



UNIVERSITÄT BONN

forsch

Bonn University Magazine

Spring 2023

New Outlook

The University is on the move

How the university saves energy
How microplastics affect our lives

Help
with
anxiety
while studying

UNIVERSITÄT **BONN**

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ZUM MITMACHEN

für alle!

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Photo: Volker Lannert

Editorial

Dear Readers,

The renovation of the baroque University Main Building is getting closer and closer. Now that the humanities faculties have moved out of the Electoral Palace, most of the teams that were housed there have now left the landmark for their new home on Rabinstraße. The two buildings could not be more different in style: crumbling baroque with a 20th-century interior meets the transparent look of modern glass-and-steel architecture. Originally constructed for an insurance company, the building will now open up entirely new perspectives for its new users from a communication point of view as well.

*The latest *forsch* shines a light on some hot topics in research and teaching. And, even though these might sometimes also involve buildings, the focus is ultimately always on the people inside them. We visit the workshops of our precision mechanics and join researchers and the “K.R.A.K.E.” team collecting trash on the Rhine. We introduce some of the new appointments reinforcing the University of Bonn and find out how actors are helping medical students to learn how to deal with patients.*

*Once again, therefore, the University’s magazine is reflecting its vibrant diversity—and not just on paper, because *forsch* is becoming more and more digital. You can obtain this issue complete with bonus digital content from uni-bonn.de/forsch, where staff can also subscribe to the printed version if they would like it delivered to their office. In addition, you will continue to find hard copies at the many stands in and around the University.*

We hope you very much enjoy reading this issue and wish you an enjoyable and productive summer semester 2023.

*Your *forsch* editorial team*



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Photo: Gregor Hübl



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Photo: BCDH/M. Lang (Per gentile concessione della Procuratoria di San Marco)



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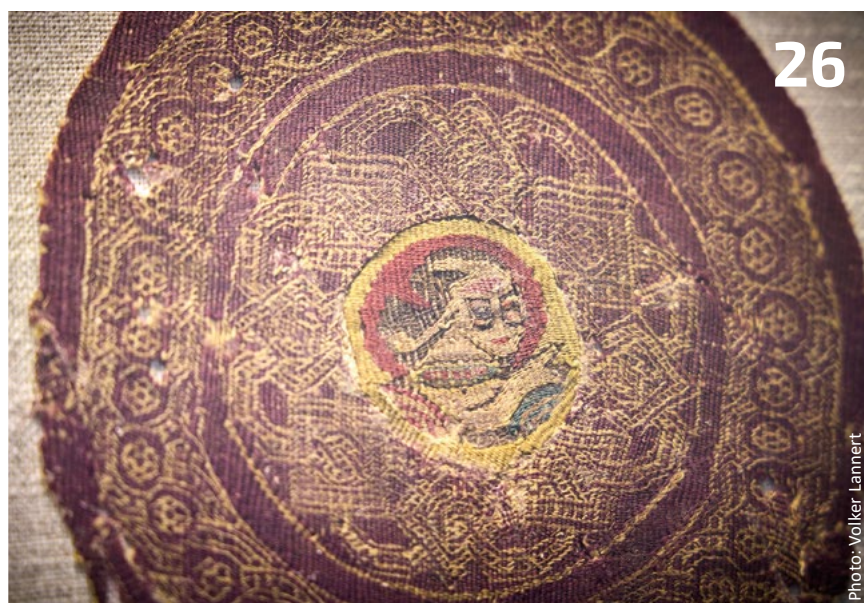
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Photo: Volker Lannert



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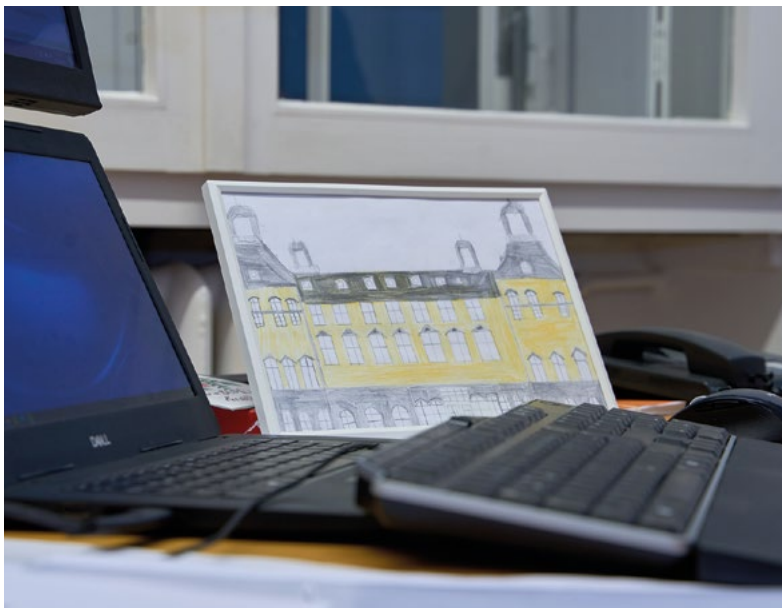
International teams have been exploring the Danube in a replica of a Roman boat from late antiquity. They included three rowers from University Sports at the University of Bonn

A New Home During Renovation Work

The various faculties, institutes and departments that call the Electoral Palace their home have begun the process of moving out

Moving trucks have been plying between the University's baroque Main Building and the new temporary base on Rabinstraße since January. Besides the Faculty of Arts, the move also involves the two Faculties of Theology as well as several thousand students, who are having to learn the new routes to their classes. However, the palace will still be able to be used for teaching in the coming years.

► Came along to the new office: A picture painted by Dr. Torsten Schlageter's son. Schlageter is the Managing Director of the Faculty of Humanities and helped organize the move.



►► Work was done between moving boxes. Dr. Torsten Schlageter, the Managing Director of the Faculty of Arts, organized the move from his old office.

"This move is exciting, because the first thing we're having to do is rediscover everything," says Torsten Schlageter, Managing Director of the Faculty of Arts. He is sitting at the conference table in his new office on the sixth floor of the former Zurich Insurance building, which lies between the main rail station and the Verteilerkreis traffic circle. The expansive windows of his modern office look out over the trees of the Old Cemetery and the railway tracks with the industrial buildings behind them. "After we'd mo-

ved in here and I came into this room for the first time in the morning in peace and quiet, I thought, 'This is a really cool office.'"

He is particularly pleased that everyone is now closer together and that working with the institutes and departments and the two other dean's offices is getting easier. "Rather than having to walk all the way through the University Main Building, all you do now is go up or down a floor," Schlageter says. "It's a building where nothing is that far away."



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SCHLAGÖTEN

Value for money



▲ The moving vans roll and bring the boxes to the new office.

The striking circular building, which was constructed to meet the needs of Zurich Insurance at the time, now provides alternative accommodation for the three faculties from the University Main Building. It will be their new home during the upcoming renovation work. Spread across some 12,000 square meters are offices, meeting rooms, seminar rooms, library space, a cafeteria and student workspaces. The building will be welcoming about 500 people during the renovation phase—a real challenge from a planning perspective.

Sabine Ludolph is responsible for making sure that this huge project runs smoothly. As a qualified engineer, she has been chiefly planning and organizing the work to renovate the University Main Building and set up the alternative accommodation since she joined the University 18 months ago. Besides the building on Rabinstraße, these temporary facilities include the former Deutscher Herold headquarters in Poppelsdorfer Allee, the old AppelrathCüpper building on Poststraße and numerous other rented properties that will give teaching and administration activities a relatively central home during this lengthy period.

together in one place. “So you’ll eventually get from the big things right down to where to put the final power outlet,” Ludolph says. This laborious process only succeeded, she reveals, thanks to some fantastic support from the people tasked with the work by the faculties and from colleagues in administration, Torsten Schlageter among them. “Working together in this way really was the best thing about the project.”

For the students, the move means a bit more walking, particularly to the canteen and the lecture halls while those in the palace can still be used. “But I know for sure that the students will really be able to look forward to the building,” Ludolph explains. The building meets all the latest technical standards, she says. Particular emphasis has also been placed on creating spacious study areas in the libraries as well as rooms just for group work. Torsten Schlageter is not in any doubt: “Students will definitely benefit from the merger of the three philology libraries, the state-of-the-art workstations and the fact that they can now borrow books as well.”

“Renting the large properties on Rabinstraße and Poppelsdorfer Allee and having the other accommodation options in fairly central locations are helping us to achieve our aim of keeping University life in the heart of the city,” explains Prof. Dr. h.c. Michael Hoch, Rector of the University of Bonn. He believes that the former Zurich Insurance building and the other rentals have enabled many of the purposes that the University Main Building served to be continued not far from

►► “When we moved in here and I walked in for the first time in the morning at my leisure, I thought - this is really a cool office,” said Dr. Torsten Schlageter, Managing Director of the Faculty of Arts, looking out the window.

“It’s a great feeling when a project of this size is working well and deadlines and budgets are being kept to,” says the construction expert, looking back at the renovation done on Rabinstraße. Given the different user groups involved, she says, that should not necessarily be taken as a given. First of all, she explains, they had to find out what everyone needed and bring people’s various wishes and desires





► Airy and modern:
Many employees were able
to get an idea of the new
office space when they
explored the building for the
first time at the end of
December.



► Rector Hoch welcomed
the employees before
the move to the new
building.



the palace: “Although having the new accommodation doesn’t eliminate the need for a temporary structure alongside the University Main Building, it takes a huge amount of the pressure off.”

Meanwhile, two pictures drawn by his son are still waiting to be hung in Torsten Schlageter’s office. One shows his dad’s new place of work, while the other is of the palace—the iconic symbol of the University, as Schlageter emphasizes. “Needless to say,” he explains, “we’re delighted that the move has brought us into the 21st century in terms of building technology,” pointing to the airtight windows and modern restrooms as well as the jaw-dropping architecture. “But once the Main Building has been fully renovated, it too will offer its future users a cutting-edge place to work and study.”

Photos: Gregor Hübl

The move in figures

No fewer than 35 people were involved in the move. Over 5,000 boxes had to be packed, taken to the trucks and unloaded at the other end. The trucks will have done the trip around 1,200 times by the end of the move. Moving five libraries out of the University Main Building is a particularly laborious task as it involves relocating some 13 kilometers of books.

Inside the “Blaue Grotte” in the University Main Building, the books from the Department for Classical and Romance Philology, the Department of German Language and Literature, Comparative Literature and Cultural Studies, and the library of the Department of English Studies, American Studies and Celtic Studies are being arranged in the precise order that they will ultimately occupy on the shelves. The trucks will need to make roughly 800 round trips in order to move the libraries.

With this in mind, he is confident that staff and students will look forward to moving back into the University Main Building. Until then, however, he will continue to enjoy his modern workplace and the less running around he needs to do while he is there.

NILS SÖNKSEN



Visual Story

Catharina Stoppel Wins Leibniz Prize

In recognition of her superlative research work, Prof. Dr. Catharina Stoppel has been awarded the €2.5 million Gottfried Wilhelm Leibniz Prize by the German Research Foundation (Deutsche Forschungsgemeinschaft, DFG). The researcher from the Hausdorff Center for Mathematics (HCM) at the University of Bonn has been presented with the award for her outstanding work on representation theory, particularly in the field of categorification. The generous prize permits a large degree of freedom in research.

"It's a great honor for me," said Prof. Dr. Catharina Stoppel, who is based at the Hausdorff Center for Mathematics Cluster of Excellence and is a member of the Modelling Transdisciplinary Research Area. "I'm delighted to receive this recog-

nition for the work I've done so far. But it's also an acknowledgment of the exciting developments that have been going on in representation theory over the past few years." The mathematician plans to use her prize money to make some significant advances in research and, in particular, to get early-career researchers involved in the exciting developments going on in research. "On behalf of the University of Bonn, a University of Excellence, I'd like to extend my warmest congratulations to Catharina Stoppel for winning one of the world's most prestigious research awards, which is widely regarded as 'Germany's Nobel Prize,'" said Rector Prof. Dr. h. c. Michael Hoch.

Video: <https://www.youtube.com/watch?v=S1RBUG60dYs&t=7s>



Photo: Barbara Frommann

▲ Professor Catharina Stoppel in conversation with Rector Michael Hoch (second from right) and departmental colleagues.



Photo: Uni Bonn

TEAM NIMBRO SCOOPS ANA AVATAR XPRIZE

Team NimbRo from the University of Bonn has won the \$5 million top prize in the ANA Avatar XPRIZE competition in Long Beach, US. The final of the contest, sponsored by Japanese airline All Nippon Airways (ANA) and organized by the XPRIZE Foundation, saw 17 teams line up from 10 different countries. Total prize money of \$10 million was up for grabs at the ANA Avatar XPRIZE, the most for any robot competition in history. The aim of the contest was to develop robotic systems capable of placing people in a different location using a control station and an avatar robot that were connected via the Internet. The sensors on the avatar robot detect the environment around it, which is displayed in the

control station in such a way that the user has the sensation of being somewhere else far away. The user's movements are tracked and transmitted to the avatar robot, making it possible to move around, handle objects, use tools and communicate intuitively through language, facial expressions and gestures.

Team NimbRo's avatar system was developed over a three-year period in Prof. Dr. Sven Behnke's Autonomous Intelligent Systems working group at the Institute for Computer Science VI.

Videos:

<https://youtu.be/pxblVcN606E>

<https://youtu.be/8AwgGSpAe8>

HUMBOLDT RESEARCH PRIZES

Prof. Lucy O'Brien from University College London has been presented with a research prize from the Alexander von Humboldt Foundation. Prof. Dr. Markus Gabriel from the Center for Science and Thought at the University of Bonn had put her name forward for the €60,000 award. The two researchers are now stepping up their collaboration. Professor O'Brien studies the nature of self-awareness and self-recognition.

Prof. Dr. Bill Cook from the University of Waterloo in Canada has also received a Humboldt Research Prize. He is currently conducting research together with Prof. Dr. h.c. Bernhard Korte, Director of the Research Institute of Discrete Mathematics, and with the Hausdorff Center for Mathematics (HCM) Cluster of Excellence. Professor Cook is regarded as the world's leading expert on the "traveling salesperson problem." In 1992, he came up with the best possible solution for a 3,038-city problem, which Discover magazine named as one of the 50 top contributions to science.

◀ Team NimbRo in the final (from left to right): Max Schwarz, Christian Lenz (front row); Andre Rochow, Bastian Pätzold, Prof. Dr. Sven Behnke, Michael Schreiber and Raphael Memmesheimer (back row).



Photo: personal

▲ Professor Lucy O'Brien from University College London



Photo: Barbara Frommann

▲ Prof. Dr. Bill Cook (left) and Prof. Dr. h.c. Bernhard Korte at the Research Institute of Discrete Mathematics.

“Power and Domination is a Form of Communication”

Down the ages, power and domination have shaped how human beings have coexisted. “Power and Domination—the Bonn Center for Premodern Orders and their Forms of Communication” at the University of Bonn is studying the characteristics of regimes and how they communicated in premodern times, focusing particularly on rulers and the ruling elites. The researchers are incorporating angles taken from Egyptology, English studies, archaeology, German medieval studies, history, art history, Oriental and Asian studies and Romance studies and are covering a span from antiquity to the early modern period and from Central Europe to Egypt. In an interview, Prof. Dr. Matthias Becher, the Center’s Director and Spokesperson for the Present Pasts Transdisciplinary Research Area, discusses the research work that has been done to date and is lined up for the future.

At the University of Bonn, researchers from different disciplines have been working together to study power and domination structures in the premodern period for some years now. Why have you chosen this research topic rather than something else?

Power and domination are what underpin coexistence in many societies. And I think that it’s highly rewarding to consider how these factors impact on people’s lives. I have a lot of colleagues from a wide range of subject backgrounds here in Bonn who are studying the premodern period. But the sources that we have for all these subjects do place a certain emphasis on power and domination, whether you’re looking at China, Japan or Europe, for instance. In their reports, chroniclers and historians have always concentrated a lot on political rule—works of art and archaeological remains are very often linked to power and domi-

nation too. So we have a common denominator across all disciplines.

Have you identified any particular differences between cultures in your research to date?

When we started, we were fairly surprised to see quite a lot of similarity. For example, most regimes developed some form of courtly etiquette—and did so largely independently. But there are differences too, of course. China and Japan adopted a centralized bureaucracy very early on, whereas Europe didn’t. So you then also find some completely different ways in which the rulers imposed that rule on the people.

What role did the elites play back then?

The elites acted as a kind of link between the rulers and the people in terms

of communication. Communicating over sizable distances wasn’t as easy to arrange in premodern times as it is now, when we get messages on our smartphones in a matter of seconds. In the premodern period, all of that had to be organized with the means that were available. And that’s where the elites came in. Either they had a power base in a particular region, or they were sent out from court to the fringes of the kingdom to act in the ruler’s stead.

Are elites well disposed toward the ruler as a basic principle?

Rulers and elites often have something of an ambivalent relationship. On the one hand, a monarch needs the elites to help impose their rule. Thus the class-consciousness of the nobility often dictates that only the high echelons of the aristocracy can take the most senior positions at court and in the royal administration. On the other hand, these nobles very often look after their own interests, even if it means going against their ruler.

This means that previously independent rulers are kept in position after they have been subjugated and now merely act on behalf of the person who wields the real power at the top. In Asia, Europe and Africa, there’s a system of proximity and distance between the ruler exercising power in the center and those doing so on the fringes that is often also held together by conquest, by the recognition of overlordship. The Emperor of China sees himself more or less as the center of the whole world and regards all other rulers, however distant their kingdoms, as being subservient to him, so to speak. And between that the transitions are fluid, from largely autonomous rulers through to governors and finally to sovereigns who are dominated entirely by the elites

▼ A court audience with the Mughal emperor. The oval tray made of wood and ivory was made in India in the first half of the 19th century in India.



In the new Center, you look at communication as the key element of power and domination. What does that mean?

Essentially, you get this tripartite division—the ruler, the elite and the ordinary people—everywhere you look. Power can only really be exercised in a stable fashion when the communication within this structure is stable too, keeps on renewing itself and adapts to different circumstances. In our research, we're asking ourselves, for example, how standards and ideals for the relationship between elites and ruler figures are developed, how these are then communicated and disseminated, but also how criticism is voiced. Among the questions we explore is how the ruler's consort was made part of this system. Depending on her background, she can act as a kind of mouthpiece for opposition elites. There are also big cultural differences: in China, rulers of far-flung regions are made an integral part of the overall system at court..

What elements of this can you also see in today's royal families and in politics?

One fascinating aspect is the closed circles of advisors that you get around rulers, both then and now. The advisor is a key figure in premodern regimes. Nowadays, we talk of "kitchen cabinets," because even democratically minded politicians gather people around them to give them advice—their childhood friend, their mother, their spouse. That quickly creates informal structures in areas where there should technically only be official relationships, legally speaking. We see phenomena like this in the premodern period too. Having informal structures wielding such power is unavoidable, even in a democracy, because ultimately it's always human beings who are involved—and human beings need to feel familiarity in order to be able to make decisions.

Despite all these parallels, where do you see some differences between then and now?

These days, the formal structures that surround those in power are designed to prevent them from acting purely arbitrarily. But then people in premodern times generally didn't act in that way either, apart from a few exceptions. Our research to date has shown us that, quite irrespective of their formal responsibilities, the ruler had to ensure that at least a significant part of the population approved of them. Because ruling in opposition to everyone makes no sense. In all the periods we've looked at, therefore, we've ac-

tually seen evidence of strategies geared toward forming a consensus.

Because the other path leads to revolt?

That's one possible consequence, yes. However, it's probably harder to break a persistent undercurrent of popular resistance than it is to crush an open rebellion. Ultimately, it's about motivating the people to go along with what you're doing. And, of course, one good way to do this is to make promises to the relevant people within your society. Give them presents, such as land, in order to achieve your objectives. Military-minded rulers that rely solely on force won't get far. You could say that power and domination is a form of communication and is underpinned by communication.

So how does a premodern ruler communicate well with their people?

The strategies employed can vary considerably. On the one hand, you have rulers who are after fairly close contact with the people and are always traveling around and being present everywhere, as in medieval Europe, for instance. A ruler seeks proximity to their people to show them that they're there and are a real person. On the other hand, you also get the exact opposite: in China, for example, where the emperor stays in his palace and

hardly ever ventures out. So the various possibilities and forms of communication are very different. Both can work; it depends on the skill of the person involved. After all, we can see how important skill is if we look at politicians in today's democratic societies too, ultimately.

What would you like to tell people outside the academic community about your research?

People are just as interested in the premodern period as they've always been, whether it's in Chinese studies or Egyptology or on a really fundamental level in linguistics, fine art, or object or text science. When we engage with the general public, we don't set out either to romanticize the premodern period or to present it as a harrowing prologue to the here and now. Instead, we want to show that the past is also of topical relevance to the present. Of course, you can't learn 1:1 from the past. But anyone who studies premodern conditions and relationships or even history in general will also tackle current problems from different angles. This is because comparable situations have already existed in the past, and people found solutions for those. This way of finding answers is definitely something you can learn from.

INTERVIEW BY SVENJA RONGE

THE CENTER AS PART OF THE UNIVERSITY

"Power and Domination—the Bonn Center for Premodern Orders and their Forms of Communication" comes under the umbrella of the Faculty of Arts and is incorporated into the Present Past Transdisciplinary Research Area in terms of its content and personnel. The Transdisciplinary Research Areas (TRAs) are six inter-faculty groups that form a key pillar of the University of Bonn in its capacity as a University of Excellence. They are geared toward bringing researchers from different disciplines together to work on issues of great relevance for the future. The TRA Present Past is studying how local and global structures in social orders came about and how they have replicated themselves over the course of history. Its Heritage and Communication research streams are investigating which epistemologies, or theories of knowledge, have reflected and continue to reflect these forms of organization and how they can be deconstructed. The Center developed out of Collaborative Research Center 1167, "Power and Domination—Premodern Configurations From a Transcultural Perspective," which had initially focused on the figure of the ruler.



Photo: Barbara Frommann

▲ Prof. Dr. Matthias Becher at the opening ceremony of the center.

How Science is Tackling the Plastic Problem

Plastic waste is everywhere on Earth: on land, in the air and in the oceans. Plastic is broken down by wind, sunlight and mechanical influences and is even found in our blood as tiny particles known as microplastics. How can this tide of plastic be stemmed? Where do microplastics build up? Can they do any permanent damage? Scientists at the University of Bonn are investigating research questions like these. Here are four examples.

What's floating in the Rhine will one day end up in the sea

Kilometer marker "691" along the River Rhine in Cologne marks journey's end. Here, the association known as K.R.A.K.E. has installed a stationary waste trap. The floating platform complete with catch basket ensures that any trash being carried along the river gets stuck. "We want to gather data on how much macroplastic and other trash is floating in the Rhine," says Katja Höreth from the Department of Geography, who is involved in the analysis. "That's why we're sorting the trash precisely and are classifying it by how much plastic, wood, glass and so on it contains." The waste trap is emptied every two weeks.

The project only began in September, so no data is available yet. "But we're realizing that we're finding a wide range of discarded products, such as balloons, shoes, toys, plastic bottles and even the odd message in a bottle," says Leandra Hamann, a doctoral student at the Institute of Evolutionary Biology and Ecology, who is lending her expertise in her spare time. "For us, the fact that the trap is actually catching waste and we have a lot of volunteers to help us sort it is an excellent start."

The team from K.R.A.K.E. takes a boat up to the trap, empties the catch baskets and brings the trash ashore, where the helpers sort the individual elements and categorize them according to their mate-

rial and type so that they can go on to record their size and weight. There are around 200 different product categories, which are analyzed alongside environmental data such as water level, temperature and precipitation. "This tells us a bit about quantities, sizes, product groups and materials," Höreth explains. The results will go on to inform potential solutions for ensuring that less trash ends up in the Rhine in future. For instance, it could be that we need more trash cans or more extensive recycling and returnable deposit schemes. Alternatively, new biodegradable materials might offer a solution. It would be fantastic if the project were also to serve as a model for other stretches of water.

▼ Emptying the catch baskets on the waste trap in the Rhine: Kai Hirsch, Thorsten Kniewel, Martina Erdelt, Katja Höreth, Laura Otschipka and Niklas Prophet (from left to right).

Garbage fished out of the Rhine will not end up in the sea further down the



Photo: Volker Lannert

Making microplastics filters inspired by fish

Each of us is responsible for an estimated 75 grams of microplastic fibers entering the sewage system through our washing machines every year. Some of this plastic then gets into the environment. A team from the Institute of Evolutionary Biology and Ecology has partnered with the Fraunhofer Institute for Environmental, Safety and Energy Technology UMSICHT and the company Hengst to investigate whether a bionic filter can be used to contain these fibers.

“We started by taking a look at how the filters work in five species of fish,” says Prof. Dr. Alexander Blanke. “This enabled us to build models to try out in washing machines on our test benches.” These fish separate out food particles from the surrounding water by building up a concentration of particles on the filter and transporting them away at the same time, meaning that the filter does not clog so quickly. However, different species apply the principle in different ways.

To explore this further, the researchers used microscopes, video recordings

and microtomography scans to study the fish. Models of the fish filter were then developed and printed in 3D based on their data. Simulations and experiments in the flow tank revealed how water flows through the fish’s trap apparatus in their gills. The results revealed that the separation principle is new and is not yet state of the art. It is yet another example of how bionics is paving the way for approaches that are beyond the scope of conventional technical solutions. Subsequent experiments on test benches that approximated real-life conditions have shown that a filter modeled on that used by the fish retains over 80 per cent of the test fibers, which are 2 mm long.

Conceivably, this filter principle could also be used in other places where microplastics enter the environment, such as in roadside drains or where wastewater is discharged into rivers. “The fish showed us that their filter system is more complex than we first thought,” Leandra Hamann says. “But it’s fun to keep on working on the puzzle and trying to solve a widespread environmental problem.”

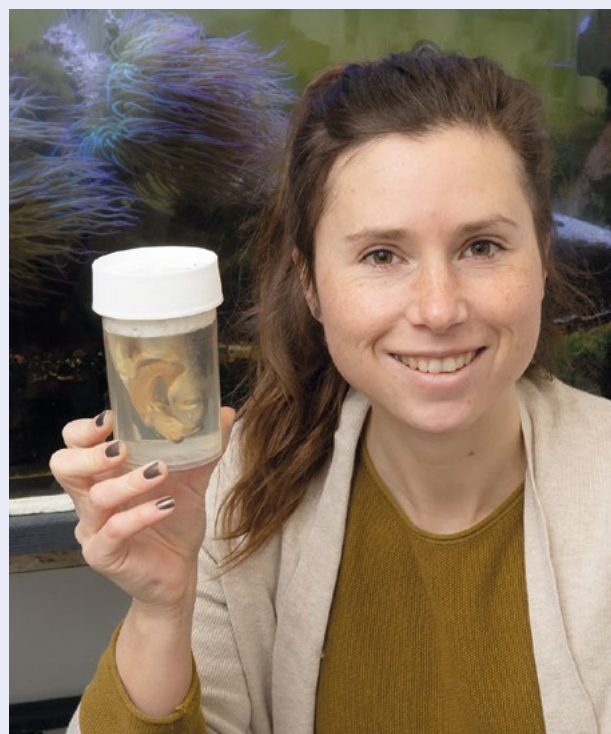


Photo: Barbara Frommann

▲ Leandra Hamann holds a jar containing the preserved head of a herring—a fish equipped with a filter. A saltwater aquarium containing anemones is visible in the background.

First it gets into the soil, then it gets into your food

“Invisible” plastic known as nano-plastics, no more than several hundred nanometers in diameter, can be found not only in the oceans but also in our soil. “Across the board, we still know very little about this tiny plastic, but ini-

tial studies suggest that it’s highly dangerous, perhaps even more so than other kinds,” says Dr. Melanie Braun from the Institute of Crop Science and Resource Conservation (INRES). As a soil scientist, she works to make the in-

visible visible. “There are signs that plastics get into the soil as a result of agricultural activity, such as applying sewage sludge and compost or using wastewater for irrigation,” she explains. “However, we’ve also been able to



Photo: Volker Iannert

◀ The soil is one of the most important building blocks of our food production. For Dr. Melanie Braun, therefore, the presence of nanoparticles in it must be investigated as a matter of urgency. She and her team are developing a new analytical technique for doing just that.

show in several studies that littering plays a key role too. This includes food packets that have been thrown away in the countryside, which is particularly frustrating because it's something that's easily avoided."

The question of how much the individual sources of plastic contribute to the contamination of the soil with such tiny nanoplastics needs an urgent answer, she says, because these plastic

particles can potentially be absorbed by plants and thus get into the food chain.

But how much plastic is there in the soil? The question has always been a difficult one to answer because there has never yet been a way to measure these kinds of small bits of plastic in the soil. Hoping to change that, Braun and her team are currently developing a new, innovative analytical technique. This uses special marking methods that,

in the coming years, will make it possible first of all to identify various types of plastic and then to determine their quantity. Melanie Braun has already been awarded a research prize from the Transdisciplinary Research Area (TRA) Sustainable Futures, which will help her get her project off the ground. It is geared toward supplying the first-ever data on soil contamination by nanoplastics, which can then be fed into forecasts, among other things.

Do nanoplastics affect the brain?

When we eat, we all absorb tiny nanoplastic particles that have found their way into our food via the environment. However, not much is yet known about what damage this can cause. Prof. Dr. Elvira Mass from the LIMES Institute is attempting to find out more about it. The developmental biologist and her team suspect that nanoplastics can damage certain immune cells, known as macrophages, from an early stage—while we are still an embryo, in fact. This can cause pathological changes in our developing organs.

Macrophages are scavenger cells that are present in almost every tissue in our body. As part of our innate immune system, they play an important part in our body's own defenses, forming the

first line of defense against pathogens by ingesting them and breaking them down into their component parts ("antigens"). It is also extremely likely that resident macrophages make a vital contribution to how our organs develop. Among other things, Elvira Mass and her team are investigating how macrophages influence brain development. Specifically, they are trying to find out whether macrophages consume nanoplastics in an embryo and, if so, whether this can cause neurological disorders in the long term.

"We believe that these long-lived macrophages are the 'messengers,' if you like, that pass the message down from one generation to the next," Mass explains. During experimental trials

involving microplastics and mice, her and her team have already noticed changes in their brains and livers that enable them to infer the activation of macrophages. In the long term, this could lead to neurogenerative or metabolic diseases.

"With our research, we want to understand the molecular biology processes behind it, i.e. what happens when plastic gets into our bodies," says Mass, who is also a member of the Transdisciplinary Research Area Life and Health and the ImmunoSensation2 Cluster of Excellence. "We want to use our basic research to show how dangerous plastic can really be and, ideally, prompt a rethink some day," she emphasizes.

► 3D rendering of a piece of nanoplastic in a microglial cell, the first line of the brain's defense system. The plastic polystyrene (in green, up to 100 nanometers in size) enters the brain via the blood-brain barrier and is consumed, primarily by microglial cells (in magenta). The rendering is based on experiments involving mice.



Photo: Lutz Kettner

► Developmental biologist
Prof. Dr. Elvira Mass



Photo: Mass Lab

Professor Hoch again named „Rector of the Year

Photo: Kay Herschelmann

Professor Dr. Dr. h.c. Michael Hoch, Rector of the University of Bonn, receives the award for „Rector of the Year“ for the third time. It is the fifteenth time that this award has been presented by the German Association of University Professors and Lecturers (DHV). After receiving the honor in 2020 and 2021, this marks Professor Hoch's third consecutive award, having secured second place the previous year.

Professor Hoch received the “Rector of the Year” award. Prof. Dr. Bernhard Kempen, President of the DHV, and Alberto Dörr, Head of Santander Universities Germany, congratulated him when they presented him with the accolade, which he has now won for an impressive third time. In fact, he is only the second head of a university to be named “Rector of the Year” three times after Lambert Koch, former Rector of the University of Wuppertal.

Professor Hoch is only the second head of a university to be named “Rector of the Year” three times after Lambert Koch, former Rector of the University of Wuppertal. Funded by Santander Universities, the prize is presented by the professional organization

representing researchers in Germany in recognition of exemplary performance in office. Professor Hoch was chosen in an online survey of the DHV's 33,000 members, which attracted 3,140 respondents. As in previous years, the Center for Evaluation and Methodology at the University of Bonn was in charge of putting together the rankings and its academic management.

The award comes with €10,000 in prize money, which was put up by Santander Universities and which the winner can use to fund a project at their university. Rector Hoch plans to put it toward a new series of events at the University of Bonn that is designed primarily by and for students. This innovative format is intended to illustrate

the history and future of science at the University of Excellence and thus inspire coming generations in particular to take up research and teaching.

With a grade point average of 1.60, Professor Hoch achieved the highest rating. Nearly 70 percent of the voters attested that he was „the ideal choice“ for the leadership position. Hoch is mostly seen as „a proactive chancellor with visions, displaying authentic and objective commitment to the University of Bonn;“ „who knows how to convince through his interdisciplinary and integrative approach, his incredibly good empathy regarding various academic cultures, who can listen and communicate difficult decisions in a humanely pleasant manner, and who is simply praiseworthy.“

Heeding the Call to Bonn

Once again, the University is welcoming some top-notch reinforcements

Establishing and filling high-caliber professorships is one key pillar of the University of Bonn's Excellence Strategy. Yet another group of internationally acclaimed experts have now joined the University in the shape of Prof. Dr. Shu-Perng Hwang, Asst. Prof. Dr. Lena Funcke and Asst. Prof. Dr. Julia Mink. They are breaking important new ground in physics, economics and law respectively. Here we take a closer look at their research work.

CLAUSIUS

Exploring the big questions of particle physics

Particle physicists often encounter many as-yet unsolved puzzles on their hunt for answers to the question of whatever holds the world together in its inmost folds. The matter and energy that we know about makes up a mere five percent of the cosmos—so what does the remaining “dark matter” and “dark energy” consist of? Why is there so much matter but so little antimatter in the universe? And why do the second most common known particles in the universe, neutrinos, have such a vanishingly small mass?

To answer these fundamental questions, Asst. Prof. Dr. Lena Funcke and her team are devising new models that go beyond the Standard Model of particle physics as well as new computer-aided calculation methods to determine model forecasts for future experiments. The Clausius Professor is thus establishing a

new research focus at the University of Bonn in the **Building Blocks of Matter and Fundamental Interactions Transdisciplinary Research Area (Matter TRA)**. “With its Transdisciplinary Research Areas, the University of Bonn is the perfect environment for me to conduct my interdisciplinary research project,” Lena Funcke says. “I’m looking forward to working with a lot of different people and leveraging more synergy effects within the Matter TRA.”

The physicist studied at the University of Münster in Germany and the University of Cambridge in the UK and gained her doctorate from the Max Planck Institute for Physics and the Ludwig Maximilian University of Munich (LMU) at the age of just 23. Her doctoral thesis won awards including the Dieter Rampacher Prize, awarded every year by the Max Planck Society to the youngest

candidate to achieve an outstanding performance in their doctorate. She followed this with spells at the Perimeter Institute for Theoretical Physics in Waterloo in Canada and at the Massachusetts Institute of Technology (MIT) in Cambridge in the US, where she published numerous articles in scientific journals.



Photo: Melke Böschmeyer

► Physicist Lena Funcke is the new Clausius Professor in the Matter TRA.

ARGELANDER

What is the social cost of climate change?

How are pollution and climate change affecting our health—and health-care costs? How do people adapt to the conditions around them, and what factors are key to this adaptability?

These and other questions are being explored by Julia Mink, the new Argelander Professor in the **Individuals, Institutions and Societies Transdisciplinary Research Area**. Mink wants to answer complex questions of environmental and climate policy by coming up with a precise quantification of the social costs of pollution and climate change. She is using large sets of spatial and temporal data, which means that she is also in a position to capture rarely seen effects. The economist is also analyzing the avoidance and adaptation behaviors of individuals, companies and other ac-

tors. One aspect particularly close to her heart is investigating examples of inequality. “For political decision-makers, it’s also very important to know the extent to which various sections of the population are capable of avoiding the effects of environmental pollution and adapting to climate change,” she says. “Finding out more about this issue can help deploy limited resources in a targeted way to support the most at-risk and vulnerable people in society.” Julia Mink is collaborating with researchers from various disciplines, including experts in the fields of epidemiology, agricultural sciences and computer science as well as specialists in meteorological and environmental pollution models.

After completing her degree at the Sciences Po Paris research institute in

France, the economist remained there to gain her doctorate, before spending time researching at the University of California, Berkeley in the US. Before taking up her post at the University of Bonn, she worked as a postdoctoral researcher at the French National Institute for Research in Agriculture, Food and the Environment (INRAE) in France.

SVENJA RONGE



Photo: Barbara Frommann

► Economist Julia Mink is the new Argelander Professor in the Individuals and Societies TRA.

► Legal expert Dr. Shu-Perng Hwang is the new Schlegel Professor at the Faculty of Law and Economics.



Photo: Gregor Hübl

Tensions between national legal systems

The research interests of Shu-Perng Hwang, newly appointed Schlegel Professor, lie in the tensions that exist between national legal systems, such as those that apply to Germany, and supra- and international legal systems, such as those of the European Union. “My focus is on how the development with regard to the coexistence of different legal systems—national, EU and international law, for instance—can and should contribute to the promotion of human rights, the rule of law and democracy,”

Prof. Dr. Shu-Perng Hwang says. Among the questions that she is exploring is how the German and European courts need to work together to ensure better protection for people’s fundamental rights. Hwang argues for a theoretical approach that places individual

freedom front and center. She is keen to incorporate new angles into the debate: although her research interests overlap with her colleagues’, her educational background—which takes in Taiwan, the US and Germany—means that she brings an outsider’s perspective to the German legal system that enables her to make comparisons. Moving to the Rhine was not a difficult decision for Hwang: “The Faculty of Law and Economics at the University of Bonn is highly respected, not only in Germany but worldwide.”

Shu-Perng Hwang studied at National Taiwan University in Taipei and Columbia University in New York. After obtaining her doctorate from LMU in Munich, she worked as a professor of public law at Chung Yuan Christian

University in Zhongli. She then moved on to Academia Sinica in Taipei, where she was a research professor of constitutional and administrative law as well as spending five years as deputy executive secretary of the General Academic Advisory Committee and being made a Distinguished Research Fellow in August 2021. She has received numerous awards, including the doctoral prize of the Munich Law Society.

JOHANNES SEILER

SCHLEGEL



Photo: MPI MIS

ANGKANA RÜLAND APPOINTED TO HAUSDORFF CHAIR

The mathematician Angkana Rüland has accepted her appointment to a Hausdorff Chair, one of several professorships

for exceptional researchers based in the Hausdorff Center for Mathematics (HCM) Cluster of Excellence. She is the second woman to hold this role. Angkana Rüland’s research takes much of its inspiration from problems that have their origins in the natural sciences and that lead to exciting mathematical questions and structures. One example from the materials sciences is the precise analysis of so-called shape-memory alloys. These are special alloys whose thermodynamic behavior gives them a “memory” and seem to allow them to “remember” a previous shape even after they have been substantially deformed. Rüland also studies “inverse problems,” where the aim is to obtain the most accurate information possible about objects by taking indirect, non-invasive measurements—such as is the case with X-ray tomography, for instance. Another example of an inverse problem of this kind is the “indirect” navigation em-
ployed by animals such as bats and dolphins.

Angkana Rüland is bringing a team of two doctoral students and post-doctoral researchers to the University with her. “The University of Bonn is one of the best places in the world to work on mathematics in general and analysis in particular, in terms of both research and teaching,” she says.

Angkana Rüland obtained her degree from the University of Bonn and completed her doctorate under Prof. Dr. Herbert Koch at the Mathematical Institute in 2014. Her doctoral thesis won her the Hausdorff Memorial Prize for the best of its kind in mathematics. She moved to the University of Oxford after her doctorate, before being named head of a research group at the Max Planck Institute for Mathematics in the Sciences in Leipzig in 2017. She was appointed as a W3 professor at Heidelberg University in 2020 and is now returning to her old stamping ground of Bonn.

► The mathematician Prof. Dr. Angkana Rüland

“TeRAbytes” — TRA Workshop on Data Science and Data Management



Photo: Birgit Westerstörfer

▲ Around 100 researchers came together to explore data science and data management.

What’s the best way to handle the large volumes of data that are generated on a daily basis in research? How can this data be best used, and how can it be turned into knowledge? A recent two-day workshop for the Transdisciplinary Research Areas (TRAs) brought some 100 researchers from the University together to grapple with the twin issues of data science and data management. At the Wissenschaftszentrum in Bonn, participants discussed some of the challenges they are facing at the moment, such as the necessary infrastructure and security aspects as well as software development and current trends in artificial intelligence.

The event attracted researchers from a range of fields, from archaeology through to biomedicine and physics, who engaged in discussion with like-minded colleagues and expanded their horizons with lectures, posters and hands-on exercises. The projects showcased included one on data-intensive research in the food sciences and another on the use of “knowledge graphs,” a system for finding and linking information.

Some of the University researchers also presented the work that they have been doing as part of National Research Data Infrastructure Germany (NFDI) consortium.

Another part of the workshop gave the researchers an opportunity to find out about the services available to them, including the RADAR data repository and a tool for keeping electronic lab notebooks. The results of the intensive two-day event are now to be summarized in a white paper.

“It was particularly impressive to see so many researchers from all manner of different disciplines discovering common ground on this critical topic for the future—in terms of the challenges they’re facing and the solutions they’re trying out—and forming new alliances and project partnerships right there and then,” says Prof. Dr. Sebastian Neubert. A member of the Helmholtz Institute for Radiation and Nuclear Physics at the University of Bonn, he is also one of the two speakers for the Matter TRA. “We now have the chance to harness the motivation and clout that this group has to actively help shape the University’s strategy for a digital future.”

The workshop was the first of its kind on data science and data management. “We’re very happy with how the event went and saw a great deal of animated discussion, so we’re already thinking of arranging another one on this crucial topic,” says Dr. Meike Brömer, speaking on behalf of the management of the **Modelling, Matter and Life and Health TRAs**, which organized the workshop. Initial ideas for the event had been gathered at a joint network meeting of the Matter and Life and Health TRAs in the Bundeskunsthalle last year.

► The new Library of Ancient Slavery

LIBRARY OF ANCIENT SLAVERY

The **Bonn Center for Dependency and Slavery Studies (BCDSS)** Cluster of Excellence on Heussallee has opened its new Library of Ancient Slavery. It is the only library of its kind to hold a large collection of publications on slavery in the ancient world and the slave trade in what is now Ukraine, including Crimea. Researchers studying slavery and other forms of dependency are thus now able to consult the holdings of one of the world’s largest libraries on ancient slavery.

The library has its origins in the Academy of Sciences and Literature in Mainz, where research into slavery in the ancient Mediterranean was conducted over a period of 60 years. Over 40 volumes were published on many different aspects of the topic. They are complemented by a comprehensive specialist dictionary of ancient slavery, to which



Photo: BCDSS

researchers from all over the globe have contributed. This library and its extensive collections have now been relocated from Mainz to Bonn.



Video



Painting a Digital Picture of the Crypt of St. Mark's

A joint project by the Department of Christian Archaeology and the Bonn Center for Digital Humanities

Fancy popping to Venice to look round the crypt underneath St. Mark's Basilica? Students and researchers will soon be able to do just that—with a click of their mouse.

Prof. Dr. Sabine Feist from the Department of Christian Archaeology and Dr. Matthias Lang from the Bonn Center for Digital Humanities are planning a virtual tour. The pair were in Venice last fall, where they used their cameras to take a 3D scan of the crypt. This scan is now in the process of being edited.

“This example from Venice is ideal for the ‘virtual treatment,’” Professor Feist says. The crypt underneath St. Mark's provides an insight into many key aspects of Christian archaeology that studying conventional maps—or even visiting it in person—would not. The crypt

Photo: BCDH/M. Lang (By the kind permission of the Procuratoria of St. Mark)



▲ The crypt underneath St. Mark's Basilica in Venice: students and researchers will soon be able to make use of a 3D representation.

◀ The laser scan and photographs are turned into a 3D model.

► Professor Sabine Feist and Dr. Matthias Lang with a special camera in the crypt of St. Mark's basilica



Photo: BCDH/M. Lang (By the kind permission of the Procuratoria of St. Mark)

of St. Mark's represents the architectural and religious center of the cathedral, as this is where the tomb of its namesake is venerated. The altar in the main part of the basilica, above the ground, is positioned precisely above St. Mark's final resting place.

In terms of how crypt and church are connected, however, floor plans and elevations can only tell part of the story. "Even a visit to the underground complex, which in any case is only possible in exceptional circumstances and with special permission, doesn't allow you to see this close link and the associated idea behind the building's construction, because some areas are strictly out of bounds," says the archaeologist, who is a member of the Bonn Center for Dependency and Slavery Studies and the Transdisciplinary Research Area (TRA) Present Pasts.

Sabine Feist firmly believes that this digital version of the crypt under St. Mark's Basilica is a fantastic addition to teaching as it allows students to see 3D views and make virtual visits. This case study for the "Virtual Collaboration" project enables key aspects of Christian archaeology, such as the importance of saints and their tombs or relics in Christian religious architecture, to be taught in a clear and vivid way—without any travel expenses and unexpected risks such as the aqua alta that regularly floods the city and renders both St. Mark's Basilica and its crypt inaccessible.

Students can therefore discuss topical research questions without getting their feet wet or burning a hole in their wallet. These include: Was the crypt already part of the first St. Mark's Church in the 9th century, or was it not constructed until the time of the current St. Mark's Ba-

silica in the 11th? Where exactly are the tomb and relics of St. Mark located? Says Feist: "Although the design of the two-storied pillars in the center of the crypt seems to be intended for a tomb, there isn't one here."

But this is just the beginning: "The project can be expanded without needing to invest much time or money," the archaeologist reveals. One potential first step would be to investigate the crypt of San Liberale in Treviso in Venetia, which is regarded as a carbon copy of that underneath St. Mark's. Professor Feist believes that building a database of 3D models for teaching Christian archaeology would be a genuine milestone that would allow equipment that uses outdated methods to be supplemented in the short term and replaced in the long term.

JOHANNES SEILER

Virtual collaboration

The University of Bonn has been awarded a grant of more than €2.15 million from the "Innovation in der Hochschullehre" ("Innovation in Higher Education Teaching") foundation for the project "Virtual Collaboration (ViCo) – Learning together for the future." The University will use this funding to create several digital platforms that will host new collaborative teaching and learning options.

No More Confusion when “Changing Foleys”

How researchers and nurses are working together to improve hospital communication

More and more hospitals are having to rely on nurses from abroad, but cultural and language barriers can soon lead to misunderstandings. Together with the senior nursing team at the University Hospital Bonn, researchers from the Section for Intercultural Communication and Multilingualism Research (IKM) at the University are devising a training course for nursing trainers on the wards. This is designed to raise their awareness of linguistic and communication challenges and enable them to try out methods for inducting and integrating specialist nurses from other countries even more effectively.

Things are busy in intensive care. A short sentence, uttered in passing: “Could you just change Mr. Müller’s Foley in Room 12?” An experienced nurse on this intensive care ward would know straight away what a nursing trainer meant by that: time for a new catheter. Yet it would be something of a riddle not only for a nurse from another country but also for seasoned colleagues based on other wards—and is a problem that Simone Borlinghaus from the IKM Section knows all too well. “This is a classic case of someone who’s been working there for some time using jargon and not showing enough linguistic awareness,” says the coordinator of the “Perspektive Integration – Sprache im Beruf (PIB)” (“Prospects for Integration—Language at Work”) project, the only one of its kind in Germany.

Together with her colleague Julia Beilein, an e-learning expert for the IKM section’s programs for German as a Second Language, she has been giving workplace language training to specialists since 2016 as part of the project. When she saw more and more nurses and healthcare professionals taking part in the continual professional development course, she and Andrea Loibl, a qualified in-company educator and member of the senior nursing team at the University Hospital Bonn, had the idea of organizing a three-day in-house advanced training event for nursing trainers at the hospital. This provided a great opportunity to combine research and practice.

Qualified workers who have only just arrived in Germany face the chal-

lenge of not only learning the specific vocabulary of a new working environment in what is for them a foreign country but also of having to get accustomed to an entirely new working culture. “We have several hundred nursing professionals from Asia, Mexico and Eastern Europe with language skills at B1 or B2 level and at least a bachelor’s degree in nursing who stay with us for a long time,” Loibl reports. “Although this gives them a good grounding, the language courses that are offered rarely get them really prepared for their day-to-day work. There’s also room for improvement in terms of the colleagues who are inducting them. With the training, we want to help our nursing trainers to be more aware of the linguistic requirements when they’re inducting their new colleagues and become better communicators.”

Language is the most important tool nursing staff use in their day-to-day work, because they always explain what they are doing as they are doing it. Occasionally, a situation may require them to wear several hats: they must be empathetic and use everyday, easy-to-understand words while also communicating in precise, technical language.



◀ The in-house training also saw participants reflect on how they themselves viewed their profession and analyze cultural and linguistic communication situations.



▲ Simone Borlinghaus and Julia Beilein from the Section for Intercultural Communication are working with nursing staff to improve communication on the wards.

“Nursing professionals need to master several linguistic registers,” says Borlinghaus. As Julia Beilein explains, the practical content of the continual professional development course is aligned with the specific place participants work at the University Hospital Bonn: “Before we start, my colleague observes the daily routine on a ward to give her some ideas: What things do people often say? Where are the linguistic stumbling blocks?”

Where could we help out from a language perspective?” In the second step, the two researchers teach language training methods to around a dozen nursing trainers and encourage them to reflect on how they themselves use language. “It was a real eye-opener for many people when we were looking for different ways of saying ‘to urinate.’ Of course, not everyone will know colloquial phrases such as ‘peeing’ or ‘going to the little boys’ or little girls’ room.’ Something that a native speaker can generally work out for themselves will be hard for a non-native speaker to understand. Neither is it something that they’re often taught on a language course.” Says Borlinghaus: “We teach

our participants about variants of language use such as regiolects, workplace vocabulary and technical jargon, but also about how the various wards often have their own language style that other people won’t understand.” One change that has become established is the introduction of set phrases: “change a Foley” is now “replace a catheter”, for instance.

“This ensures everyone’s on the same page linguistically,” Beilein adds. There have also been improvements to handovers, which can often be hectic: “Materials that we’ve developed and that we’ve adapted to fit individual wards together with the people involved are helping with situations that present a communications challenge such as shift handovers or even phone calls,” she says. “More use is being made of handover sheets, for example. These allow

nurses who’ve only just arrived in the country, in particular, to have a written structure for what they’ll need to convey verbally during a handover before they actually have to say it.” Getting the nursing trainers to word their questions in a different way has also proven successful: “Instead of ‘Have you understood?’, they now ask ‘Can you summarize what it is you now need to do?’ or ‘What’s the first thing you need to do now?’” Borlinghaus says. This is important, she points out, because many of those who have come from abroad are used to different working cultures. “They find it hard to say ‘No, I didn’t understand that,’ even if they failed to grasp the tasks at hand on a purely linguistic level,” Borlinghaus explains. Asking targeted follow-up questions helps to identify potential areas of uncertainty in advance, she adds. Loibl states that feedback from the first two series of courses has been very positive and that the content was very well received. “Many nursing trainers are pleased to get their hands on some important tools and innovative teaching methods for communication and to have the chance to improve their communication skills,” she says. “But they also welcome the opportunity to reflect on their own understanding of their roles and share experiences of integrating and inducting nurses who have come here from another country.” In other words, the benefit is huge: so huge, in fact, that more of these continual professional development courses are being run in 2023.

SEBASTIAN ECKERT

The “Perspektive Integration – Sprache im Beruf (PIB)” program

With the German as a Second Language continual professional development course (“WBS DaZ Bonn”) and the “Perspektive Integration – Sprache im Beruf (PIB)” project, the IKM Department is currently running two programs that focus on the long-term transfer of research findings from the field of (foreign) language didactics into professional and educational practice. The Ministry of Culture and Science of North-Rhine Westphalia are funding both projects until the end of 2023. By providing linguistically and culturally sensitive support, the programs are geared toward ensuring the long-term integration into society of people who have (recently) moved to the area from abroad as well as enabling and ensuring equal opportunity at training centers and workplaces.

Whereas traditional German as a Second Language courses at universities are primarily designed with academics in mind, PIB is for staff from all manner of different fields who have training responsibilities and who work with trainee or already-qualified workers originally from abroad as well as for teachers involved in vocational advanced training or continual professional development. They are trained as multipliers for making the worlds of training and work linguistically and culturally sensitive and are familiarized in a targeted way with the linguistically challenging situations that can arise in the workplace.

Read more: <https://www.ikm.uni-bonn.de/weiterbildungsstudium/pib>



Photos: University of Klinikum Bonn / Rolf Müller

The First Reality Check

How medical students in Bonn experience exams in OSCE format

In the new teaching building of the Faculty of Medicine, students demonstrate their professional skills and their interaction with patients.

It's eight in the morning. A shrill whistle echoes through the third floor of the teaching block at the Faculty of Medicine. Hurriedly, and with an impressive degree of synchronization, students open up the task sheets attached to the doors. Their faces a picture of concentration, they attempt to grasp what these say as quickly as possible. Among them are Carlotta Petri and Victor Moldovan, who are both in their sixth program-related semester.

After the whistle sounds, they have one minute to read and understand the tasks that have been hung out for them. They then enter the corresponding room, and their examination begins. Now they have four minutes to demonstrate their skills to the examiners at each station, who are already in the room. After completing every station, they are given some brief feedback before the next whistle goes and they move on. The only station that is different is the conversation with a patient, for which they are given twice as long.

This is the first OSCE that the two medical students and their peers have encountered on their degree program. OSCE stands for "objective structured clinical examination," an innovative, hands-on format that requires students to complete tasks at a series of themed stations. Today, they are being tested on the basics of clinical medical examinations and handling patients.

Before the exam started, there was a slight degree of tension in the air that even the students' obligatory FFP2 face masks could not completely hide. "I was nervous before the exam because it was the first time I've been assessed on a practical exercise," says Victor, summing up how he felt. "But as soon as I'd done the first station, I quickly became a lot less nervous. Once the exam was over, I was relieved that I'd managed it," he adds, even though this feeling of relief in the midst of his written examination period was only short-lived. Carlotta also admits to having been a bit nervous before tackling her first station, although it was "nothing out of the ordinary for an exam situation," she says. One reason for her heightened nerves was "the fact that it was a whole new concept."

This special format was introduced at the University of Bonn in 2012 for exams in pediatric medicine. Since then, the concept has not only proven its worth but has also been adopted in more and more departments and curricula. "The biggest difference between a standard exam and the OSCE was that, for the first time, I had the chance to see how much information I was able to take in without being afraid of having to repeat my written examination," Carlotta says. This is because this first OSCE is ungraded. Even though this will not be the case for the students'

subsequent exams, it is not yet possible to fail them. Victor is also pleased about this: "Usually with an exam, there's always pressure on you to pass or get a certain grade. This OSCE is different. Rather than it being all about passing, you're trying to apply what you learned last year from your course on the basics of clinical medical examinations and handling patients."

Since this exam is not only about simply reproducing knowledge that the students have acquired but also focuses on the practical side, they also have to prepare for it in a different way to their conventional exams. The OSCE simulates scenarios that the students will encounter later on in their careers. For instance, actors are used to simulate discussions with patients, and students are asked to demonstrate the correct way to take blood from a dummy. The exam serves to determine what level students are at. They can see how far their practical skills have come after six semesters and completing their clinical medical examination course.

"Although I also read through the Heidelberger Standarduntersuchung to prepare for the OSCE, I mainly met up with friends and discussed and practiced examining patients," says Victor, outlining his approach. Carlotta explains that most of her preparation came in a course that she took during the semester break. "My part-time job in a hospital was also a massive help, because I was able to draw on experience that I gained through my work there at many

▲ On your marks, get set, go: students have one minute at each station to memorize the task at hand.



Photo: Barbara Frommann

▲ A medical student studies a patient's arm during the exam.

of the stations that formed part of the exam," she adds. As far as Carlotta is concerned, the exam is a chance to practice the kind of things that she will encounter later on, when she is a doctor. "It's a great introduction to clinical work, where you're confronted with real-life, hands-on situations for the first time," she says. What Victor likes about the OSCE is the fact that "you're left on

your own and don't have anyone else alongside you who can help if you get stuck. So you get to see what your strengths and weaknesses really are." Nevertheless, he would appreciate slightly more detailed feedback. However, there is not much time left for a debrief before the next whistle sounds. The pair hurry off to the next room as there is no time to lose.

MERLIN BARKOWSKY

OSCE place exceptional demands not only on the students taking them but also on the rooms in which they are held. With this in mind, the Venusberg teaching block has been expanded with the addition of a state-of-the-art annex. However, these new premises will not only be used for innovative teaching and learning formats. Quite the contrary, in fact, as students are also to be given more space for self-study. As well as the Venusberg teaching block gaining a new annex, therefore, campus life is also getting another place for academic and scientific dialogue.



Children's university started again

After the Children's University is before the Children's University. At the end of February, the first series of lectures of the Bonn Children's University came to an end. Six times, our researchers had the job of packaging science in an exciting way. They always do that - of course. But at the Children's University, they did it for a very special audience: schoolchildren between the ages of eight and thirteen. And anyone who thinks they just sit there and listen is completely wrong. Professor Dr. Jenny Stracke (at the lectern) was also at the Children's University with her colleague Lukas Lindenberg. They are researching whether animals feel comfortable. And she had not expected so many good questions at her lecture on „Are happy pigs happy? pigs happy“, she didn't expect so many good questions: „I'm totally impressed, how attentive everyone was. The young students really participated and asked so many questions that I almost ran out of time at the end. The questions were tough. I had to take a bit of a break when answering them. And new questions arose immediately. Actually, we all did the lecture together, and that was great fun.“

Interested? The Children's University will be held every Monday through June 5. More: www.uni-bonn.de/kinderuni

Photo: Volker Lammert

University of Bonn Secures ERC Grants

The European Research Council (ERC) is funding not one but several researchers at the University of Bonn through its

Consolidator Grants. These are awarded to established top-level researchers who have already produced some outstanding

work. The funding from Consolidator Grants generally amounts to up to €2 million over five years.



Photo: David Fußhöller/UKB

Rayk Behrendt: large parts of the human genome are made up of sections that serve no ostensible purpose and can even potentially make us ill. Yet these sections are still copied and transferred whenever a cell divides, requiring our bodies to expend a significant amount of energy. So what is the evolutionary benefit of keeping these sections?

This is the question being investigated by Prof. Dr. Rayk Behrendt, a virologist and immunologist from the ImmunoSensation2 Cluster of Excellence at the University of Bonn who is also a member of the Life and Health Transdisciplinary Research Area.



Photo: Volker Lannert

Annaliese Mason: Prof. Dr. Annaliese Mason from the Institute of Crop Science and Resource Conservation is studying how new polyploid crops can be stabilized using naturally occurring genetic variants and genetic modifications. She is hoping to double the number of chromosomes in plants such as Chinese cabbage, beets and oilseeds and then use this approach to create stable crops for cultivation.

"If it works, we could theoretically be able to increase crop vitality and thus crop yield further," says the researcher, who is also a member of the PhenoRob Cluster of Excellence.



Photo: Barbara Frommann

Dennis Lehmkuhl: over the past seven years, the General Theory of Relativity developed by Albert Einstein in 1915 has enjoyed some major successes with the observation of gravitational waves and black holes, which scooped two Nobel Prizes. "But these observations wouldn't have been possible had Einstein's theory not been developed further between 1955 and 1975, and yet this renaissance in the theory hasn't really been studied so far from either a historical or a philosophical perspective," says Prof. Dr. Dennis Lehmkuhl from the Department of Philosophy. His "Centre of Gravity" project sets out to close the gap in our understanding of the developments that went on from 1955 to 1975.

◀ Left to right:
Prof. Dr. Annaliese Mason from the Institute of Crop Science and Resource Conservation
Prof. Dr. Annaliese Mason from the Institute of Crop Science and Resource Conservation and
Prof. Dr. Dennis Lehmkuhl from the Department of Philosophy at the University of Bonn.

ERC SYNERGY GRANTS

The University of Bonn can celebrate a twofold success in the ERC's Synergy Grants grant program together with other partners.

The **"SuperWave"** project is concerned with scaling up quantum systems from single photons and atoms. Prof. Dr. Arno Rauschenbeutel from Humboldt-University of Berlin, Prof. Dr. Sebastian Hofferberth from the Institute of Applied Physics at the Uni Bonn and Prof. Dr. Thomas Pohl from Aarhus University (Denmark) are collaborating on the project. Of the more than €8 million in funding available under the Synergy Grant, the team in Bonn will be receiving some €2.8 million. The second project, **"Horsepower"** is studying the interrelationships between sedentary and nomadic peoples. It is

made up of an international team of researchers from the University of Oxford (Professor Chris Gosden), CNRS Toulouse (Professor Ludovic Orlando), the British Museum (Dr. Ruiliang Liu) and the Uni Bonn and is led by Adjunct Professor Dr. Ursula Brosseder from the Department of Prehistoric and Early-Historic Archaeology. The researchers are investigating the interdependencies between cattle herders from the eastern steppes of Eurasia and sedentary societies in China.

In particular, the funding from the ERC Synergy Grant is intended to advance the research being done at the interface between established disciplines and unlock new knowledge. The projects will be supported to the tune of up to €10 million over the next six years.

ERC STARTING GRANT

Matthias Braun: No sooner had Prof. Dr. Matthias Braun been appointed to the Faculty of Protestant Theology than he secured an ERC Starting Grant. Together with his team, the ethicist and theologian is studying the ethical and social ramifications of digital twins. "They're an emerging technology," he says.

The technology involves simulations of bodily functions or organs created using artificial intelligence. These simulations can make predictions regarding health risks, for instance, or provide personalized feedback.

Worth up to €1.5 million, the ERC Starting Grant is designed for innovative early-career researchers who are looking to set up a new research unit.



Photo: Barbara Frommann

▶ Prof. Dr. Matthias Braun from the Faculty of Protestant Theology at the University of Bonn.

► Attempting to reconstruct everyday life 1,500 years ago: Dr. Petra Linscheid and Dr. Katarzyna Lubos study a find—a piece of Egyptian fabric



Photo: Volker Lannert

“People Didn’t Spend the Early Middle Ages Walking Around in Sackcloth”

What tiny fragments of fabric can tell us about the past

It has always been the case that “the clothes make the man.” But what kind of clothes did people wear in the Early Middle Ages? What style and what kind of colors were “in” at the time? These are tough questions to answer, with written records hard to come by and finds of original clothes thin on the ground. Dr. Petra Linscheid and Dr. Katarzyna Lubos from the Department of Christian Archaeology at the University of Bonn study fragments of fabric from different eras and, in so doing, attempt to piece together what everyday life was like for people in the past.

“The discoloration shows us that it was later used as a shroud. But the flecks of rust come from the modern day and indicate that the fabric had been nailed to a collector’s wall. All cultures used this simple linen binding. But this beautiful knitted pattern also existed in the Baroque period, for example, but not among the Franks. Although they were familiar with it from the Romans, they made a conscious decision not to use it because it didn’t fit their identity or culture.”

It is under the microscope that things get really exciting: the two researchers spend several hours studying every piece of fabric, analyzing not

only the weaving technique that was used but also how the yarn was made. This particular sample produces some exciting results. “Here you can see that these yarns are S-twisted, meaning that the twists go from top left to bottom right, as was common in Egypt, Palestine and Syria,” Linscheid says. “The other is ‘Z-twisted,’ which was the standard practice in Asia Minor and Europe.

That’s good to know if you’re really struggling to classify a fabric. We sometimes also find Z-twisted yarns in Egyptian wool applications of this kind. These are usually ultra-fine, made from cashmere, for instance, and

often dyed with Tyrian purple. So you can infer a link to imports and trade relations.” The Egyptians used these Asian woolen yarns to enhance the value of their fabrics. Linscheid then points to an imperfection in the fabric and says: “Pieces have been removed from here. From the days of the archaeology boom sparked by Napoleon’s Egypt expedition until the early 21st century, it was quite common to rob tombs, cut bits out and then sell them.” The individual scraps were often used to study the techniques used to make them and ultimately ended up scattered in museums, cupboards or attics all around the world via roundabout routes.



Particular importance is attached to material that can be accurately dated, which is added to an online database at the University of Bonn. This allows historical developments to be identified and the original fabrics and patterns to be digitally reconstructed. "From a methodological perspective, I love the visual aspect," she explains. "It also has a lot to do with enjoying solving puzzles. Different pieces from the same tomb, different fragments of the same piece, scattered to the four winds, that we can put together again."

Whilst Egyptian material is often well preserved, finds from the early Frankish kingdom are generally in a poor state. One piece held by the LVR-Landesmuseum Bonn, which the pair are currently investigating, measures a mere 0.15 of a square inch (1 square centimeter). The trained eyes of Lubos and Linscheid are needed in order to determine that the scrap encrusted onto this particular belt buckle is woven fabric rather than simply a fleck of dirt.

It is a chance discovery from a tomb that was preserved thanks to a chemical reaction with the metal of the buckle. "The moisture creates corrosive salts, which penetrate the textiles and preserve them," Linscheid explains. This not only leaves clues about the technique used to make them. "It also tells us a lot about the material culture, about traditions and about social developments as well," Linscheid adds.

"For a long time, archaeologists worked largely without textiles, because they're organic materials that decay," Lubos explains. This is one of the reasons why many modern reconstructions seem empty in some way. "And that's a shame. Naturally, fabrics played a very prominent role in everyday life at the time, both in people's clothes and for decorating rooms," Linscheid reports.

The Franks had their own style. Grave goods and remnants of clothing are particularly helpful for providing clues about the early medieval period, when written sources were scarce. "An unbelievable amount happened between antiquity and the Middle Ages that we don't know very much about," Linscheid explains.

Studying a large number of finds allows regional or chronological similarities to be spotted with patterns and characteristics of workmanship. "Unlike with the Egyptian fabrics, of course, we know the context of the local finds, such as the precise tombs or graves that the goods came from," Linscheid says.

"This lets us find out whether the same production technique was always used in the tombs of Frankish men in a particular region in the 7th century, or whether garments always had slits in the same places." This makes it possible to determine what style was common, she says, or whether there was



Photo: Volker Lannert

any sense of cultural affiliation. This is because, although the Franks were familiar with Roman weaving techniques, for example, they stuck to their own handicraft traditions. They had their own style, one could say.

Essentially, the fabrics became more complex and were given complementary patterns on their two sides. "One of the most exciting finds is a fragment from an early medieval tomb, where several small-scale patterning techniques had been put to sophisticated use on a single fabric," Linscheid says. "We were able to find this technique in other tombs as well. This also changes our preconceptions of early medieval dress sense. People didn't spend the Middle Ages walking around in potato sacks, in other words."

There is only one thing that is almost impossible to figure out. "Our work can tell us a lot about techniques and about what customs the Franks had," says Lubos. "But, of course, you're also itching to find out what colors were in fashion." However, many of the color pigments have decomposed. And the rust-red shade is just that: iron oxide.

SEBASTIAN ECKERT

▲ Linen on the outside, wool on the inside: the imperfections show where pieces were removed in the past



Photo: Volker Lannert

▲ The tiniest fragments are investigated under the microscope.

▲ Only little remains of the textiles found locally: pieces of fabric stuck to metal. Remnants of twill weave fabric on the exposed side of a belt clip found in Euskirchen-Weidesheim.



LVR-LandesMuseum Bonn, Photo P. Linscheid

Website and Online-Datenbank:

<https://www.iak.uni-bonn.de/de/institut/abteilungen/christliche-archaeologie/forschung/textilforschung/kontextil>

“Charisma Can Have Catastrophic Consequences”

What role do power and the powerful play when the fate of the world is at stake? How does charisma influence all of this? And is it only political leaders who have power? Or, put another way, how powerful is Greta Thunberg really? An edited volume entitled *Macht und Machtverschiebung** (Power and Power Shifts) that explores these issues has recently been published. We discuss it in an interview with Dr. Hendrik Ohnesorge from the Center for Global Studies.

Dr. Ohnesorge, when does someone wield power?

If you take Max Weber's famous definition as your model, power means the chance to impose your will within a social context, even when opposed and regardless of the integrity of that chance. We're particularly interested in the second part of that sentence, because there are various possibilities for changing someone's behavior.

And what might those be?

On the one hand, of course, there's force. In international politics, that might take the form of military force. And then there are economic or financial incentives. In our research, we group these two things, force and incentives, together as “hard power.” On the other hand, you have persuasion and appeal. You can attempt to persuade

or appeal to someone, i.e. win them over with your ideas. That would essentially be soft power.

Why is it important to consider the personality of decision-makers in this context?

The debate about the interplay between actors and structures is an old one: What role can individual decision-makers play? How much is predetermined by external factors? And a look at some actual cases from history and their sources reveals quite clearly that individuals exert an influence in certain situations: take John F. Kennedy during the Cuban Missile Crisis. He went through his various options for responding to the discovery of Soviet missiles one by one, drawing on his own personal experience and his nature, and came to the following conclusion: we need to retain control of events; we can't order an immediate invasion of Cuba or consider it in isolation from potential Soviet countermeasures. Essentially, based on his personality and his experience, he decided against both an immediate invasion and ramping up the rhetoric, instead opting for his “quarantine” blockade.

Wouldn't anyone else have done exactly the same?

Now we're in the realm of the famous “What if?” questions. As far as the Cuban Missile Crisis goes, it's clear that there were some fervent supporters of other options. And consider, for example, Kennedy's phone call

during the crisis in October 1962 with his predecessor Eisenhower, who advised him in words to this effect: “The only thing the Soviets understand is military might. Don't be that worried about a possible backlash, against Berlin for example. What we need to do now is show strength.”

With Kennedy, you had an extremely charismatic person in charge of the US. When does someone have charisma?

At the risk of splitting hairs, you don't “have” charisma—it's conferred on you by other people. The word comes from the Greek for “gift of grace,” so technically it's something that's given to you.

Max Weber identified three types of charisma. The first is the pure, genuine charisma that someone is afforded as an individual, without holding a particular office. The second is family or hereditary charisma, the kind that we are familiar with from royal dynasties or the nobility, for instance. How charisma is passed on through rituals also plays a role here. And then the third kind is office charisma. Holding a specific role, an office, makes you more charismatic. You can think of the US Presidency or the Papacy. When you take up your office, therefore, a certain degree of “bonus” charisma is bestowed upon you. And the three types aren't necessarily mutually exclusive. They can coexist and even magnify one another, as the example of Kennedy clearly shows. However, not every US president instantly became charismatic after taking office.

Can you acquire charisma through practice?

No. As I've said, it's a gift. Not everyone has it; not everyone is entitled to it. It's also in the eye of the beholder. “You can't, if you can't feel it, if it never rises



from the soul,” says Faust to his famulus Wagner. Although “charisma coaches” make a lot of money out of the claim that anyone can be charismatic. Charisma also has to be accompanied by a healthy dose of reality. Otherwise, for instance, it soon becomes ridiculous if you don’t fulfill your promises but merely put yourself on a pedestal or allow other people to do that for you. Although a certain amount of learning through practice may well be possible, it has to be backed up with substance.

Is charisma a good thing?

Essentially, charisma lacks any intrinsic value. Of course, there are some examples of charismatic figures appearing as “good leaders.” But charismatic leadership can produce the most terrible things. Here too, the pedestal plays an important role, as we saw with Adolf Hitler, for instance. We have to be objective and make it clear that, in the history of the world, charismatic people have left disaster and unimaginable suffering in their wake. So I’d advise against seeing charisma fundamentally as a positive thing. You could even argue that democratic systems involving the separation of powers were invented to rein in charismatic individuals who, after all, are not always only good. Sticking with etymology for a moment, charisma can go from being a “gift of grace” to a poisoned chalice.

Can you lose charisma?

Of course. Charisma is something extraordinary, and it can be affected by wear and tear, especially in the long run. Take Napoleon, who’s widely regarded as the archetypal charismatic leader. When he comes back from his first period of exile, he’s able to use his charisma to convince his veterans to follow him into the fray once more. But after the Battle of Waterloo in 1815, if not before, he loses a great deal of this charisma.

So this gift of grace also needs to be nurtured. By both sides. Because charisma is a social relationship, like power—and especially soft power—in general, where you always need a leader on one side and followers, disciples or whatever you want to call them on the other.

What about Greta Thunberg, for instance? Objectively speaking, she has no hard power. Is she powerful nonetheless?

I think she’s an excellent example of how individuals can exert an influence on politics and history without having to hold a particular office. Thunberg is currently showing us how people can wield power from within themselves, using the means and possibilities at their disposal. She doesn’t hold any political office. But she has soft power, has reach, on social media, for instance. She addresses the United Nations and, when she speaks, it has an impact across the world.

Do we need to start focusing more on the personalities of those in power?

Personality isn’t the only factor. We need to keep an open mind and ask: Who plays a role in political decision-making processes, in contemporary history, in historical processes? And here I’m finding myself increasingly thinking that we need a kind of synthesis between structures and actors. On the one hand, you have

structures and an environment that shape people and to an extent actually make them what they are. On the other hand, however, you have individuals, who play a major role in my view. In today’s political arena, we can also identify numerous figures without whom the world would probably not be like it is. Without a Putin, for instance, to give you an extremely topical example. If we want to understand international politics in its entirety, therefore, we have to include factors like personality and charisma in our analysis.

THE INTERVIEW WAS CONDUCTED
BY SEBASTIAN ECKERT.



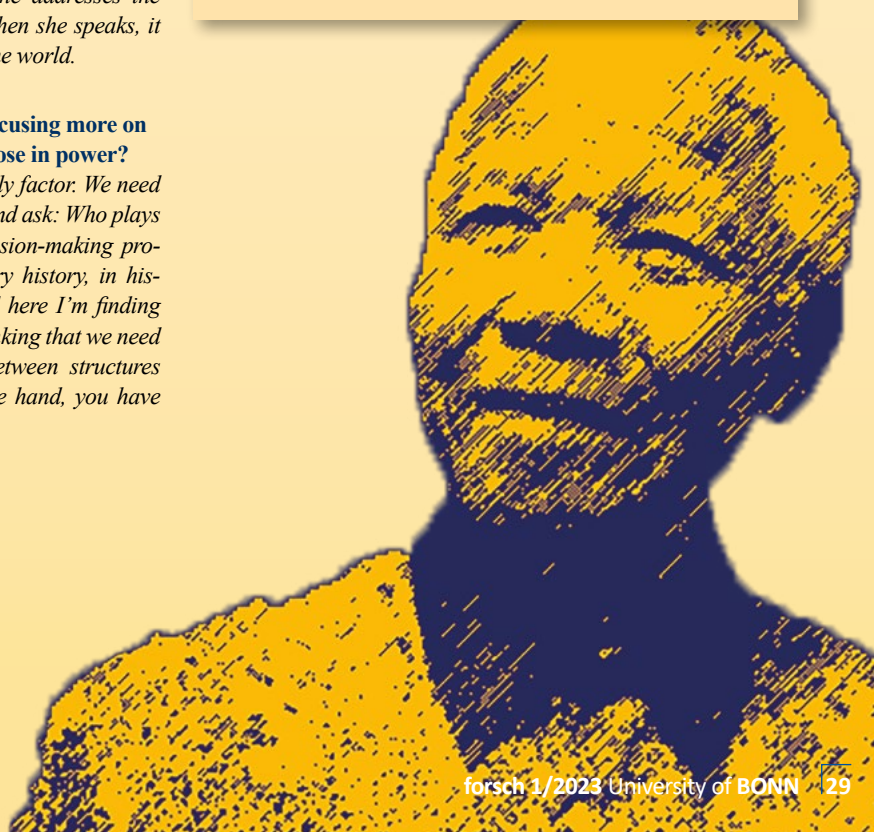
Photo: Barbara Frommann

More about power and how it shifts

Dr. Ohnesorge offers a detailed examination of power, personalities and charisma in the Hypothese (Hypothesis) podcast: (in german) uni-bonn.de/hypothese

Edited volume

Hendrik W. Ohnesorge (Ed.): Macht und Machtverschiebung. Schlüsselphänomene internationaler Politik – Festschrift für Xuewu Gu zum 65. Geburtstag (Power and Power Shifts. Key Phenomena in International Politics – a commemorative publication for Xuewu Gu to mark his 65th birthday), De Gruyter Oldenbourg, 588 pp., €59.95





Photos: Gregor Hübl

▲ Hunting for clues: Dr. Michael Herkenhoff, Philipp-Lukas Bohr and Tobias Jansen are inspecting the USL's holdings to see what can be restored to its rightful owners.



Podcast

► The accession catalogues record over 61,000 acquisitions made between 1933 and 1950, some of which will have included much more than one book.



Visual Story

Uncovering Stories Hidden Behind Stamps

How detective work is hoping to restore items seized by the Nazi regime to the heirs of their original owners

One of the most extensive hunts for clues in the country is currently under way at the Bonn University and State Library (USL) under the watchful eyes of Veronica Albrink and Dr. Michael Herkenhoff. They are leafing through tens of thousands of books, sifting through just as many index cards in old catalogues, scrutinizing acquisition lists line by line—all to find books that the Nazis stole from people and that have ended up in Bonn. This is the first project of its kind at the USL.



On December 9, 1941, Leo Polak was murdered by the Nazis in the Sachsenhausen concentration camp. Records from camp staff suggest that he was beaten to death. In February of that year, the Nazis had deported the Dutch free thinker, legal scholar and philosopher from his place of work at the University of Groningen to the camp north of Berlin. Although not a practicing Jew, Polak had Jewish roots. Those

of his worldly possessions that he was unable to get to a safe place in time were seized and sold off.

Nine of the books that he owned are now in the USL in Bonn. Tobias Jansen takes them carefully down from the shelf and opens one of them on the first page. "Polak" it says. How the book came to be at the USL is still not fully known. Nevertheless, it is one of many books that perhaps do not belong in Bonn at all but with the heirs of the victims of Nazi crimes. This is the task entrusted to Tobias Jansen as part of the project entitled "Ermittlung von NS-Raubgut in der University ofs- und Landesbibliothek Bonn" ("Identifying items seized by the Nazi regime held at the Bonn University and State Library"), which is being funded by the

German Lost Art Foundation. The USL holds over two million items, and its building on Adenauerallee has three whole floors underground that are home to miles and miles of books on shelves and in rolling stacks. How does one go about finding stolen books in all that? "It's genuine detective work sometimes," the historian admits.

For one thing, however, the holdings can be narrowed down somewhat: obviously, the focus is on items acquired between 1933 and 1950. For another, the books in question would have to have been published before 1945. Every single one of these is flicked through and checked for stamps, initials or other markings that might hold the key to somebody's story. "We're finding out what we have here in the library and getting an idea of the procedures and processes that people followed back then," Jansen says. "In the process, we're also discovering which staff were responsible at the time."

The old accession catalogues are also helping them with their hunt. These

lists record over 61,000 acquisitions made between 1933 and 1950, some of which will have included much more than one book. If the accession catalogues contain references to individual books, these are checked against the information from the “Katalog der Kriegsverluste”—the list of items lost during the war.

The University library at the time was set on fire by Allied airstrikes in 1944, destroying around 180,000 books. So a book not mentioned in the “Katalog der Kriegsverluste” must be somewhere on the premises. Of these over 61,000 acquisitions, almost 4,000 have now been classified as “suspicious,” while the project team have discovered nearly 600 “strong candidates” that can definitely be assumed to have been seized illegally. And this number is expected to rise even further. Many books will have arrived at Bonn from the training complex that the Nazis called “Ordensburg Vogelsang,” for example. Others, however, will have come from local authorities of the time, such as various town and city halls in the Rhine region, the Gestapo in Düsseldorf or Wuppertal, and antiquarian bookshops—including some major ones—in Germany and abroad.

Jansen pulls a book that only arrived at the USL in 2016 from the blue rolling stack. The work, which actually belongs to a library in Ukraine, was seized from a horticultural college some time before 1944. A soldier in the Wehrmacht had evidently brought it back from the Eastern Front. With Soviet troops massing on the horizon, his wife cut out the library stamp that betrayed the

book’s origins. “She was probably afraid that the books would be discovered in her house,” Janssen thinks. If the Russians had found the book, she would have had to come up with a good explanation.

What she did not know, however, was that many books have secret stamps that allow them to be identified in the present day. The horticultural college is now part of a university, and there is a good chance of restoring the book to its rightful home in the long term.

Other high-profile finds include several series of books by the criminal defense lawyer Max Alsberg. Born in Bonn, he studied both here and elsewhere before going on to work as a notary public and criminal defense lawyer in Berlin. As a Jew, Alsberg was persecuted by the Nazis from 1933 onward. Within just a few months, they had destroyed his livelihood and his life’s work, which also included an art and book collection. Desperate and broken, he shot himself in September 1933 in exile in Switzerland.

The books that are rediscovered will be restored to their rightful owners if at all possible, and their origin will be recorded in bonnus, the library’s catalogue, so that the results of the team’s research can be made available to researchers as well as students.

An extensive volume of work from the project is being prepared for the coming year. Much of the project’s funding comes from third-party sources, with the rest provided by the USL itself.

SEBASTIAN ECKERT



▲ The “Katalog der Kriegsverluste” lists the books that were destroyed in the Second World War

▼ In several rolling stacks deep beneath the USL, books wait to be combed through by the team



▲ Tobias Jansen is coordinating the project and searching for surviving descendants



Creative Tinkering in the Name of Research

Vocational training at the University: become a precision mechanic

▲ Ilya Geyer machines a front panel on a conventional milling machine.

The University of Bonn is a place for students to earn a degree and early-career researchers to gain an academic foothold. But in addition, the University currently has 70 young people doing apprenticeships in 18 different professions, including precision mechanic, for example. In the summer, two young people will be starting an apprenticeship in the precision mechanical engineering workshop of the Helmholtz Institute for Radiation and Nuclear Physics. We asked the workshop staff what the two can expect, and look forward to.

Adrian Jaeger didn't have to think twice when asked why he enjoys working for the University as a precision mechanic: At many companies, preci-

sing is successfully performed using our components."

ting is successfully performed using our components."

Jaeger started out himself as an apprentice at the University of Bonn, in 2013. "Actually, all I knew at that time was that I wanted to work in some tradesman vocation. My mom read an article about apprenticing at the University in *Forsch* magazine, and then everything took its course," Jaeger recalls with a grin. Today Jaeger is himself an apprenticeship instructor on the seven-person workshop team, and can't imagine working anywhere else: "It's truly a special thing to be able to make parts for Institute research projects that otherwise would not be possible to conduct."

Ilya Geyer agrees, who has been working there since 2009. He has no intention of leaving, because there is nothing he'd rather be doing than making components for research projects. "Our work is highly varied, and very much different from other precision mechanic jobs. Milling, turning, soldering and welding ... we have to get creative and try a lot of different things out. In many cases there is no solution you can just take from a manual. The orders we get are out-of-the-ordinary. We specialize

We get to contribute to the research work, which is a great thing. Where else do you get to have that kind of experience?

on mechanics spend producing the same components week in, week out. The objective is to produce large quantities. But things are quite different at the University, where it's never the boring same-old. "There is no typical workday here. The job is varied; you just never know what the colleagues at the Institute will come up with," says Jaeger. "Sometimes they will need a prototype, sometimes a replacement part; other

times they need an idea for a component that has never existed before."

Researchers discuss whatever job they have for their precision mechanics in detail. Jaeger appreciates the good communication: "We don't just get an order emailed in to us and the go get started. Instead, we discuss together what the best approach could be, how to proceed. An early-career researcher for example may come to us with drafts of an experiment setup required for his or her doctoral thesis. The objective may be to test how a material behaves under radiation. We would then design components to be made for that one specific application." Another advantage is how everything is close together at the Institute: "I don't just hand over the components, then never hear another word about it. Often, researchers will have me come visit the lab due to some adjustments that need to be made. I can also go over and observe for myself how te-



Visual Story

in precision work, and that means down to the μ ". Having the workshop close to the labs is a major advantage. "I can just stroll right over and have a look at the experiment setup. That makes things easier than having to work off a rough sketch." When the components he builds function as planned, Geyer feels pride of accomplishment. "Sometimes the preparations take longer than actual production. A lot of thought and planning goes into ensuring that the installed components will properly work later on during the experiment. If everything ultimately goes well, the researchers will come over and let us know, and that's a great feeling." The workshop staff have a spectrum of ultra-modern tools at their disposal: a conventional milling machine, a CNC lathe, a five-axis milling machine and a 3D printer. "Over the last ten years we have done a lot of investing and modernizing," says Daniel Kunz, who manages the preci-



Adrian Jaeger checks and cleans the print heads before a 3D print

Apprentices who enjoy sophisticated technologies will definitely find they have come to the right place here.

on mechanical engineering workshop. An apprenticeship instructor, Kunz knows well that apprentices have little interest in working with outdated machines and methods. This requires ho-

wever a willingness to do continuing education—to constantly acquire new skills and knowledge. Like learning CAD: computer-aided drawing for model design. Anyone thinking about be-

coming a precision mechanic should enjoy working in a digital as well as a precision environment, and have a lot of patience too. "High-precision working is critical for us, as all components need to serve their own designated function. The researchers are relying on us! Individuals with a hectic work style will have a hard time manufacturing complex, ultra-small components," says Kunz. The summer apprenticeship semester starts out fairly relaxed, with the apprentices performing manual tasks like sawing, filing and soldering. In the second apprenticeship year they start being involved in completing jobs. Some time before that however they will have certainly had a look at the impressive isochron cyclotron (particle accelerator) located more or less beneath the Institute workshop, used by particle physicists to study what holds the world together at its core.

Precision mechanics Adrian Jaeger, Daniel Kunz and Ilya Geyer in their workshop at the Helmholtz-Institute for Radiation and Nuclear Physics (HISKP). The team includes four other colleagues - and soon two apprentices.

TANJA KÜHN-SÖNDGEN



Photos: Gregor Hübl

Apprenticeship at the University of Bonn

Are you interested in an apprenticeship at the University of Bonn? Would a precision mechanic be something for you? Or would you rather work as a sports and fitness merchant or a chemical laboratory technician? We offer a lot of possibilities for your career entry- depending on whether you are interested in craftsmanship, technology, business or science. You can apply for the new training year from around September.

Training starts on August 1, 2024. Info:

<https://www.uni-bonn.de/de/universitaet/arbeiten-an-der-uni/ausbildung-an-der-uni-bonn>

From Bonn to Ghana: Volunteer Service Year

Hannah Weisheit's voluntary social service year at the University of Bonn involved a trip to Ghana, where she gained valuable intercultural experience

Hannah Weisheit felt the damp heat of Ghana hit her face the moment she exited the Air France Airbus. The thermometer showed 28 degrees—back in Bonn it was still wintry. Weisheit was there on an eight-day conference trip to Kumasi and Accra organized by the ijgd, as part of a voluntary social service year she was doing at the University of Bonn, in the field of politics (FSJ-P). A fascinating and emotional adventure!



A voluntary service year in an international environment, with trip abroad included—little did Hannah Weisheit know that all this was in store when she came across a newspaper ad last summer placed by the International Office of the University of Bonn. Her interest was piqued: “I had been interested in international relations and intercultural exchange for quite some time. So the idea of doing an FSJ-P sounded exciting,” says the 18-year-old volunteer. She applied immediately, and has been working ever since as a member of a fifteen-person team with close involvement in a range of international research and administration matters.

Of particular note was the 25th anniversary celebration of the Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR) in Ghana. “We want to create opportunities for our FSJ volunteers to take part in a trip abroad during their time here with us,” says Christine Müller of the International Office. “The destinations are usually in

Europe, but in this case we had a need for Hannah's support further afield. This special experience of taking part in a trip to Ghana was made possible by funding under the Erasmus Programme via the partnership with Kwame Nkrumah University of Science and Technology (KNUST).” Ghana enjoys the special status of a priority country for the University of Bonn, thus numerous partnerships exist with the country.

Weisheit had of course gathered plenty of information about the host country in advance. Visa, vaccinations, passport, intercultural training ... she had everything in place. And yet many surprises were still in store: “I had many formative experiences there, looking back, that left quite an impression,” says Weisheit, “and it was challenging too. The conference days were long, as was my list of tasks.” All this while having her first-ever experience of major travel without parent or teacher accompaniment. “I had to make a lot of decisions independently—that was slightly new to

▲ How do you deal with pandemics? What are the current findings at the Ghanaian and international level? Experts, politicians and other stakeholders discussed this at the GWAC meeting.



me,” she relates. Kumasi is a business hub and university town, and as Ghana’s largest city, some say it is the real heart of the country as well. Twenty-five years ago the internationally prominent tropical research institute KCCR was formed there, whose mission is to trace infections from tropical diseases.

The two-day ceremony was attended by representatives of the Bernhard Nocht Institute for Tropical Medicine and the University of Bonn Faculty of Medicine, and by virologist Christian Drosten of Charité Berlin and Asantehene Osei Tutu II. The FSJ volunteer helped with on-site organization, picked up guests from the airport and prepared Instagram publicity posts.

A few days later they went to the capital city of Accra, 250 kilometers away, for the second event of the trip: a discussion on pandemic prevention between the German-West African Centre for Global Health and Pandemic Prevention and government representatives and other stakeholders, in dialogue about their latest experiences. There too Weisheit assisted with on-site organization, supporting the coordinator—which proved a superb opportunity to learn how events of this size and importance are conducted in Ghana. She answered several questions about Germany while there, and had opportunity to speak briefly with the German ambassador.

Asked to relate some of her experiences in the foreign country, she told us: “It was so cool, but challenging too; the weather was physically strenuous, and the food and differing ways of polite interaction were also stressful.” As white Caucasians, they naturally stood out sharply in the city. “You feel welcome everywhere you go, but it’s not something you are used to, being spoken to constantly,” she relates, “Communication behavior in Germany is minimal, in comparison.”

During some of her time off, the partners in Ghana showed her around the vibrant and diverse capital city. And Hannah met a young Ghanaian woman of the same age in the course of the trip, with whom she remains in contact. What is this kind of experience worth? “Even if it was only one week, I now have more understanding and empathy for international students—I know how they probably feel. It was a great opportunity to get to know another culture in



a real ‘intercultural encounter’. I would do it again in a heartbeat,” says 18-year-old Weisheit.

“The year strengthened my resolve to continue working in an international environment.” The knowledge she gained there flows right into her work, as right now she is helping run a summer school and planning a series of new networking events for students interested in political science. It was a positive experience for everyone on the International Office team. “We are pleased that the University’s first FSJ-P has been such a successful one,” says Müller, “and we hope to offer two voluntary service year places going forward.”

SEBASTIAN ECKERT



▲ At the ceremony, the participants also exchanged information between the program items.

▲ Ashanti King Osei Tutu II welcomed participants at KCCR ceremony



▲ Mary Agyeman, Department of Medical Diagnostics, Faculty of Allied Health Science (KNUST), Christine Müller, Prof. Daniel Duah (Dean, International Programmes Office KNUST), Hannah Weisheit

Photos: privat

Career Support and Funding for Female Academics at the University of Bonn

At German universities and colleges, significantly fewer women teach than men. According to the Federal Statistical Office, in 2022, only slightly over one-fourth of full-time professorships were occupied by women. From 2020 until now, the University of Bonn has sponsored 90 female scientists through the STEP program. We would like to introduce three of them.

“In academia there is clear gender inequality, and the differences are greater the higher the academic position concerned. Addressing issues of gender equality is thus extremely important,” says Prof. Dr. Irmgard Förster, Vice Rector for Equal Opportunity and Diversity at the University of Bonn. In cooperation with the University Gender Equality Officers and the Central Gender Equality Commissioner, Professor Förster and her team work together to make equal opportunity for women in research and teaching a reality.

Twenty-seven percent of professors at the University of Bonn are female, which is just below the national average. The Rectorate has adopted the goal of increasing this figure up to 30% by

the year 2026. This is stated in the University Development Plan of the Excellence University Bonn. And that’s exactly what Professor Förster is advocating for: „The fact that the representation of female researchers in comparison to their male colleagues at the professorship level is still so low is not acceptable. The promotion of female scientists on the path to lifetime professorship is therefore a central goal of gender equality at the University of Bonn. Despite remarkable progress in recent years, we want to further accelerate the process of gender equality and clearly encourage female scientists to pursue their career path and not cease to be passionate about research.“

There are stumbling blocks, but also a lot of support. The university sup-

ports female scientists in their career development individually and based on their needs. For example, through the program for strengthening the Equal Opportunity process (STEP). The program includes various funding lines. The university supports its female researchers in forming and intensifying strategic partnerships: it funds conference stays and promotes networking events so that female researchers can present their own research results to an international audience. Additionally, funds are available to enable professors to start and expand their research activities more quickly after their appointment or contract negotiations, or to alleviate their workload when serving on committees.

Prof. Dr. Sabine N. Meyer

Prof. Dr. Sabine N. Meyer teaches at the Department of English, American, and Celtic Studies. Her current research project concerns the intersection of aesthetics and politics in contemporary writing and

cultural works by North American artists who identify as black and indigenous.

How did you get into academia?

For me, working in academia demands constant mobility, mental as well

as physical; remaining comfortably ensconced in a given intellectual position or in habitual thinking patterns will not suffice. The academic sector represents an entirely unique space for lifelong research and learning through continuous



dialogue across cultures and disciplines. Higher education gives young people and the broader public access to insights and knowledge developed with painstaking effort. And this, we hope, contributes through critical examination to greater transparency with regard to existing hierarchies, past and present, and to work approaches in our society.

Describe an obstacle you have had to overcome in your research career thus far.

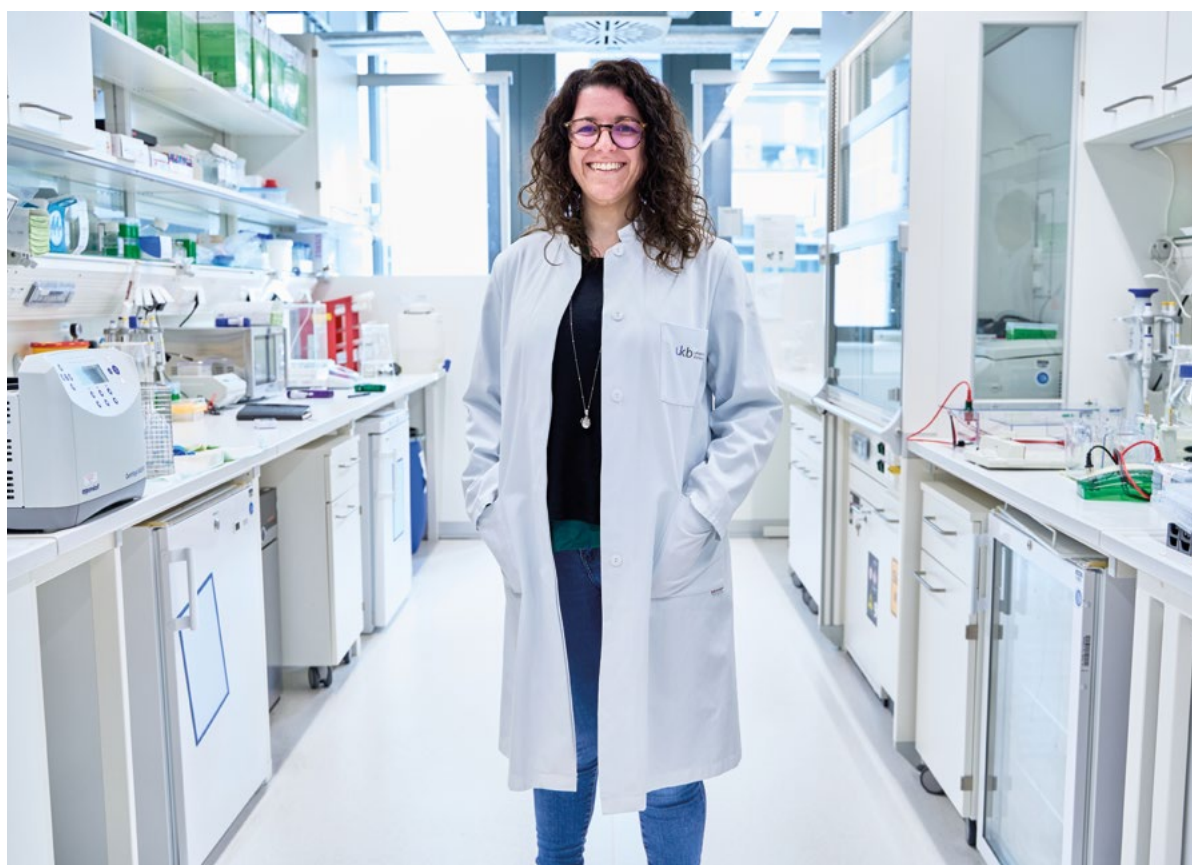
One of the biggest things to deal with in pursuing an academic career is the constant awareness of being on an arduous journey, and that reaching the desired destination is uncertain and in most cases will remain uncertain for a very long period of time. You have to truly

have a passion for your field, and you have to give it your all to succeed in an extraordinarily competitive environment, knowing at all times that you may never end up with making it in the envisioned career. You have to win the mind game to keep fighting the good fight as an “early-career academic”—to keep your spirits up and your motivation and feelings intact.

What would your advice be to women interested in a career in academia?

It is extremely important for women in particular to build up a robust network of contacts. I have benefited a lot from university mentoring and grant programs designed for female researchers early in their careers. Women in

academia become “thick-skinned” of a necessity, especially those who have children. Female academics, and especially those in prominent positions, have to deal with incessant messages that whatever they do is “not enough”—not enough time for research, teaching, parenting and family. These messages come from outside as well as inside, through deep-rooted convictions stemming from our socialization. Programs like STEP provide valuable support, and when I was starting out, it was also a major help that an additional position was created. This relieved me of heavy workload, and the postdoc hired contributed significantly to the planning and execution of third-party funded projects.



Dr. Laura Surace

Dr. Laura Surace works at the Institute of Clinical Chemistry and Clinical Pharmacology (ICCCP) at the University Hospital, conducting research on tumor immune metabolism. Her work investigates the specific metabolic properties of tumors arising in different tissues, and how diet and lifestyle influence metabolic processes.

How did you get into academia?

I have always loved biology. I view it as a privilege, being able to study how the body works, possibly discovering things we don't currently know. Every day, theoretically, I can discover something new that no one has seen before, and it could prove to be important information for the scientific community and benefit the health of people all over the world. Being a

scientist means serving the community to me. We work towards better understanding how our bodies function and how we can improve the health of everyone. Despite the challenges that come with a scientific career, the journey is worthwhile. I consider myself fortunate to pursue this profession because my research work truly matters to me.

Describe an obstacle you have had to overcome in your research career thus far.

There are definitely challenges for women pursuing a career in academia, which for many years was unquestionably “a man’s world.” Things have gotten much better, thanks to many incremental changes, but more change is necessary to realize true equality and a fair playing field. Bridge funding available under the STEP program kept me financially afloat in the time between

my postdoc fellowship and being employed in the position of group leader. During that time I achieved initial research results and landed a competitive grant from German Cancer Aid (Deutsche Krebshilfe), which has enabled me to open my own lab already.

What would your advice be to women interested in a career in academia?

My advice to women and men would be: never give up, and believe in

yourself. The academic world needs people who are inquisitive and dedicated to understanding more about phenomena in the world around us. Such individuals are crucial for science to thrive. A career in academia is fraught with obstacles, but the very best things in life often require the most effort and determination!



Photos: Gregor Hübl

Prof. Dr. Jing Zeng

Prof. Dr. Jing Zeng works at the Institute of Finance and Statistics (IFS). She conducts theoretical analyses of institutional interaction within the financial system in order to understand observed, real-world market outcomes and derive policies that enhance financial system efficiency and stability.

How did you get into academia?

I love the idea of conducting research: continuously searching for the ultimate truth and potentially accomplishing something of lasting impact and benefit for society. Wherever my research may lead, the work itself de-

mands and promotes critical thinking and creativity. It is very intellectually stimulating and rewarding.

Describe an obstacle you have had to overcome in your research career thus far.

The transition was highly challenging from postdoc to conducting independent research as an assistant professor responsible for my own research agenda. I did a lot of exploring along the way, and the great researchers I met who became my mentors enabled me to find a path that is optimal given my skills and research interests, and a research area in which I am able to make contributions. This empowered me to reach the next level in my

academic career, of associate professor, with a STEP program grant.

What would your advice be to women interested in a career in academia?

The most important thing for women in academia is being sure of your interests—where your research passion lies. As long as you believe in your work, external factors don’t matter. There is always a way to navigate through the process to reach your goal. Research can be a lonely pursuit at times, and your passion and conviction are the things that will guide your steps when confronting those feelings.

TANJA KÜHN-SÖNDGEN



Infos zu STEP



Photo: Volker Lannert

Tweaking Every Tiny Dial

How the energy crisis has helped uncover potential savings

Few people will forget 2022 in a hurry. The Russian invasion of Ukraine and the disruption it caused to the supply of raw materials sparked real fears of a severe energy shortage. Like many, the University was also forced to take action. It drew up an energy strategy that identified areas where savings could be made. Now the first figures have been released, showing how successful this has been.

▲ Annika Veith and technician Jörg Radzey from the Energy Management Unit in front of a heating system.

“We really did expect the worst,” remembers Prof. Dr. Waldemar Kolanus, Director of the LIMES Institute. He and his colleagues conduct interdisciplinary basic research in biology and biomedicine. When discussions began, he said, they were worried about what would happen to the institute’s mice if there was a genuine energy shortage and the animals’ air conditioning and ventilation systems shut down. “So we made initial arrangements with our colleagues at the University Hospital Bonn to set up a kind of ‘Noah’s Ark’ project and keep at least some animal lines inside it.”

Although this plan fortunately never had to be put into action, saving energy has been an important duty for the whole University ever since. It has set itself the ambitious goal of reducing its consumption by at least 20 percent without affecting research or teaching. The main focus is on 40 University buildings, because they account for almost 80 percent of the energy consumed. They include the University Main Building and the Bonn University and State Library (USL) as well as research buildings with extensive ventilation and air conditioning systems, high-tech equipment and cryogenic freezers.

Annika Veith is Head of the Energy Management Unit at the University and has spent the past few months touring a lot of buildings. She is heading up one of seven energy teams made up of heating, air conditioning, electrical and energy management experts that are supporting the departments and institutes with their efforts to make savings. “Of course, we had no idea at the start how well the measures we were suggesting would work,” she says, looking back.

Reducing energy consumption by 20 percent means a not insignificant 17 or so megawatt-hours of energy to be saved between December 2022 and November 2023. “If you were to use this energy to power an electric vehicle, you’d get about 2,200 times round the Earth,” Veith explains, putting the figure into perspective. She is therefore all the more delighted that the measures have already proved highly successful. “In the first two months since we began measuring, we’ve already saved around 6.7 megawatt-hours by all pulling together,” which is a very good result in her view.

At the LIMES Institute, it was mainly the sterilization machines—known as autoclaves—that consumed massive

amounts of gas. This is because a lot of gas is needed to make steam and apply constant pressure, and the institute cannot achieve any reproducible results from its research without sterilizing cages and fluids.

“Personally, I was amazed by how much we can save and what actually consumes the most energy,” Kolanus reports. Together with the energy team, a solution was found for this problem that was both surprising and very straightforward in principle. “Working closely with colleagues from Technical Services, who carried out a systematic inspection of the equipment, it turned out that we’d been heating the boilers much more than we actually needed to,” he says.

This was something that had not occurred to them in the past, he admits, because their energy footprint had not been so important in the days of low gas prices. It was therefore possible to eliminate this excess consumption by optimizing the regulation of steam pressure. This enabled the institute’s gas consumption alone to be cut by some 20 percent in December and January compared to the previous five years, all without affecting productivity.

► Cornelia Löhne is standing in the rainforest greenhouse with master gardener Patrick Bartsch, who is responsible for the heating system.

In the foreground is one of the heating elements that provides the tropical temperatures.



Photo: Gregor Hübl

Cornelia Löhne, the curator of the Botanic Gardens, is also astonished by the massive reductions that have been achieved over the past few months. Together with teams of gardeners and technicians, they started with taking a closer look at the valuable and rare plants in the greenhouses, and determined their precise origin. “We realized that most of the plants in the rainforest greenhouse should be able to withstand a temperature that was six degrees cooler,” Löhne explains. The once hot and humid greenhouse is now a cool 19 degrees Celsius, the same as the University’s offices.

“Although it doesn’t feel as tropical any more, the plants have been handling the change in temperature well so far, and we’re confident they’ll make it through the winter,” Löhne says.

She reveals that this and other measures combined helped to save an impressive 22 percent in heating energy in the garden in December and January. “Needless to say, we’ll keep things as they are if the plants continue to thrive well in the medium term,” the expert adds. She says that the results are encouraging her and her team to find more

areas where savings could be made. These include the old greenhouses, some of which are only single-glazed, although this will take somewhat longer to do.

For University Provost Holger Gottschalk, it is precisely this focus on additional potential energy savings that is particularly important during this phase. “The savings made so far represent a fantastic success and couldn’t have been possible without everyone doing their bit.” The amount of energy saved on heating has been especially impressive in his view: some buildings, such as the USL, have reduced their energy consumption by roughly 50 percent in this way. “Now, however, it’s important not to ease off and to try some new approaches in the warmer months, particularly on the electricity front—by fitting solar panels, for instance,” Gottschalk says. “We’re keen to get the most out of other options here.” This is important not only during the major crisis, he says, but also for the sustainable development of the University.

As far as Anika Veith is concerned, the results achieved so far are the product of real teamwork. “We were only able to be this successful because our priorities were focused clearly on this issue.” According to Veith, not only the 20 colleagues in the energy teams but also their contacts in the departments and institutes had been extremely dedicated and had suggested some very creative and effective measures. “So I’m optimistic that we’ll meet our energy saving target this year.”

NILS SÖNKSEN

▼ Prof. Waldemar Kolanus in front of one of the large sterilization machines, a so-called autoclave.



Photo: Gregor Hübl



Photo: Barbara Frommann

How the Right Mindset Helps Students Overcome Anxiety

Quickly read to the end of your chapter, summarize the slides from your lecture, then pop to the shops, cook some dinner and put together a learning plan for your next written examination. The daily life of a student can often be highly stressful and demanding. But what happens when things get too much? When stress and strain boil over into anxiety? Many students are afflicted by a fear of failure, exam anxiety and self-doubt or even depressive moods. The Central Study Advisory and Counseling Service is there to show students that they are not alone.

“There are many sides to exam anxiety,” says Claudia Kerp, a qualified psychologist and one of the three psychologists in the Central Study Advisory and Counseling Service to have completed additional training in psychotherapy. To solve individual problems, she believes, it is important to drill down into the details of their personal situation and the background to it. Is it preparing for the exam that is the challenge? Is it the exam itself? Or is the problem a combination of the two? A student’s attitude to an upcoming exam and to their own abilities would appear to play a key role, because doubts and fears increase our stress levels even further.

How do you cope with problems like these? One way is to write down what you yourself would like to change and then do something about it, such as forming a study group, improving your time management, highlighting the progress you have made, and working on your own style of thinking and the image that you have of yourself. You should also not forget to set aside time for social contact and relaxation in your daily routine.

The Psychological Counseling team at the University of Bonn offers targeted support in the form of coaching sessions and workshops and helps students to devise new coping

strategies. Every semester, small groups meet with a psychological counselor to explore issues such as increasing self-esteem, time management and procrastination as well as dealing with exams. “The group discussion soon makes it clear to students that they’re not alone,” says Kerp with confidence.

One-to-one sessions open up new perspectives

As well as group-based coaching and workshops, students can also arrange a one-to-one consultation with a counselor to get support in order to see things from new angles or learn how to



Photo: Volker Lannert

► The psychologists from the Central Study Advisory and Counseling Service who have completed additional training in psychotherapy and who support students with anxiety: Claudia Kerp, Laura Neufeldt-Homolka, Anne Zilligen (PP)

deal constructively with stressful situations. If none of this helps, psychotherapy is always an option. “We can also give them advice on finding a psychotherapy session,” Kerp says. All psychological counseling services at the University are free.

All the consultations are tailored to the student’s individual needs as there is no one-size-fits-all solution. “Analyzing the student’s individual exam situation tells us what precise aspects are causing them difficulties. By working together, therefore, we find out their strengths, which they will be able to make targeted use of in the future. This allows us to identify potential solutions just for them that the students can try out as part of their daily routine and develop further.”

Claudia Kerp knows from experience that a coaching session or workshop really can help students. As well as working on your mindset and alternative coping methods, however, she also believes that taking time out to recharge your batteries is important. This is because exam situations are actually easier to tackle if your mind has been refreshed and strengthened.

JULIA DOBRJANSKI

Five tips for a better mindset: :

1. What has worked well?

Ask yourself what exam strategies have already been successful and what you still need to change

2. Visualize your progress

This will show you how well you are doing.

3. Start early

Breaking your learning up into smaller chunks with enough of a time buffer between them is better than a huge mountain of things to learn.

4. Set up a study group

Mutual support and having other people to talk to often makes learning easier.

5. Do some sport and meet up with friends

Relaxation and activities will help you achieve a healthy work/life balance.

Current services

The “Reboard Your Study Life” workshop series helps students to improve their skills and abilities with lasting effect and strengthen their own resources. The series will continue in summer semester 2023 with the title “RessourcenStark durchs Studium” (“Sail Through Your Studies with Strong Resources”).

uni-bonn.de/en/studying/consultation-and-service/central-study-advisory-and-counseling-service/reboard-your-study-life

Coaching is provided on exam anxiety and stress. This consists of an intensive in-person workshop, an e-learning module and two online follow-up sessions and focuses mainly on individual strategies for dealing with exam anxiety and related stress. The coaching is designed to help students in a targeted way to look at old, unsuccessful habits in a new light and come up with some new methods. More details of the services offered by the Psychological Counseling team:

uni-bonn.de/en/studying/consultation-and-service/central-study-advisory-and-counseling-service/central-study-advisory-and-counseling-service



Tracking Down the “History of Ideas and Intellectual History of our World”

Dr. Holger Aulepp discovered his passion for Ancient Hebrew—and is now helping students make excavation trips and research visits to Israel



Photo: Volker Lannert

As a senior physician at a rehabilitation clinic at the Nordseeklinik Borkum hospital, Dr. Holger Aulepp looked after patients with chronic skin conditions and allergies. Following his retirement, he finally found time to devote his attention to Protestant theology—and also began funding archaeological trips for students out of his own pocket. This engagement was made permanent last year with the establishment of a foundation trust under the umbrella of the University of Bonn Foundation.

Holger Aulepp's journey to setting up a foundation started back when he was a young man. The desire to study theology one day grew in him even while he was settled in his career. He was fascinated by the view of the discipline as “the history of ideas and intellectual history.” For family reasons, he concentrated on learning Hebrew before embarking on a degree, doing so here in Bonn, his alma mater. “I had a really fantastic time studying here,” says the now 79-year-old, remembering his student years during the 1960s. “New areas of knowledge have been opened up to me to this day, especially in the natural sciences,” says Aulepp. This includes a lecture on experimental physics given by the spirited Professor Paul, who would go on to win a Nobel Prize, as well as in botany, zoology, chemistry, physiology and physiological chemistry.

Boning up on vocabulary and grammar all over again in one's mid-60s is no

easy task. In fact, it is almost an adventure: in Dr. Axel Graupner, a theologian at the University of Bonn, he found someone to teach him Biblical Hebrew and explain the background to the texts of the Hebrew Bible. His lessons would go on to become regular weekly joint study sessions taking in nearly all the books of the Hebrew Bible. “As well as being a big challenge for me, it was also—and in particular—a great intellectual experience. It opened up a whole new world for me, and that has stuck with me right up to the present day,” says Aulepp in conclusion.

But Aulepp was not only interested in studying. When he had the opportunity to make his first trip to Jerusalem alongside Dr. Graupner in 2013, the pair visited the archaeological dig at the fortress of Azekah. It proved a formative experience, one that he also wanted to make available to other students in Bonn. Unfortunately, no German institution of-

ferred public funding for trips of this kind. Aulepp took matters into his own hands and began financing trips for students.

The only unusual aspect was the condition that he imposed: aside from a good grounding, the students would also gain insights into the various facets of modern archaeology, of course, and would be able to work on digs themselves under supervision. But half of the student's time would be set aside for discovering the country—looking around museums, taking trips to other excavated ancient cities and the Judean desert, plus an obligatory visit to the Yad Vashem memorial and the fortress of Masada.

As far as he was concerned, the two aspects—the technical element and everyday cultural life—are inextricably linked. “Besides learning the basics of practical archaeological work, students should also get a good impression of the material conditions and unique landscapes that have shaped the region's history and its events, which form the essential subject matter of their discipline,” Aulepp says.

Through his foundation trust, established in summer 2022 under the aegis of the University of Bonn Foundation, he enables students to spend a good amount of time conducting research on site, accompanying excavations and exploring museums. Since this is one of the ideas underpinning the foundation, it is geared toward those who are just beginning to grapple with theology in an academic context, i.e. the students in the Faculty of Protestant Theology at the University of Bonn.

But why seek to support students in the first place? “My main motivation for setting up the foundation is gratitude,” Aulepp reveals. “Gratitude for being able to study human medicine at this University and for my later studies of the Hebrew Bible over many years spent conversing with Dr. Graupner. I'm delighted that the foundation is now becoming a reality.”

◀ After setting up the foundation: Antonia Streit, General Manager of the University of Bonn Foundation; Prof. Dr. Cornelia Richter, Dean; Dr. Holger Aulepp; and Prof. Dr. h.c. Michael Hoch, Rector of the University

SEBASTIAN ECKERT

Awards for Distinguished Early-Career Researchers



Photo: Harkabir Singh Jandou

KfW Early-Career Researcher Prize

KfW Development Bank and the Development Economics Committee of the economics association Verein für Sozialpolitik have presented awards to three early-career researchers for their work in the field of Development Research. The Early-Career Researcher Prizes are bestowed in recognition of distinguished doctoral theses demonstrating academic excellence which furthermore evidence particular practical relevance. Second Place prize was earned by Dr. Pallavi **Rajkhowa** for her doctoral thesis on the far-reaching developmental potential for

digitalization in India, written at the University of Bonn. Her work was recognized by the Development Bank and the Committee at the 13th awards ceremony, held as part of the Committee's annual conference in Hohenheim. In her work Dr. Rajkhowa studied the effectiveness of personalized digital advice for small farmers, demonstrating that these services do increase yield and promote diversified production. Her research also demonstrates how mobile phone access can increase non-farming employment opportunities, promoting gender equality.



Photo: Webasto Group

Webasto makeathon

How can sensor data be used to make autonomous driving better? This was the question investigated by Leif **Van Holland** (University of Bonn) working in collaboration with Lukas **Harrer** (University of Applied Sciences Upper Austria), Marc **Wagner** (Ulm University of Applied Sciences) and Richard **Kollert** (Furtwangen University) at a makeathon organized by automotive supplier Webasto that took place at the Impact Hub in Munich. Some 30 students and graduates from all over Germany took part in the competition devoted to exploring the uses of roof sensor data. The winning team came up with solutions for identifying specific factors through the extensive use of sensor data. Webasto will be able to use this solution to optimize the functionality of the roof system for autonomous driving. "I tried to apply what I have learned in my studies. The teams were randomly assembled and each team assigned a task. It was challenging, because you have lots of data

but not enough time to check and automate everything. So we had to identify characteristics of interest to analyze, particularly characteristics from vector data generated by the depth sensors, in order to distinguish between motion and non-motion data, for example," Holland explains, who is doing his doctoral dissertation on "physically interpretable 3D reconstructions for human-robot interaction". The judges panel concurred that this work is valuable: "The individual strengths of the different members were combined particularly well in this team, which succeeded in coming up with a faster, more effective solution affording direct benefit from roof sensor module data. Strong teamwork between the four members and a compelling presentation impressed the judges on all points," as Michael Hülsen of Webasto explains, who is Director of Product Management for roof sensor modules. The prize comes with a purse of 2,000 euros for the team.

Recognition by the Radiological Society of North America

Dr. Alexander **Isaak**, Dr. Alexander Isaak, Assistant Physician at the Radiology Clinic of University Hospital Bonn (UKB), was recognized for his research on Broken Heart Syndrome at the world's largest radiology conference, held by the RSNA (Radiological Society of North America). New findings from Quantitative Imaging Lab Bonn (QILaB) at University Hospital Bonn will enable more accurate prognoses for patients. 'Broken heart syndrome', also known as Takotsubo syndrome and stress cardiomyopathy, is the sudden onset of a heart muscle condition triggered in most cases by an emotionally stressful event. "While much about the phenomenon remains unclear, we now know that broken heart syndrome is a potentially life-threatening condition that occurs predominantly in women, typically as a result of major emotional stress, such as the loss of a loved one. An increased number of patients with this syndrome were treated at University Hospital Bonn following the flood disaster in the nearby Ahr Valley; these were individuals who had suffered serious losses," relates Dr. Alexander Isaak, who conducts heart muscle research at the QILaB of University Hospital Bonn. For his research on broken heart syndrome Dr. Isaak received the RSNA Trainee Research Prize from the Radiological Society of North America in the category of Cardiac Imaging, with a purse of 1,000 US dollars.



Photo: Rolf Müller / UKB

Mario Markus Prize for Ludic Sciences

The first-ever Mario Markus Prize for Ludic Sciences to be awarded went to Christoph **Schürmann** and Prof. Dr. Carsten **Urbach** of the University of Bonn and Dr. John **Ostmeyer** of the University of Liverpool in the UK. This three-man team of researchers scientifically studied the motion of beer mats in flight. The prize is awarded

by the German Chemical Society (GDCh) with a purse of 10,000 euros in recognition of scientific work of a fun-oriented nature in the natural sciences. The judges panel honored the award winners' playful approach to a complex matter, obtaining intriguing insights in the process.

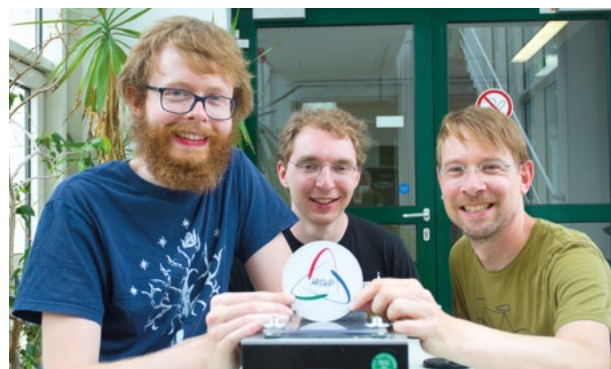


Photo: Gunar Peters

Bayer Pharmaceuticals Doctoral Award

The German Society for Biochemistry and Molecular Biology (GBM) has recognized Bonn-based early-career researcher Dr. Inga **Hochheiser** as this year's recipient of the Bayer Pharmaceuticals Doctoral Award. A biochemist at the University of Bonn Institute of Structural Biology, Dr. Hochheiser earned the award for her research on the structure and function of an inflammation factor occurring in many chronic diseases. In her groundbreaking doctoral thesis Dr. Hochheiser successfully deciphered the three-dimensional structure of this protein and rendering the bond to an active substance that keeps the protein in an inactive state visible in atomic detail. Dr. Hochheiser's key breakthrough, reached through painstaking experimentation, was to visually render the protein through cryo-electron microscopy. The award comes with a purse of 1,500 euros.

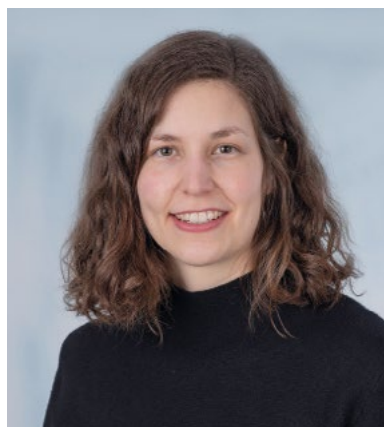


Photo: Rolf Müller / UKB

Whitehead-Preis der London Mathematical Society

Jessica **Fintzen**, Professor at the Mathematical Institute and member of the Hausdorff Center for Mathematics, has received the Whitehead Prize bestowed by the London Mathematical Society (LMS) for her pioneering work at the in-

tersection point between representation theory and number theory. Fintzen's research concerns 'p-adic' numbers, investigating how number theory, i.e. the mathematical theory of fundamental properties of numbers and equations, intersects with representation theory as the describing of symmetries through matrices. The Whitehead Prize is awarded annually by the London Mathematical Society to early-career mathematicians working in the UK. The award commemorates J.H.C. Whitehead, a founder of homotopy theory.



Photo: Petra Lein / CC BY-SA 2.0 de

Award for the DONALD study

At this year's Scientific Congress of the German Nutrition Society (DGE) held in Bonn, Dr. Maike Elena **Schnermann** was recognized for her poster presentation of the results of the Dortmund DONALD study. The DONALD study has been instrumental for the collection of data on nutrition, metabolism, health and lifestyle from infancy to adulthood since 1985. Dr. Schnermann started by creating an index for healthy living based on data on food consumption, physical activity/inactivity, sleep duration and body weight. Factoring in various lifestyle factors within an index is a valuable

scientific approach for viewing health more holistically than by considering individual factors in isolation, such as diet and physical activity.

Dr. Schnermann then studied possible connections between the level of this lifestyle index during adolescence in relation to the risk of incurring non-alcoholic fatty liver disease in young adulthood. Non-alcoholic fatty liver disease has become increasingly seen as a risk factor for various chronic diseases including type 2 diabetes, cardiovascular disease and cancer. A lower lifestyle index value in youth, it has been observed, is associated with increased risk of non-alcoholic fatty liver disease in adulthood, particularly for men. "It is possible that our female study subjects have a generally healthier lifestyle than their male counterparts," Schnermann notes. "Though of approximately the same age in our study, the risk reduction associated by adopting a healthy lifestyle was seen as twice that for men than for women." The study results also indicate that adolescents too can benefit from lifestyle improvements. Eating more vegetables and increasing physical activity are beneficial in particular.



Photo: Rudolf Benz

Introducing



Photo: Tobias Schwerdt

Prof. Dr. Frank Bigiel
The Faculty of
Mathematics and
Natural Sciences

Prof. Dr. Frank **Bigiel** was appointed to W3 position on June 28, 2022, and is now Professor of Radio Astronomy at the Argelander Institute for Astronomy. Professor Bigiel studied physics at the Rupprechts-Karls University in Heidelberg and earned a doctorate at the Max Planck Institute for Astronomy. Thereafter he was a CARMA postdoctoral fellow in the Astronomy Department of the University of California Berkeley for three years. He then returned to Heidelberg and as a Gliese Fellow at the Center for Astronomy before leading research groups funded by the DFG (Emmy Noether Group, German Research Foundation) and under an ERC Consolidator Grant (European Research Council). In 2013 he received the Ludwig-Biermann Award from the Astronomical Society as an early-career researcher, and since 2018 has been a tenure-track professor at the Argelander Institute of the University of Bonn. Professor Bigiel and his working group study the formation of galaxies and stars via modern radio telescope technology. Stars form out of interstellar gas and dust in a process from which all elements heavier than hydrogen and helium are created. The enrichment of galaxies with these resulting "heavy elements" represents the basis for the subsequent formation of planetary systems, giving rise to complex organic molecules and thus ultimately to life itself. Why some galaxies form stars much more efficiently than others, how these processes are regulated within galaxies and how they change in the course of the cosmic evolution of galaxies are the central questions investigated by the working group.



Photo: Katharina Wisperger

Prof. Dr. Simone Dohle
Faculty of Medicine

Prof. Dr. Simone **Dohle** has been W2 Professor of General Practitioner Health and Risk Communications at the Institute of General Practice and Family Medi-

cine since April 1, 2022. Professor Dohle studied Psychology at Julius Maximilians University of Würzburg and received her doctorate at the University of Zurich (UZH) in 2010. Before completing her habilitation at the University of Cologne in 2018, she was a postdoc and Senior Assistant at the Department of Health Sciences and Technology (D-HEST) at the Swiss Federal Institute of Technology Zurich (ETH Zurich). Thereafter she was Akademische Rätin (lecturer with civil servant status) at the Department of Psychology of the University of Cologne. She accepted the appointment at the University of Bonn while serving as interim professor of Medical Psychology in Bielefeld. Professor Dohle's research concerns communication strategies designed to better educate patients regarding health and health-related risk factors. She thus assumed leadership of the new working group General Practitioner Health and Risk Communications at University Hospital Bonn, and is working on setting up a Health and Risk Communication research lab at the Institute. One key focus of her research is the question of how communications can motivate people to adopt healthier lifestyles, specifically promoting corresponding behaviors. For example, one goal is to develop signage/display formats for use in the offices of general practitioners and specialists to communicate health risk factors. Risk communications encouraging individuals to obtain a personal consultation are also very important regarding prenatal diagnostics, vaccination, organ donation and hereditary diseases. Professor Dohle is also studying the use of eye tracking and augmented reality technologies in ongoing projects with researchers from the University of Newcastle, Australia and other institutions.



Photo: Ecki Raiff

Prof. Dr. Anke Grutschus
Faculty of Arts

Prof. Dr. Anke **Grutschus** has been W3 Professor of Romance Philology/French and Spanish Linguistics at the Institute of Classical and Romance Philology since August 1, 2022. Professor Grutschus earned an education degree with state teaching certification in the

fields of Romance languages and music education before working as editorial assistant for a magazine on French language and literature. She then worked as a research assistant at the Department of Romance Studies at the University of Cologne and was visiting researcher at the Département Musique of the Bibliothèque Nationale de France in Paris. From 2006 to 2009 she was a DAAD lecturer at the Institut d'Allemand d'Asnières at the Université Sorbonne Nouvelle. After completing her doctorate she was a research assistant in Cologne and Erlangen-Nuremberg, and in 2020 served as interim professor of Romance Linguistics in Regensburg. Most recently she served as Akademische Oberrätin a. Z. (senior lecturer with temporary civil servant status) for Romance Studies & Linguistics at the University of Siegen. Professor Grutschus' research concerns language change, Spanish and French prosody and linguistic variation, such as Argentinean Spanish and Swiss French. Her work furthermore extends to computer-mediated communication and the use of language in social media.



Photo: Lutz Kettner

Prof. Dr. Elvira Mass
The Faculty of
Mathematics and
Natural Sciences

Prof. Dr. Elvira Mass has been W3 Professor of Developmental Biology of the Immune System at the Life and Medical Sciences Institute (LIMES) since May 5, 2022. She studied Biology and earned a doctorate in Molecular Biomedicine at the University of Bonn. Professor Mass had worked at the LIMES Institute in Bonn as postdoc research fellow as well as King's College London and Memorial Sloan Kettering Cancer Center in New York. She then returned to the LIMES Institute as group leader for Developmental Biology of the Innate Immune System between 2017 and 2019. Thereafter she became tenure-track Professor of Integrated Immunology at the University of Erlangen-Nuremberg and Professor of Developmental Biology of the Immune System at the University of Bonn. Professor Mass is the recipient of several awards, including the Bayer AG PhD Thesis Prize 2014 and the Heinz Maier-Leibnitz Prize. In 2021 she received

the Young Investigator Award bestowed by the German Stem Cell Network (GSCN). Among other focuses her research concerns the development and functioning of resident macrophages, which are a diverse family of specialized innate immune phagocytes found in most tissues.

The latest research has shown that resident macrophages function as a kind of founder cell type in most organ primordia, developing in many organs during embryogenesis to support organ development and function. Professor Mass' work is aimed at gaining an understanding of how resident macrophages contribute to homeostatic functions during organogenesis, and also to disease processes, such as obesity and infections.



Photo: Prof. Dr. Christian März

Prof. Dr. Christian März The Faculty of Mathematics and Natural Sciences

Prof. Dr. Christian März has been W3 Professor of General

Geology at the Geosciences Institute since April 1, 2022. After studying Geology in Heidelberg, Professor März turned his attention to marine geochemistry, which is primarily concerned with understanding processes of chemical cycling (carbon, nutrients, metals, etc.) in the ocean and on the sea floor—both today and geo-historically through the analysis of marine deposits millions of years old. Understanding cycling allows reconstructing past environmental

conditions, and furthermore provides key insights in the contemporaneous contexts of climate change and the availability of various natural resources. After earning his doctorate in Bremen in 2008 and doing postdoc work in Oldenburg and Newcastle, Professor März went to the University of Leeds, where he conducted research and taught until recently. He has been on several research voyages, mainly in the high northern latitudes and the Arctic, which is the focus of his current research. Professor März is also active in the International Ocean Discovery Program (IODP), an international marine research collaboration in which German researchers have been heavily involved for decades.

Announcements

Central Research Units

On October 24, 2022, Prof. Dr. Bodo **Hombach** departed the office as President of the Bonn Academy for Research and Teaching of Practical Politics (BAPP), a private institute affiliated with the University of Bonn. In a panel discussion, Ministerpräsident Hendrik Wüst and other guests addressed the question-topical “Turning Point? Where Will We Be Five Years From Now?”. The presidential inauguration ceremony was held for former federal minister Prof. Dr. Sigmar Gabriel and Ministerpräsident a.D. and parliamentarian Armin Laschet. Prof. Hombach is now Honorary President of the Academy.

Dr. Vera **Traub** was appointed Assistant Professor (W1) of Discrete Mathematics at the Research Institute for Discrete Mathematics under a three-year contract starting September 1, 2022. Assistant Professor Dr. Vera Traub received the 2022 Richard Rado Award presented by the German Discrete Mathematics Section of the German Mathematics Society for her outstanding dissertation in the field. The Award is in honor of Richard Rado, whose research contributions to the field of discrete mathematics were fundamentally important, thus remaining relevant theory to this day. Introduced in 1998, the Award carries a 1,000 euro purse and is presented bi-annually to a recipient chosen by a prominent foreign mathematician. Jesús A. De Loera of the University of California made the decision choosing the doctoral

thesis by the Bonn-based assistant professor for the honor. For her doctoral thesis Professor Traub, a member of the Hausdorff Center for Mathematics (HCM), was recently also awarded the Maryam Mirzakhani New Frontiers Prize by the Breakthrough Prize Foundation. Addressing persistent questions around the Traveling Salesman Problem (TSP), the dissertation has been seen as groundbreaking in key aspects.

Faculty of Catholic Theology

Prof. Dr. Klaus **von Stosch**, Professor of Systematic Theology, was ordained as permanent deacon by auxiliary bishop Rolf Steinhäuser at the Church of St. Hedwig in Bonn. As deacon he now joins the pastoral team of the Parish of St. Thomas More in Bonn.

Dr. Stefan **Walser** was appointed Assistant Professor (W1) of Fundamental Theology and Christian Identities at the Seminary of Fundamental Theology under a three-year contract starting September 15, 2022.

Faculty of Law and Economics

Prof. Dr. Christian **Bayer**, Professor at the Institute for Macroeconomics and Econometrics, was appointed to the Gas Price Commission formed by the German Federal Government.

The term of the interim appointment of PD Dr. Catherine **Brei** as W2 Professor of Civil Law, International Private Law, Comparative Law and European

Private Law at the Institute for German, European and International Family Law was extended beyond the original date of September 30, 2022 until March 31, 2023.

Dr. Pavel **Brendler** was appointed Assistant Professor (W1) for Topics in Macroeconomics and Public Economics at the Institute of Macroeconomics and Econometrics under a three-year contract effective September 10, 2022, representing his second tenure track phase.

Assistant Professor Gönül **Doğan** was appointed interim W3 Professor of Applied Microeconomics at the Institute for Applied Microeconomics for the period April 1-September 30, 2023.

Prof. Dr. Lorenz **Götte** of the Institute for Applied Microeconomics resigned his W3 professorship effective November 30, 2022. He now works for the University of Singapore.

Dr. Thomas **Grosse-Wilde** was appointed interim W2 Professor of Criminal Law and Philosophy of Law at the Philosophy of Law section for the period October 1, 2022 to March 31, 2023.

Prof. Dr. Jens Koch of the Institute of Commercial and Economic Law resigned his W3 professorship effective September 30, 2022. He now works for the University of Cologne.

Dr. Hanna **Schwank** was appointed Assistant Professor (W1) for Climate Dynamics at the Institute of Macroeconomics and Econometrics under a three-year contract starting August 5, 2022.

Gossen Award for Christian Bayer



Prof. Dr. Christian Bayer has been honored with this year's Hermann Heinrich Gossen Award from the Verein für Socialpolitik (VfS) in recognition of his outstanding research work that has garnered international recognition. The €10,000 prize is awarded annually to a researcher in economics under 45 from a German-speaking country. Christian Bayer from the Institute for Macroeconomics and Econometrics and the Hausdorff Center for Mathematics Cluster of Excellence studies so-called heterogeneous agents from a variety of angles. For instance, different companies are affected by macroeconomic shocks such as financial crises, wars or pandemics in very different ways. This begs the empirically important question of how companies' responses to a shock differ. Among other things,

Professor Bayer has demonstrated just how varied this response is in terms of investment decisions.

Dr. Alexander **Wilhelm** is now interim Professor of Civil, Commercial and Corporate law (W2) at the Institute of Commercial and Corporate Law for the period October 1, 2022-March 31, 2023.

Dr. Donghai **Zhang** was appointed Assistant Professor (W1) of Macroeconomics at the Institute of Macroeconomics and Econometrics under a three-year contract starting January 4, 2023—representing his second tenure phase.

Medizinische Fakultät

Prof. Dr. Nicole **Ernstmann** of the Center for Internal Medicine and the Clinic and Polyclinic for Psychosomatic Medicine and Psychotherapy resigned her W2 professorship effective October 31, 2022. She now works for the University of Cologne.

Prof. Dr. Ulrich **Gembruch** was engaged under a self-substitution contract for the period from June 22, 2022 to March 31, 2023 as the Chair of Obstetrics and Prenatal Medicine (W3) at the Center for Obstetrics and Gynecology.

Prof. Dr. Frank **Giordano** of the Radiation Therapy and Radiation Oncology Clinic resigned his W3 professorship position effective at the end of September 2022. He is now a researcher at the Faculty of Medicine of Heidelberg University in Mannheim.

Prof. Dr. Dr. Søren **Jepsen**, Director of the Polyclinic for Periodontology, Tooth Preservation and Preventive Dentistry at University Hospital Bonn (UKB), became the first German national to receive the Distinguished Scientist Award from the European Federation of Periodontology (EFP) for his outstanding scientific achievements in the field of periodontology.

Faculty of Arts

In January 2023 PD Dr. Axel Bernd **Kunze** of the Bonn Center for Teacher Education (BZL) became a member of the newly constituted Advisory Board of the non-profit German Student History Association (GDS) and advisor to the Working Group of Student Historians (AKSt). Also this year he became an editorial board member for the new Academic Freedom Yearbook published by the Network for Academic Freedom, to appear annually starting in 2024.

PD Dr. Peter **Glasner** was appointed interim W2 Professor of Older German Studies with a concentration in Medieval German Literature for the period October 1, 2022-March 31, 2023, working in the Medieval German Studies section.

The W2 interim professorship appointment of Prof. Dr. Wolfgang **Hallet** is to be extended beyond September 30, 2022 until September 30, 2023.

Dr. Elena **Parina** was appointed Assistant Professor (W1) of Celtic Studies at the Department of English, American, and Celtic Studies under a three-year contract starting October 1, 2022.

Prof. Dr. Sabine **Sielke**, Professor of North American Literature and Culture at the Department of English, American, and Celtic Studies, continued her fellowship at the Institute for Advanced Study (Hanse-Wissenschaftskolleg) during the period September 1-October 31, 2022.

Dr. Henning **Türk** will be interim W2 Professor of Modern History at the Department of History during the period April 1, 2023-September 30, 2023.

Faculty of Mathematics and Natural Sciences

Dr. Martin Baunach was appointed Assistant Professor (W1) of Pharmaceutical Biology at the Institute of Pharmaceutical Biology under a three-year contract starting September 1, 2022.

Prof. Dr. Karl Heinz **Erdmann**, honorary professor at the Faculty of Mathematics and Natural Sciences, has been confirmed by the Board of Trustees of the North Rhine-Westphalia Foundation for Nature, Homeland and Cultural Conservation for another five-year term as honorary member of the Foundation board. Professor Erdmann thus co-directs the largest such state foundation in the Rhine, Ruhr and Weser river region along with five other experts in monument preservation, nature conservancy and administration.

Dr. Alexander **Follman** was appointed interim W2 Professor of Earth Science at the Geosciences Institute for the period March 1-March 31, 2023.

Prof. Dr. Massimiliano **Gubinelli** was on leave of absence between September 1 and November 30, 2022, working at the University of Oxford. He also voluntarily resigned as W3 professor at the Institute for Applied Mathematics effective at the end of November 2022.

Prof. Dr. Franca **Hoffman** of the Institute for Applied Mathematics voluntarily resigned as her W2 professorship effective November 30, 2022. She now works at the California Institute of Technology (Caltech).

Prof. Dr. Georg **Oberdieck** of the Hausdorff Center for Mathematics (HCM) voluntarily resigned his W2 professorship effective January 31, 2023. He now works at the KTH Royal Institute of Technology in Stockholm.

The 2022 Sigrid Peyerimhoff Prizes

Bonn University Foundation presented the 2022 **Sigrid Peyerimhoff Prizes** to Annika Marie **Krüger** and Dr. Philip **Pracht**—early-career researchers in the Department of Chemistry. Annika Marie Krüger received the Sigrid Peyerimhoff Recognition Award for her outstanding master's thesis, rated best in her class. Krüger's project in the paper titled "Investigation of the antimicrobial mode of action of Teixobactin on biomimetic membrane model systems" was to biophysically characterize the antibacterial action of Teixobactin. The thesis represents a valuable contribution in the field of Physical Biochemistry. The prize came with a purse of 2,000 euros. The Sigrid Peyerimhoff Research Award with

3,000 euro purse went to Dr. Pracht for his work titled "Calculation of absolute molecular entropies and heat capacities made simple", in which he has made a fundamental contribution to the science of Chemistry generally. Since earnings his doctorate Dr. Pracht has been working at the University of Cambridge under a Feodor Lynen Research Fellowship from the Humboldt Foundation.

Faculty of Agriculture

Dr. Christian **Baccarella** was appointed interim W3 Professor of Agribusiness Innovation and Management at the Institute for Food and Resource Economics (ILR) for the period October 1, 2022-September 30, 2023.

Dr. Agim **Ballvora** was appointed interim W3 Professor of Plant Breeding at the Institute of Crop Science and Resource Conservation (INRES) for the period December 8, 2022-July 16, 2023.

The leave of absence of Prof. Dr. Frank **Ewert** of the Institute of Crop Science and Resource Conservation (INRES) was extended beyond December 31, 2022 through the date February 28, 2026 so that he can assume the office of Scientific Director at the Leibniz Center for Agricultural Land Research (ZALF).

The interim appointment of Dr. Thomas **Gaiser** as W3 Professor of Plant Cultivation at the Institute of Crop Science and Resource Conservation (INRES) was extended beyond December 31, 2022 through the date February 28, 2026.

Dr. Daniel Hermann was appointed Assistant Professor (W1) of Digital Circular Economy Management at the Institute for Food and Resource Economics (ILR) for under a three-year contract starting October 1, 2022.

Prof. Dr. Theo **Kötter** was engaged under a self-substitution contract for the period September 1, 2022-August 31, 2023 as W3 Professor of Urban Planning and Land Management at the Institute of Geodesy and Geoinformation. He has held this professorship since March 2003.

Dr. Dominic Lemken was appointed Assistant Professor (W1) of Socioeconomics of Sustainable Nutrition at the Institute of Food and Resource Economics (ILR) under a three-years contract starting December 1, 2022.

Dr. Suzanne **Plattes** was appointed to Akademische Oberrätin (senior lecturer with civil servant status) position effective September 22, 2022. In her previous position she was Akademische Rätin (lecturer with civil servant status) at the Faculty of Agriculture.

Prof. Dr. Daniel **Wallach** of the Institute of Crop Science and Resource Conservation (INRES) – PhenoRob Cluster of Excellence will serve as Distinguished Professor Emeritus for the period October 1, 2022-September 30, 2024 with a teaching load of 2 hours per week during the lecture period.

Guests invited by the Alexander von Humboldt Foundation

Dr. Juan Eduardo Villanueva Criales, Other Classical Studies, Museo Nacional de Etnografía y Folklore, La Paz, Bolivia, Humboldt Research Fellowship for Experienced Researchers, Host: Prof. Dr. Karoline Noack, Department of Archaeology and Cultural Anthropology

Obituaries

Andreas **Blasius** passed away on January 15, 2023 at the age of 55. Andreas Blasius played an important role in establishing the Egyptian Museum in Bonn in close cooperation with founding director Ursula Rößler-Köhler. He was a founding member and the first chairperson of the donors association. Andreas Blasius earned his Magister degree in Ancient History in December 1995, and worked at the Bonn Collaborative Research Center 534: "Judaism - Christianity". Historical and Contemporary Constitution and Differentiation Processes" (07/1999-06/2003). His research field was Hellenism, concentrating on the Ptolemaic/Seleucid period; the meticulous, detailed work he did spanning eras and geographies from Pharaonic Egypt to Roman Britain evidenced broad knowledge and analytical clarity. He was internationally respected and had strong research contacts thanks in part to substantive contributions at numerous local, national and international conferences and workshops concerning ancient history, theology, classical archeology and Egyptology. He was an avid collector, and the museum benefited from his numismatic or coin expertise in particular. He was an enthusiastic and inspiring teacher who held very popular courses regularly for many years on Ptolemaic and Roman Egypt, Roman Britain and pharaonic Egyptian history.

Prof. Dr. Helmut **Fichsel** passed away on December 24, 2022, aged 92. Born in 1930 in Rudolstadt, Thuringia, Professor Fichsel studied at Heidelberg University and elsewhere, earning a Doctorate of Medicine degree in 1955. That same year he joined the University of Bonn Faculty of Medicine, working and

conducting research in pediatrics; in 1968 he became Senior Physician. He was Head Neuropediatrician at the Pediatric Center of University Hospital Bonn and Professor of Paediatrics between 1980 and 1995. He continued attending faculty events after his retirement, which he enjoyed and liked to support. A co-founder of the Neuropediatrics Society, Professor Fichsel enjoyed a considerable reputation in the field of pediatrics. The numerous awards he received include the Alfred Hauptmann Prize for his work on epilepsy, and in 1997 the Cross of Merit on ribbon. His passion for his work and his commitment to teaching and research earned him great respect among colleagues, staff and students.

Prof. Dr. Dieter **Hänssgen** passed away on February 24, 2023, aged 86. Professor Hänssgen retired in 2001 as Professor of Inorganic Chemistry. He was born in Tokyo, where his family had moved for his father's employment. When his father died after the end of the Second World War, his family was deported to Germany. He passed the university entrance exam in Jena in 1954. Then after fleeing to West Germany, he enrolled at the University of Bonn for the winter semester of 1957/58. In 1966 he graduated with a Chemistry degree, then earned a doctorate summa cum laude at the Institute of Inorganic Chemistry in the research group of Prof. Dr. Rolf Appel. His doctoral thesis was on organic-element sulfur-nitrogen compounds, for which he received the Doctoral Award presented by the Universitätsgesellschaft Bonn - Freunde, Förderer, Alumni e.V. (UGB). He earned his post-doctoral habilitation in 1974 with a doctoral thesis on "Organostannane reactions with sulfur and sulfur-nitrogen compounds", and was named Adjunct Professor in 1982. Professor Hänssgen worked at the University of Bonn for more than 35 years as researcher and lecturer, during which time his work on the organic-element chemistry of sulfur, nitrogen and tin became a key contribution toward understanding the synthesis and reaction behavior of this class of compounds. During this career he furthermore also played a significant role in the relocation of the Chemistry Institutes from Poppelsdorf to the facilities at Gerhard-Domagk-Straße. As lecturer Professor Hänssgen contributed substantially to designing the core chemistry curriculum in Bonn over the course of decades, as well as courses relevant for students of Medicine, Pharmacy and Biology. He was always there for students to turn to for questions and advice.



▲ Award ceremony at ZEF of the University of Bonn: Prof. Dr. Louise O. Fresco received the Justus von Liebig Prize for World nutrition of the fiat panis, presented by Dr. Andrea Fadani, Executive Member of the Board (right).

Award of the Justus von Liebig Prize for World Food at ZEF

For outstanding achievements in the fight against hunger and rural poverty, the fiat panis foundation has awarded the Justus von Liebig Prize for World Food for the seventh time. Most recently, it went to the Dutch agricultural and nutrition expert Prof. Dr. Louise O. Fresco.

The award ceremony took place at the Center for Development Research (ZEF) at the University of Bonn. Fresco gave a lecture there on the topic „Where Are We in Understanding World Hunger“ - as part of the Distinguished Lectures Series of the Transdisciplinary Research Area „Sustainable Futures“.

Prof. Dr. med. Karlfried **Karzel** passed away on June 12, 2022, aged 92. Professor Karzel worked at the Pharmacological Institute of the University of Bonn for over 35 years. He studied Medicine at the Universities of Freiburg and Bonn, with concentrations in pharmacology and toxicology. He earned his doctorate at the Pharmacological Institute in Bonn in 1957. He did a shorter research stay in Edinburgh before completing his post-doctoral habilitation in 1965, and in 1970 was appointed professor at the Pharmacological Institute, where he worked until 1994. He had numerous publications of papers in prominent scientific journals, and demonstrated outstanding didactic competency as a speaker at national and international conferences.

Prof. Dr. med. Klaus **Mohr** passed away on December 22, 2022, aged 69. Professor Mohr was known one of Germany's most distinguished professors of Pharmacy. He studied medicine from 1972 to 1978 at the University of Kiel and earned his doctorate in 1979, advised by Prof. Heinz Lüllmann. From 1980 to 1988 he was a research assistant and then senior assistant at the University of Kiel Institute of Pharmacology, where he gave lectures. He completed his post-doctoral habilitation in 1988. In 1992 he was appointed Professor of Pharmacology and Toxicology at the Pharmacy Department at the University of Bonn Faculty of Mathematics and Natural Sciences. Professor Mohr was widely known for his didactic and lecturing competency, able to convey complex subject matter in an easy-to-grasp way. He co-wrote the "Pocket Atlas of Pharmacology", which has been translated into very many different languages, together with his academic mentor Prof. Lüllmann and colleague Alb-

recht Ziegler. From 2001 to 2010 he was spokesman of the DFG-funded Collaborative Research Center titled "Structure and molecular interaction as the basis of drug action", from 2003 to 2012 he served as Dean of Studies of the University of Bonn Faculty of Mathematics and Natural Sciences, and from 2004 to 2007 he was Secretary General of the German Pharmaceutical Society. He retired from the University of Bonn in 2015 for health reasons.

Günter **Muhr**, former manager of the University of Bonn Machine Shop 4.3. in Bonn-Poppelsdorf, passed away on February 1, 2022 in Bonn-Bad Godesberg, shortly before his 82nd birthday. Günter Andreas Muhr was from Gielsdorf near Bonn; he joined the University of Bonn administration after many years working in the private sector. He was put in charge of the machine shop in Bonn-Poppelsdorf 1980, with responsibility for the many associated Shop teams and their branch shops at the institutes (in central Bonn and the Venusberg location). In his previous career he had mainly worked on large projects in the Cologne area as an independent contractor. He served in this capacity, working reliably and conscientiously, for over 25 years, until his retirement in 2001.

PD Dr. Alheydis **Plassmann** passed away on November 28, 2022 in Bonn at the age of 53. Dr. Plassmann was a member of the Department of History, active in the Early Modern History and Rhenish Regional History sections. She studied history, philosophy, Celtic studies and Welsh history in Bonn, Freiburg and Aberystwyth and received her doctorate in Bonn in 1997 with a dissertation titled "Structure of the Court of Frederick I Barbarossa, According to the German

Witnesses on his Deeds". She then completed her post-doctoral habilitation in Bonn with a paper on "Identity and Legitimacy in Early and Late Medieval Origin Stories" in 2004. Her core research area was history of historiography, and she was also a scholar of German and British medieval history. Her work earned substantial international acclaim, and she was active in the field of diplomacy, employing data mining techniques to study deed practices of Henry II of England regarding his continental possessions. Her research and teaching focused increasingly on Cologne-related topics that served to keep up the Rhenish tradition of maintaining strong ties between Cologne and England. She was a research assistant at the Department of History for 27 years and was an active member of the CRC Power and Hegemony, the Center of Power and Hegemony studies, the Bonn Medieval Center and the Present Past TRA. She was a primary decision-maker for one of the leading regional history journals as co-publisher and editor of the Rheinische Vierteljahrsblätter (Rhenish Quarterly Journal). Dr. Plassmann furthermore served as Gender Equality Officer on numerous appointment committees, where her dedication and contributions were greatly esteemed—as they were in other contexts, including teaching. Dialogue and interaction with students was very important to her. During the last weeks of her life she carried on correcting papers from the summer semester, determined to correct them all personally.

Marking 25 years of service

Prof. Dr. Andreas **Archut**, Division 8 – University Communications; December 30, 2022

Prof. Dr. Sven **Behnke**, Institute for Computer Science, Section VI - Intelligent Systems and Robotics; January 2, 2023

Prof. Dr. Walter **Bruchhausen**, Institute of Hygiene and Public Health (IHPH); April 5, 2023

Prof. Dr. Andrew **Eberle**, Institute for Applied Mathematics; October 17, 2022

Sonja **Edmeier**, Section 3.3 – Scientific Staff; February 1, 2023

Dr. Rochus **Franke**, Institute of Cellular and Molecular Botany (IZMB); November 13, 2022

Alexandra **Jünger-Leif**, Institute of Cell Biology (izb); November 3, 2022

Buket **Kaygusuz**, Section 9.3 – Student Registry; February 2, 2023

Triantafillia **Keranidou**, Division 8 – University Communications; 03/25/2016 (observed retrospectively)

Prof. Dr. Ruth **Kirschner-Hermanns**, Surgical Center – Clinic and Polyclinic for Urology and Pediatric Urology; January 1, 2023

Adelheid **Kleine**, Institute of Physical and Theoretical Chemistry; November 2, 2022

Gertrude **Mandt**, Faculty of Protestant Theology – Secretariat, Practical Theology; November 3, 2022

Dr. Nicole **Meier**, Department of English, American and Celtic Studies; November 6, 2022

Prof. Dr. Barbara **Niethammer**, Institute for Applied Mathematics; January 4, 2023

Helen **Siegburg**, Faculty of Protestant Theology – Transdisciplinary Research Areas; January 18, 2022

Prof. Dr. Andrea **Stieldorf**, Department of History, Historical Science and Archival Studies sections; September 30, 2022

Prof. Dr. Ina Maya **Vorberg**, German Center for Neurodegenerative Diseases (DZNE); November 9, 2022

Dr. Christof **Völker**, Institute of Biochemistry and Molecular Biology (IBMB); November 30, 2022

Marking 40 years of service

Prof. Dr. Thomas **Bartolomaeus**, Institute of Evolutionary Biology and Ecology; January 1, 2023

Heinz Biörnsen, Frankenforst Campus – Frankenforst external lab; January 21, 2023

Klaus **Emmerich**, Section 3.4 – Technical and Administrative Staff, Trainees; March 31, 2023

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Jörg **Göttner**, Section 4.1 – Infrastructure and Facility Services; March 7, 2023

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Retirements

Prof. Dr. Dr. Udo Di **Fabio**, Institute of Public Law; at the end of January 2023, upon elapse of a service extension period.

Prof. Dr. Karen **Holm-Müller**, Institute of Food and Resource Economics (ILR); at the end of September 2022

Prof. Dr. Detlef **Müller-Mahn**, Department of Geography; at the end of December 2022, upon elapse of a service extension period

Dr. Hubert **Rein**, Pharmaceutical Institute; at the end of November 2022

Prof. Dr. Wolf-Dieter **Schuh**, Institute of Geodesy and Geoinformation; at the end of July 2023

Prof. Dr. Karl Heinz **Südekum**, Institute of Animal Science; at the end of July 2023

Prof. Dr. Claus-Christian **Wiegandt**, Department of Geography; at the end of March 2023

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Last But Not Least

Amadé, Why Spend Two Weeks Rowing Down the Danube, Amadé?

International teams have been exploring the Danube in a Roman boat from late antiquity. They included three rowers from University Sports



▲ With the rowing boat in front of Budapest

Rowing like the Romans: when Sören Wader, Amadé Sirokay and Jakob Hetfleisch took up their invitation from Friedrich-Alexander-University of Erlangen-Nürnberg to be part of the EU's "Living Danube Limes" Interreg program, the three trainers from University Sports at the University of Bonn did not know much about their upcoming adventure down the Danube. In an interview, Amadé Sirokay talks about their two-week trip in a specially made oak boat that took them 120 kilometers from Budapest to Baja.

Why embark on such a journey?

We know the Rhine inside out, and we wanted to discover a river that was completely unfamiliar to us while immersing ourselves in Roman history—and experiencing something crazy and unpredictable into the bargain. But we weren't given very much information in advance, except where to set off from and the fact that we'd get board and lodging provided. Ultimately, we had no idea what we'd let ourselves be in for.

Were you dressed like Romans?

The project team suggested that we buy some Roman kit. First, that would have been too expensive and, second, we didn't think it was a great idea anyway. After all, we didn't know how things would pan out on the boat and didn't want to be wearing tunics in case there were storms, let alone for any other reason. Before we set off, however, we found out that some of the crew had some fabric left over, so we made the snap decision to sew ourselves some tunics after all. With it being 36°C on the water, they turned out to be the perfect

outfit, one that also worked as a towel, a sleeping mat for a night spent on the riverbank, or a comfy cushion.

That sounds a bit like re-enactment.

Nobody in our crew was a re-enactor, and we didn't reckon much to that sort of thing. However, the organizers had filled the crew before us with re-enactors. When they handed the boat over to us, therefore, they looked at us with deep suspicion. However, we definitely learned some Latin phrases too, which we made diligent use of. In the boat, though, we all spoke English, because our crew came from about six different countries.

How does a Roman boat differ from a modern rowing boat?

Our boat, the *Damuvina Alacris*, was built in the Roman style, with oak trees cut down specifically for the purpose and tools that the Romans would have used. As rowers from Bonn, we're used to lightweight, nimble boats made from carbon fiber. At the start, we weren't sure

whether this one, which weighed around 6 metric tons, could even be maneuvered properly. Unexpectedly, though, it managed very well. That was down not least to the highly coordinated way in which the team—a dozen experienced rowers and a far-sighted captain—all worked together. We had a strong degree of trust in the boat. Rowing a *lusoria*-type boat like this one is very different from the sport as it is today as you only use your arms and your upper body. With modern rowing, a lot of power comes from your legs, and you exert more pressure on the water. Modern oars are perfectly balanced and made of high-tech carbon, whereas we used heavy wooden cudgels in the Roman boat.

What kind of welcome did you get in Hungary?

A very warm one. It was an indescribable feeling to be the first people in maybe 1,600 years to travel down this stretch of the Danube in a boat like that. Wherever we went, people celebrated our arrival with receptions and parties. They cooked for us as if we had hardly eaten for weeks.

What will you take away from the experience?

It was a unique and unforgettable trip. We learned a huge amount about Roman history and had exclusive guided tours of archaeological digs and museums. None of us knew hardly anything about the fascinating history of the Danube Limes. As someone who spends all their time rowing on the Rhine, it was also a wonderful experience getting to know a completely different river. We swam and rowed in the Danube and camped overnight on its banks, and it was a really special way to get to know the area and its people.

What would your dream be?

The original Roman boat on which ours is based was discovered in Mainz. Wouldn't it be fantastic to row our replica down the Rhine from Mainz to Bonn one day? With a reception in our boathouse at the University thrown in...



Photos: privat

▲ Jakob Hetfleisch, Amadé Sirokay, Sören Wader

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Prof. Dr. Wolfgang Löwer,
ehem. Vorsitzender der
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