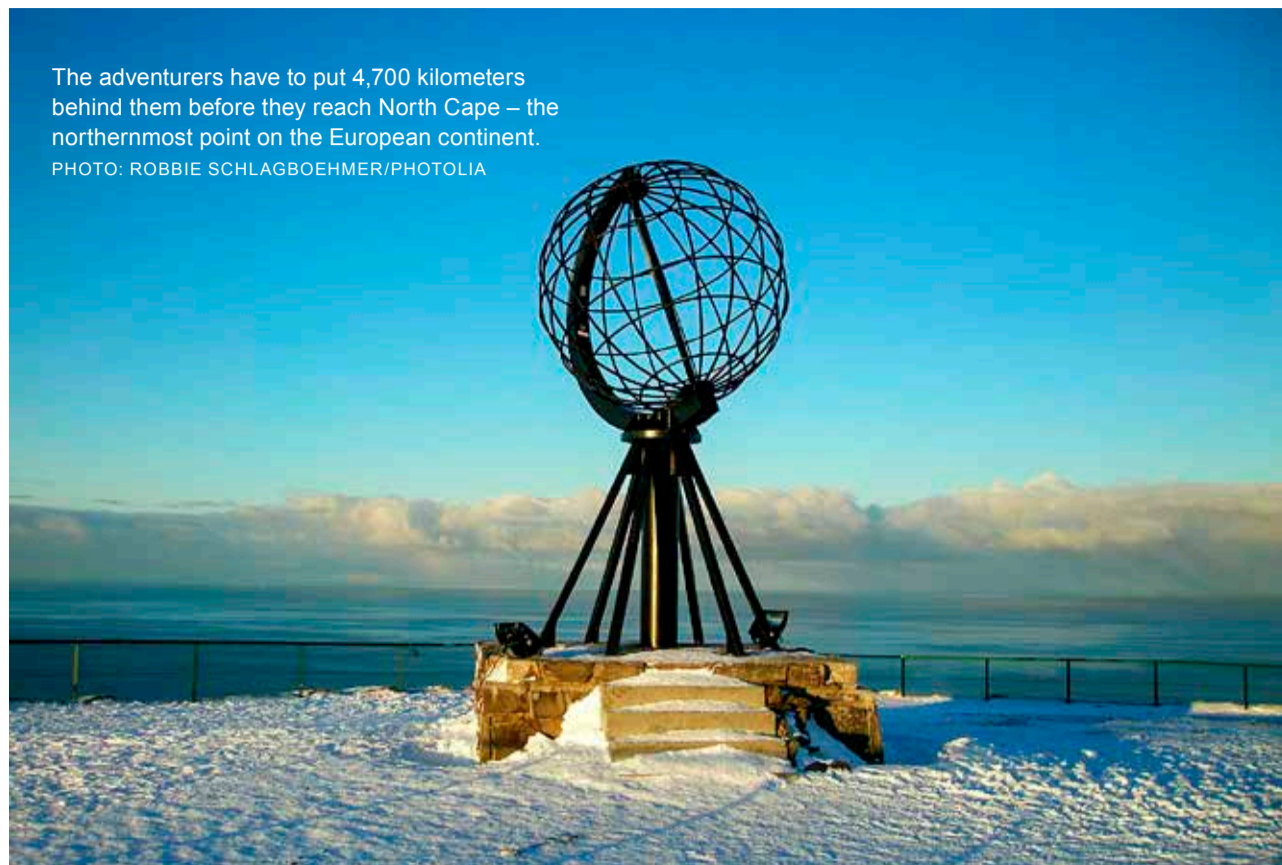
ing stubbornly north; they are taking some detours to interesting places. They want to see the countryside and the people, experience some culture and - not least - try some culinary specialties. In line with this, their plan is to walk six days a week and to take a break on one. In that free time so far, they have taken a look at Nuremberg, Bamberg, and Weimar. In late January they had already managed more than half the 1,200 kilometers of the German leg of their tour.

Kapitzke and Weigel set off in the depths of winter. That didn't stop them from spending about half their nights



Packing their bags: Philipp Weigel (left) and Philip Kapitzke have to carry everything they need for the tour.

PHOTO: SÜDWESTPRESSE ULM/LARS SCHWERTFEGER



The adventurers have to put 4,700 kilometers behind them before they reach North Cape – the northernmost point on the European continent.

PHOTO: ROBBIE SCHLAGBOEHMER/PHOTOLIA

outdoors. Not always voluntarily. "Today we have to sleep outdoors - unexpectedly," Kapitzke explains by telephone on 25 January. "We are sleeping in a hut somewhere above Schwarzburg in the Thuringian Forest. We have a good view of a hotel which unfortunately is currently closed." They tried four hotels and five boarding houses that evening, he said - but all were shut. "That's never happened to us before when we wanted a room. But luckily it is only meant to get down to minus eight degrees." They have already survived minus twelve in the tent; their sleeping-bags promise comfort down to minus ten. "You don't really feel very warm, unfortunately," says Weigel. "You have to wear a cap at night. And I usually pull my neckerchief up over the tip of my nose."

In the mornings it's not easy to crawl out of the sleeping-bag and put on cold clothes. On a typical day they get going between eight and nine. They take a break every two hours. In temperatures like these, the breaks tend to be short. They walk for six to eight hours, then it is getting dark again.

The long tour was Weigel's idea. "At the start of 2016 I wanted to plan my

summer vacation, and I thought northern Europe would be nice." He read about the European long-distance trails, particularly about the E1, the last part of which runs to North Cape. "And I thought, you could walk there from home." Philipp asked Philip if he wanted to come along. Once they had decided to take half a year for the trip, they started planning. They compiled their route as far as possible from existing trails, so that they could follow the signs and would not have to always navigate using their phones. For emergencies they have three powerbanks so they can charge their batteries along the way.

## Walking into loneliness

Later, when they are in Norway, there will be a roughly 14-hour march in which they will pass no human habitation. "By then we might have bought ourselves a solar panel," says Weigel. "Then the sun will be shining at night anyway." Their packs will be heavy with rations for two weeks. So far they have always carried enough food for about two days. A piece of fruit every day - that's the goal. Their diet of porridge, ready meals, and muesli bars is not otherwise very balanced. To expe-

rience nature this way, to visit cities, and to strike up conversations with nice people make all the effort worthwhile. They will also be climbing some high mountains, because, as Weigel puts it - "What matters is the journey, not the destination."

The two friends know the value of the little things which make their tour into a grand experience. After their night in Gunzenhausen, their route took them through a thinly-populated region with only a few small villages. Weigel says he had not reckoned on another jam doughnut that day. "And then a baker's van stopped on the road, almost right in front of my nose. It opened up shop, and I got doughnuts after all. That was an absolute highlight."

## Read up on the North Cape trek

Philipp Weigel and Philip Kapitzke have a weekly blog on the website of the Ulm "Südwestpresse," where they describe their journey.

> [www.swp.de/nordkap](http://www.swp.de/nordkap)

Win a gift certificate

# uni'kat

Office supplies, baby bibs, rubber ducks: The University of Freiburg uni'shop offers much more than things for everyday campus life; it's got something for people of all ages. In this series, uni'leben presents some of the products and raffles off gift certificates.

## Heirlooms for vegetarians

by Martin Jost

Did you ever ask yourself why you carry your belongings around with you in a shoulder bag - a bag originally designed for bicycle couriers? Martin Reichert puts that question in his book "Wenn ich mal gross bin" (When I grow up). "Are you a bicycle courier? Do you even have a bike? I don't," writes Reichert. Reichert's scorn for shoulder-bags made of truck tarpaulin is out of place in Freiburg. Where (it feels like) 80 percent of the population rides a bike, people understand the advantages of this kind of material. It's water-proof and doesn't tear even if you overload it all the time with heavy books.

And above, truck tarpaulin only looks more stylish as it ages. When the load stretches it or when the corners are battered, it gets a bit rough. In



Water-repellent, shock-resistant, stain-resistant, and hard-wearing. The shoulder bag made of truck tarpaulin is a reliable companion. PHOTO: KLAUS POLKOWSKI

the places it rubs against your clothes, it gets a dark, shiny patina. And of course it remains waterproof and stable no matter what. Looked at this way,

truck tarpaulin is the new leather. Leather itself is not a sustainable material because animals have to be raised and slaughtered to make it. The

ecological future is looking increasingly vegetarian. Freiburg, where (it feels like) 86 percent of the population is vegetarian - and the rest are vegan - is a step ahead of the rest of the world. That's why you see so many truck-tarpaulin shoulder bags here.

## Material of the future

After textiles, which wear out quickly or fall apart, and after leather substitute, which looks horrible in no time, truck tarp is the long-lasting, easy-care material for the accessories of the future. Martin Reichert defined what he called "generation shoulder bag" as a subset of what Florian Illies called the "generation VW Golf" - those who just refuse to grow up. In his book, he calls on readers to get over their shoulder bags. That was in 2008. But what he could not have foreseen back then - the shoulder bag itself has grown up. Today it goes everywhere in every profession and lifestyle - not just if you're a courier.

At the uni'shop you will find nylon-lined, truck-tarp shoulder bags in white and bright blue. They can hold your laptop, lunch, and your reading for the day. The material is reliably water-repellent, shock-resistant, stain-resistant, and hard-wearing. Of course it proudly bears the University of Freiburg logo. The solid dispatch case of yore is the truck-tarpaulin shoulder bag of today. Maybe the next generation will find it in their parents' attic - nicely aged, timelessly smart. And - 100 percent vegetarian.

## Competition!

Win two gift certificates, each for 25 euros at the uni'shop. Send an email to [unileben@pr.uni-freiburg.de](mailto:unileben@pr.uni-freiburg.de) by 31 March.

The winners will be drawn from all the entries.

> [www.shop.uni-freiburg.de](http://www.shop.uni-freiburg.de)

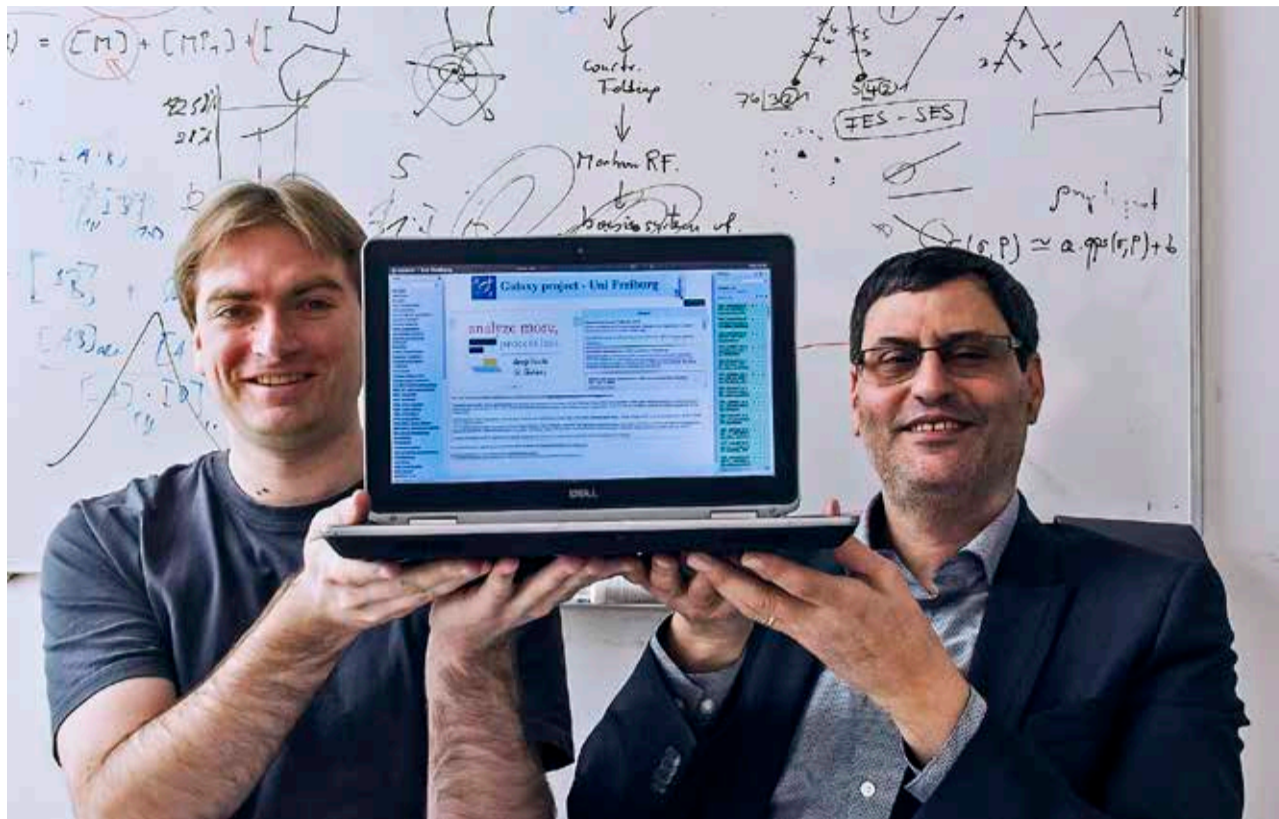
# All in one Galaxy

A new online platform allows scientists across Europe to share Bioinformatics' infrastructure and service

by Nicolas Scherger

More than 30 terabyte of data, some 500,000 calculations - this example from the working group of Professor Lutz Hein and Dr. Ralf Gilsbach demonstrates how the life sciences could become data sciences. The team from Pharmacology is working within the University of Freiburg collaborative research center (SFB) Medical Epigenetics and has decoded the entire epigenome of heart muscle cells. The epigenome is the entirety of epigenetic mechanisms, which determine which genes are active in a cell and which aren't, whereby changing environmental factors, such as nutrition, stress, or medication can create patterns. The group was able to use infrastructure which also arose with the SFB: Galaxy - an open-source community project, initiated at Penn State University in the US. It is a simple-to-use online platform via which the researchers can use high-performance computers for their data analysis. "Galaxy enables us to carry out this kind of research quickly and efficiently," Gilsbach says.

The pharmacologist took part in one of the first Galaxy workshops which was organized by Freiburg Bioinformatics in 2013. Since then, the group headed by Professor Rolf Backofen and Dr. Björn Grüning has continually expanded the infrastructure and the service. The team has been coordinat-



Björn Grüning and Rolf Backofen (from left) open doors to other researchers to analyze their own large data sets. PHOTO: PATRICK SEEGER

ing a performance center for Bioinformatics since 2015. It is sponsored by the German Ministry of Education and Research to the tune of some 5.8 million euros; it now makes its services available across Europe. "The interests and requirements of the users is paramount for us," says Backofen. Working with the university Computer Center's high performance computing team, the group is able to access mainframes and additionally offers

advice and workshops - all free and on an open-source basis.

#### More than 800 analytical tools

Another advantage to Galaxy is that instead of developing the programs themselves - as is usual in Informatics - the users can input all the settings for their data analysis easily via a graphic interface in the browser. "The researchers upload their data and can

then apply and combine various analytical tools, alter the parameters, translate the data into a relevant format, and much more - all on one platform," Backofen explains. Already, more than 800 such analytical tools are available. If the right one is not there, the Bioinformatics team will help in programming a solution.

The possibilities of big data are fundamentally changing many research

processes in the life sciences. Instead of a clearly-viewed experimental setup, analyses are now often conducted which are the equivalent of hundreds of thousands of single experiments. "To be in the global forefront of your research, you need statistical method, high-quality data analysis, and a lot of computing power," says Grüning. Around 400 researchers from some 40 working groups in the university, the Medical Center, and the Max Planck Institute of Immunobiology and Epigenetics use Galaxy for their work; and in subjects such as Pharmacy and Biology, the platform is also used in teaching. If you would like to use the service, contact the team by email. Easy access is provided with the help of the workshops and interactive online training materials, some of which take the user step by step through a simple data analysis.

But that's just the start. "Galaxy is like Excel; you can soon use plus and minus, but it really only gets interesting when you are doing more complex calculations," says Gilsbach. Today all members of the Pharmacology working group use the platform and combine various data formats in ambitious analyses. The team reported their decoding of the heart muscle cell epigenome in the specialist journal *Nature Communications*. "That kind of publication," says Gilsbach, "would not have been possible without Galaxy."

<http://galaxy.uni-freiburg.de>

## New events for postdocs

The University's Freiburg Research Services (FRS) have expanded their options for postdocs planning their professional careers inside or outside of academia, with several new formats. On 4 April 2017, interested parties participated in the workshop Time to write: Your research proposal - our expertise, getting support with their funding applications and the chance to ask questions. The writing workshop took place from 9am to 4pm at Friedrichstr. 41-43, second floor, room 02003. In summer semester 2017 the "brown bag" events will be launched, offering the chance of a snack around noon and information on issues such as the law relating to time-limited employment contracts in academia, tenure track, or child care at the university. The FRS also offers a coaching program for the first time, helping postdocs to reflect on the challenges of their everyday work with professional support. FRS already provides financial support for child care during the events. All events are free and open to researchers of all disciplines except Medicine. Registration is required.

[www.frs.uni-freiburg.de/kurse\\_postdocs](http://www.frs.uni-freiburg.de/kurse_postdocs)

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# Move while you work

Sitting motionless, staring at the screen - That's what students and office workers often do for hours. And as exams and deadlines approach, relaxation seems nigh impossible. No wonder that back pain, neck stiffness, headaches, or simply the discomfort of low blood pressure are common complaints. And yet it is not really hard to get relief. In this series, members of the University of Freiburg's Health and Fitness Center demonstrate exercises which anyone can do any time at their desk.

## A strong back prevents pain



When you pull your shoulder blades together, it should feel as if you could hold a pencil between them. PHOTOS: KLAUS POLKOWSKI

by Petra Völzing

Humans have evolved (or mutated!) from *Homo erectus* to *Homo sedens*. Few people realize what hard work for the back sitting is. The muscles have to hold quite a bit of weight in position without moving. They can cramp up painfully. But you can

strengthen your back muscles with a dynamic exercise which you can do any time at your desk: Shift back slightly from the desk and hold your body loosely upright. Part your knees slightly. With a straight back and neck, move your upper body forward and as you do, lightly tense your stomach muscles. Put your arms, bent, between your knees. Raise your upper body back to an upright position and lift your bent arms out to the sides. Pull your shoulder blades together. You should

feel as if you could hold a pencil between them. Then tip your upper body forward again and repeat the whole exercise 15 or 20 times. You shouldn't do it to fast, but it should be a fluid and conscious movement. Breathing is important, too - breathe in as you sit up, and out as you go forward. And another thing: Deep breathing now and again never hurts; because when more oxygen gets into your body, it activates your brain, and you can work better.

#### Move it!

If you would like to take up an activity, contact the Health and Fitness Center or book regular exercise sessions in your office with PausenExpress.

[www.fgz.uni-freiburg.de](http://www.fgz.uni-freiburg.de)  
[www.gesunde.uni-freiburg.de/angebote/projekte/pausenexpress](http://www.gesunde.uni-freiburg.de/angebote/projekte/pausenexpress)

# Silver in the slalom

Psychology student Anna-Lena Forster is winning a load of medals in Alpine Paraskiing

by Anita Ruffer

Of course she still lives in Freiburg. "But in winter," the Freiburg psychology student Anna-Lena Forster admits, "I'm not here that often." When it's winter season, alpine ski sports-women have just too much to do. Forster has just come back from the world championships in Italy, where she captured the bronze in the super combination and silver in the slalom. She was just half a second from the world title. But successes like this are nothing new for Forster. At her first world championship in 2013 she took silver in the slalom, and she made bronze at the championships in 2015 in Canada. Her greatest highlight to date - two silvers and a bronze at the 2014 Paralympics in Sochi, Russia.

Forster needs to get herself a big cupboard to put all her trophies in. There's one at her parents' house in Radolfzell, where she likes to visit. When she was born in the town 21 years ago, she was missing her right leg and parts of her left thigh. But she's never let it get her down. With bright eyes, Forster, a blonde young woman, sits in her wheelchair, which she propels with the strength of her own muscles. Her glance is full of

vitality and curiosity. People talk about inclusion. Anna-Lena Forster simply does it, and always has. Kindergarten, school - there were no special paths for her. She completed her high school leaving certificate at a regular school, was active in the light athletics club, and loved swimming. "Sport is my passion. I like to try new things."

## Wheelchair basketball and trampolining

Her latest new things are wheelchair basketball and trampolining at the University Sports Center. She does them sitting down, where others use their legs. She tests things out and does whatever is possible. Her brother, who is three years older, is partly responsible, because she always wanted to do what he did. Her parents did their bit - "I was allowed to try everything." When the whole family enjoyed skiing, there was no thought of leaving Anna-Lena out. Her parents registered her for skiing lessons. Nowadays, she is better than all of them and is booking up one success after another in many alpine paraskiing disciplines. She sits in a perfectly-fitted seat with a frame underneath on which the normal ski is mounted. She has two supporting skis to manage the steepest slopes. Forster loves it when her parents come with her to competitions. But she can manage without them. "I'm

completely independent and drive myself to training."

And because her sport is a seasonal business, she has to study something, too. That mostly happens in summer. She was interested in psychology even at school. Her internship back then reinforces her choice of studies; and the presence of a sports psychologist on the team was decisive. Forster is now in her fifth semester, "but academically only in my third." She says the university gives her good support. For example, she can extend her studies over eleven semesters. She also finds the close cooperation with Freiburg's Olympic facilities helpful, and does strength training there. She had the support of a career advisor. Together they worked with the Institute of Psychology and the academic staff to decide what would be the best solution for the times Forster is away.

Sometimes she has to do the supplementary exams. And because attendance is compulsory in classes, she is given extra work to do when she misses class. Sometimes she has to do it in between competitions. It's only in everyday life that she sometimes has problems - for instance, when she has trouble rolling into the tram at the newly-refurbished Bertoldsbrunnen. Forster gets support too from sports associations - for example, she has a scholarship from the Deutsche Sporthilfe. It won't make



Seasonal studies - in winter Anna-Lena Forster is usually competing; she goes to classes and lectures in the summer semester. PHOTO: PATRICK SEEGER

her rich, says Anna-Lena Forster. "There's a different profit for me - independence and self-assurance." And once more she is on her way to training. The world cup competition kicks off 1 March in Japan and South Korea.



## Conductor, organist, and tenor Eduard Wagner is the new director of the Uni choir

by Alexander Ochs

In winter semester 2016-17 Eduard Wagner took on an "honorable" role - directing the Freiburg University Choir. The multi-talented Wagner is not yet 30 - and was not pushing for the job. How did he get it? "They requested that I apply," he says diplomatically. "And I thought - if you get the chance to work with such a big choir, then take a good look at it."

### Rehearse in the flow

Every semester the choir practises one work, switching between secular and religious music programs. From October 2016 to January this year, Wagner and his 200 singers rehearsed Carmina Burana by Carl Orff. They performed it in late January. "This work is made for a 'mass choir.' It has to be loud, it has to be wild," says Wagner. Four drummers and two grand pianos, various soloists, and a children's choir are all required in the reduced version of Orff. But how does a conductor with so many participants manage to ensure that no-one gets lost in the crowd?

"To respond to the individual is the hardest thing for instrumentalist conductors," Wagner says. He adds that to reach everyone, knowledge of the subject, the music, is everything. It is also important to him to communicate images for the music and to maintain

the excitement from the first rehearsals through to the concert. Those are the real challenges, he says. When things go well, successful moments are added. "The rehearsal weekend was one big flow," he reminisces. In the best case, the conductor releases the singers' energy. "If the choir is working well, that gives the soloists an additional lift - and vice versa."

The conductor with the high forehead and powerful arms knows what he is talking about; after all, he is on stage himself often enough. Wagner has performed in Robert Schumann's Der Rose Pilgerfahrt, Felix Mendelssohn's oratorios Paulus and Elias, Wolfgang Amadeus Mozart's Mass in c-Minor, and Johann Sebastian Bach's Magnificat. Two years ago he debuted in the Mozart opera La finta giardiniera as Podestà, in a production of the Hochschule für Musik Freiburg. In Francis Poulenc's opera buffa Les Mamelles de Tirésias in 2016, Wagner took on the main role of Le Marie.

### Concert in summer semester

"Singing is the most intimate thing there is, because it comes straight out of the body," Wagner says. "We communicate what no other instrument can - words." The qualified church musician will be teaching church music at the Collegium Borromaeum of the Erzbischöfliche Priesterseminar in Freiburg from April 2017. It is a perfect transition and a dream job, Wagner thinks, "because here I can apply and connect all the skills I have learned."

While in his final year of school, Wagner completed the church's musical C training at the archdiocese of Freiburg and finished a degree in church music at the Musikhochschule Freiburg. He later did a Bachelor's degree in singing and added a Master's degree in concert and opera singing. For the summer semester, the conductor is planning a major ecclesiastical piece, given that the choir - founded in 2007 as the University of Freiburg turned 550 - will be celebrating its tenth birthday.

And what does Wagner listen to when he is not at work? "I love classical music," he says, "but I love high-quality pop as well." I think Adele, Queen, Michael Jackson, and Roy Orbison are great. But sometimes I listen to AC/DC and Metallica."

### Uni choir

Students and employees of the University of Freiburg sing in the Uni choir. Rehearsals during semester are Tuesdays from 6:15pm to around 8:15pm in the Senatssaal of the Rectorate on Fahnenbergplatz. Male and female singers of all types are very welcome.

> [www.unichor-freiburg.de](http://www.unichor-freiburg.de)  
[www.facebook.com/FreiburgerUniChor](https://www.facebook.com/FreiburgerUniChor)

"Singing is the most intimate thing there is," Eduard Wagner says. At his debut as choir director in January 2017 he conducted some 200 singers. PHOTOS: THOMAS KUNZ

## Achievements

Physicist Professor **Peter Jenni** was selected by the American Physical Society (APS) for its Panofsky Prize. He receives the 10,000-dollar award jointly with Michel Della Negra and Tejinder Virdee of Imperial College London. The APS honors the physicists leading role in the conception, design, and construction of the ATLAS experiment. It is located at the Large Hadron Collider at the European Organization for Nuclear Research CERN in Geneva, Switzerland.

PD Dr. **Dimitra Kiritsi** of the Dermatology and Venereology hospital at the Freiburg Medical Center receives the 10,000-euro Mathilde-Wagner-Preis. The University of Freiburg Medical Faculty equal opportunities office has been making the award annually since 2014 for outstanding Habilitation theses by researchers at the Faculty. Kiritsi's research is into post-zygotic mosaicism in heritable skin diseases. Her work enables a new form of cell therapy in patients with genetically-determined skin diseases.

The Sonja-Bernadotte-Medaille for garden culture goes to **Vivien von Königslöw** for her Master's thesis at the Chair of Nature Conservation and Landscape Ecology at the University of Freiburg. The Lennart-Bernadotte-Stiftung has been making the 1,000-euro award since 2004 to writers of above-average Bachelor's and Master's theses in the field of horticulture. In her thesis von Königslöw showed that home-made insect hotels contribute considerably more to the protection of bees than the commercially-sold types.

Molecular biologist Dr. **Jia Li** of Imperial College London, UK, receives a Humboldt Research Fellowship for postdoctoral researchers from the Alexander von Humboldt Foundation. With the Fellowship, the Foundation supports highly qualified researchers from abroad at the start of their careers. At the University of Freiburg Li will investigate new methods allowing the simultaneous identification of several DNA signatures in bacteria at the single-cell level. This is intended to improve diagnosis of hospital infections in the future. The host is Dr. **Felix von Stetten** of the Department of Microsystems Engineering.

Chemist **Lili Liu** of University of Wollongong, Australia, receives a Humboldt Research Fellowship for postdoctoral researchers from the Alexander von Humboldt Foundation. With the Fellowship, the Foundation supports highly qualified researchers from abroad at the start of their careers. At the University of Freiburg Liu will conduct research into the characteristics of lithium-air batteries at the nano-level, in order to raise the batteries' life and power density. The host is Dr. **Simon Thiele** of the Department of Microsystems Engineering.

Dr. **Susana Minguet Garcia** of the BLOSS Centre for Biological Signalling Studies excellence cluster receives funding for her research project of 97,000 euros over three years from the Baden-Württemberg Foundation's elite program. BLOSS is to add another 12,000 euros. Minguet Garcia is to investigate chemical signals which cause the activation of the body's defence cells and ultimately, an immune reaction. The findings will help in the development of an immunotherapy against cancer. The Foundation's elite program for postdocs supports junior researchers on their way to a professorship.

Dr. **Martin Pfeiffer** of the Deutsches Seminar receives funding of 95,000 euros from the Baden-Württemberg Foundation over the next three years. The Deutsches Seminar is to top up Pfeiffer's research project with a further 12,000 euros. Pfeiffer will investigate exclamative constructions and conduct the first research into the ways in which adults and children use these expressions of surprise in dialogue. The Foundation's elite program for postdocs supports junior researchers on their way to a professorship.

Dr. **Bidhari Pidhatika** of the Ministry of Industry Yogyakarta, Indonesia, receives the Georg Forster Research Fellowship for experienced researchers from the Alexander von Humboldt Foundation. The Fellowship is intended for researchers in countries with developing or emerging economies, who have above-average qualifications. Pidhatika's work focuses on the surface modification of biomaterials used in implants. While at the University of Freiburg, she will investigate the particular question of how such surfaces could be fitted with bioactive molecules. The host is Professor **Jürgen Rühle** of the Department of Microsystems Engineering.

Improving agents for cancer treatments - for the project Hide and Seek with Cancer Drugs **Wilfried Weber**, Professor of Synthetic Biology, receives a grant of approximately 150,000 euros. The funds are provided by the European Research Council as part of a Proof of Concept Grant. This goes to researchers whose proposals have already received funding from the ERC, who use the innovation potential of an idea, and who aim to develop it until it is marketable. Weber's project aims to improve tolerance and efficiency of cytotoxic agents used in chemotherapy for the treatment of cancer. The duration of the funding is 18 months.

## Anniversaries

### 25th ANNIVERSARIES

**Helga Heidiri**, Central Administration  
**Rüdiger Klöcker**, University Library  
**Konrad Küster**, Music Institute  
**Ferdinand R. Prostmeier**, Institute of Biblical and Historical Theology  
**Silke Schillinger**, Central Administration  
**Thomas Stieglitz**, Department of Microsystems Engineering  
**Petra Weber**, Central Administration  
**Alexandra Weber-Flamm**, Central Administration

### 40th ANNIVERSARIES

**Werner Pfeifferkorn**, Central Administration

### VENIA LEGENDI FOR

Dr. **Kerstin Dittrich**, Psychology  
 Dr. **Göz Kaufmann**, German Linguistics  
 Dr. **Lena Partzsch**, Environment and Development Policy

## Appointments

### Faculty of Law

The Rector has appointed Dr. **Rüdiger Engel**, Director of the Freiburg planning office and assistant lecturer at the University of Freiburg since 2004 as an adjunct professor.

### Faculty of Medicine

Professor **Tobias Huber** has accepted an appointment to the Universitäts-Klinikum Hamburg-Eppendorf. He vacates the Heisenberg Chair of Chronic Kidney Disease and Gerontology at the Freiburg Medical Center.

The Rector has appointed Professor **Christiane Kugler**, Universität Witten, as a Professor of Nursing Science as of 2 November 2016.

### Faculty of Philology

Professor **Antje Dammel** has accepted an appointment to the University of Münster. She vacates the Chair of German Linguistics with a focus on Variation and Transformation at the Deutsches Seminar.

Professor **Rolf Kailuweit** of the Romanisches Seminar has turned down an appointment at the University of Potsdam.

The Rector has appointed Professor **Ursula Schaefer**, professor at the Technische Universität Dresden until becoming an emeritus in 2013 and since then an assistant lecturer at the University of Freiburg, to be an adjunct professor.

### Faculty of Humanities

Dr. **Katharina Kraus** of the Philosophisches Seminar, University College Freiburg has accepted an appointment to the University of Notre Dame, USA.

The Rector has appointed Professor **Andreas Urs Sommer**, of the Forschungsstelle Nietzsche-Kommentar at the Heidelberger Academy of Sciences and Humanities, a Professor of Philosophy focusing on cultural philosophy, effective 14 November 2016.

### Faculty of Mathematics and Physics

The Rector has appointed Professor **Tanja Schilling**, University of Luxembourg, as a Professor of Theory and statistical physics of soft condensed matter and complex systems, as of 1 April 2017.

Professor **Eicke Weber**, Institute of Physics and Fraunhofer Institute for Solar Energy Systems ISE, retired on 31 December 2016.

### Faculty of Engineering

The Rector has appointed Dr. **Uwe Pelz** of the Institute of Microsystems Engineering to the Academic Council for three years from 1 February 2017.

### Faculty of Biology

The Rector has appointed Dr. **Maja Banks-Köhn**, European Molecular Biology Laboratory, a professor of Integrative Signal Research at the

Institute of Biology III/BLOSS Centre for Biological Signalling Studies, as of 1 December 2016.

The Rector has appointed Dr. **Oliver Niehuis**, of the Stiftung Zoologisches Forschungsmuseum A. Koenig, to be Professor of Ecology, Evolutionary Biology and Biodiversity at the Institute of Biology I as of 1 January 2017.

Professor **Edward Pearce**, deputizing professor at the University of Freiburg, has accepted an appointment as Professor of Immunobiology with the focus on the innate immune system at the Institute of Biology III.

The Rector has appointed Dr. **Wenjing Qi** vom Institute of Biology III to the Academic Council for three years from 1 January 2017.

The Rector has appointed Dr. **Pablo Ríos-Muñoz** vom BLOSS Centre for Biological Signalling Studies to the Academic Council for three years from 1 December 2016.

### Faculty of Environment and Natural Resources

Professor **Dirk Jaeger** has been appointed to a professorship at Göttingen University. He leaves the professorship of Forest Operations at the Institute of Forest Sciences.

The Rector has named Professor **Peter Poschen-Eiche**, Director of the Brazilian Office of the International Labor Organization and assistant lecturer at the University of Freiburg, as an adjunct professor.

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PHOTO: UNESCO

## Probed

### Ask an Alumni: Mechtild Rössler

#### Where were your favorite places in Freiburg to study, dance, and eat?

We liked studying at home best, in my shared apartment in Haslach and in study groups; we danced at wonderful, jointly-organized parties, and we cooked at home. Our potato casserole made to the recipe of gastronomy critic Wolfram Siebeck was legendary.

#### Which insight from your years of study has had a lasting impact on your life?

That it is very important to engage in politics. My involvement in the Geography student council made a big difference to me, as did my work representing all Germany's Geography students. We had an international working group on the subject of academic criticism - I'm still in touch with the other members today. At our last meeting of 30 people, we asked ourselves - Where were we back then, what were our professional dreams and goals, and where are we now? What would we do differently today? It is wonderful to have this chance for a comparison! Another advantage to political activity - if you get up in a lecture hall and speak to a thousand people when you're 20, you won't have any trouble intervening in your later career.

#### What advice would you give to students?

Enjoy the time and try out lots of things. Later in life, when you are working, you won't have that freedom to organize and spend your time as you wish.

#### What do you miss about student life?

I miss the endless opportunities, the all-night discussions, and the doors which are open to you...

#### A "typical student" thing in my day was...

...going to Valentin for a glass of wine from the barrel, up the Schönbühl, or watching the sunset from the meadow on the Kaiserstuhl.

*Dr. Mechtild Rössler took her final exams in Geography and German Studies at the University of Freiburg in 1984. She completed her doctorate in 1988 at the University of Hamburg's Geoscience Faculty. In 1989 she started work at the research center Cité des Sciences et de l'Industrie in Paris; in 1990-91 Rössler was a visiting scholar at the University of California at Berkeley. In 1991 she started working at UNESCO Headquarters in Paris in the Division for Ecological Sciences and transferred in 1992 to the newly created UNESCO World Heritage Center. In 2015 Rössler became director of the World Heritage Center and of the Division for Heritage.*

## Pictured

PHOTO: SANDRA MEYNDT



**Hats off, hats on:** It's a noisy and colorful sight when the new PhDs parade out of the institutes of the University of Freiburg and through the old town. Eye-catching floats rattle over the cobblestones. Designed and decorated by colleagues, they are a tribute to the new doctors' years of hard work.

## Pronounced

by Nicolas Scherger

### Animal Turn

Whether as beasts of burden, as transportation, or steak – all too often, humans reduce animals to nothing more than a useful commodity; that was certainly so in the past. That is now at an end – historians at another university in southern Germany are calling for an "animal turn." The discipline is to regard animals as subjects who helped to shape history; their perspective is to be considered.

That's where the problems start. Certainly there are plenty of sources providing information about animals. But how do we use them to draw conclusions on animals' perspectives, actions, or intentions? It's very annoying that the creatures are so taciturn

and have very rarely left us any written records. Because they'd have a lot to say. What were the thoughts of an elephant crossing the Alps with Hannibal to stomp on Roman soldiers? Have whales read "Moby Dick"? What a storm of protest must have gone through the moth world when Thomas Edison patented the light bulb!

#### Bubonic plague – A successful venture

And the anniversary of the opening of the first slaughterhouse in Chicago is a memorial day for US pigs. The bubonic plague in the Middle Ages, however, was surely a spectacular

success from the flea perspective. Not to mention the arrogance of holy cats in Ancient Egypt.

Yet when all's said and done, even this view is still too humanocentric. If we take this approach to its logical end, we arrive at the conclusion that historical events which are important to humans tend to leave most species cold. Other things are important to them. But what? Perhaps participatory observation would help. It is a proven scientific method. Historians will need to spend a few decades among orangutans. Or swap their living rooms for a birdcage and eat delicious birdseed for a while.

## Picked-up

by Rimma Gerenstein

### Red rules, OK?

**A stroll through the University of Freiburg's Zoological Collection offers valuable insights into the animal kingdom. A fox in the Collection has difficulties in distinguishing between dreams and reality. Rimma Gerenstein allowed him to shout at her.**

**uni'leben:** Hello, fox. Are you tweeting there?

**Fox:** That's "Mr. President" to you! I tell you, you can't trust the media. They can't even get your title right. Get out, before I throw my phone at you!

**What? Do you think you are the president of the Zoological Collection?**

I'm the president of this university! Don't you see the similarity to Donald Trump?

**A reddish pelt, dead eyes, sagging jawline, and a smell of decay... I can't deny it. But how does that make you president?**

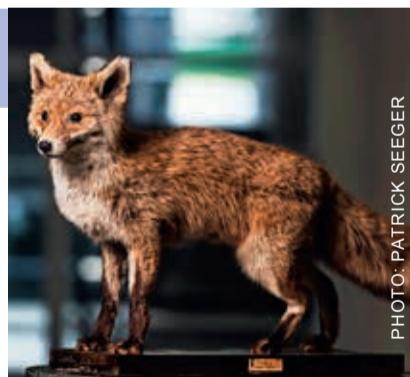


PHOTO: PATRICK SEEGER

Because my delightful daughter – if she weren't my daughter, I'd probably be dating her – has been living on top of Trump's head since he's been in office. She's the best hairdo he's ever had. A terrific hairdo. Believe me. It's the dawn of a new age. Red rules, OK?

**You want to bring back communism?**

Lying media!

**This doesn't get us anywhere. Besides, the University of Freiburg doesn't have a president.**

Well, America didn't have freedom until 1776, and look at it now. They're winners, all winners. It's true. And we could be, too. So I say – Freiburg first!

### Supposing you could guide the fate of this university – what would you do?

I have a colossal vision, the best vision! First, we get rid of all the subjects that give people stupid ideas – Islamic Studies, Gender Studies, Cultural Anthropology. Then we get the old student prison up and running again and expand it to take up the whole of Kollegiengebäude I. And the most important thing – we cut all connections with France and Switzerland. No more European Campus! Instead, we're gonna build a yuge wall around the university, and make the foreign students pay for it.

**I don't think you can. You're not even on display – you're stuck in a storeroom. It's not exactly the Oval Office.**

Geometric shapes are fake news. My basement is an alternative oval!

#### Masthead

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