



# forsch

University of Bonn

*Spring/Summer 2024*

**How Digitalization  
Transforms the  
University**

Also in this issue  
New work in an old building  
Kant year 2024 in Bonn  
Field trip to Egypt  
Writing advice for students

UNIVERSITÄT BONN



WISSENSCHAFT  
ZUM MITMACHEN

*für alle!*

**DABEI SEIN &  
MITMACHEN!**

- ✧ Mitmachaktionen, Präsentationen und Experimente
- ✧ Kinder- und Familienprogramm
- ✧ Kulinarisches Angebot

**WISSEN  
SCHAFTS  
FESTIVAL**

**IM HOFGARTEN**

**7. JULI**

**12–18 Uhr**

Unsere Unterstützer\*innen:



Alle Infos zum Wissenschaftsfestival:  
[www.uni-bonn.de/wissenschaftsfestival](http://www.uni-bonn.de/wissenschaftsfestival)



# Editorial: Everything new from May

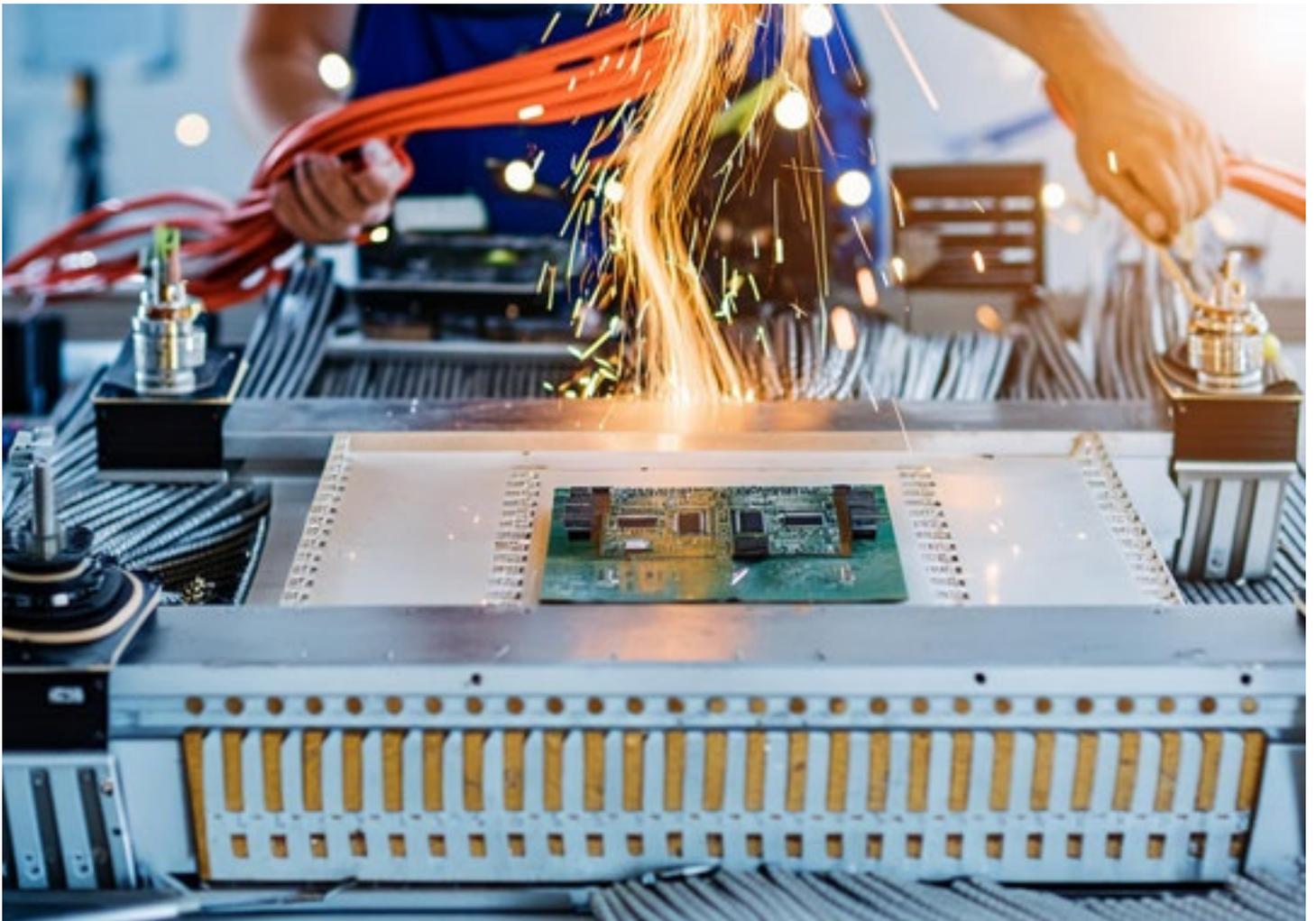
A new way of working: The university's administration has not only moved into a new building, but has also completely redesigned its physical workspace: with open spaces for collaborative working, multifunctional meeting rooms and much more. Healthy, modern and, of course, excellent to adequately support the university's researchers: That is the goal!

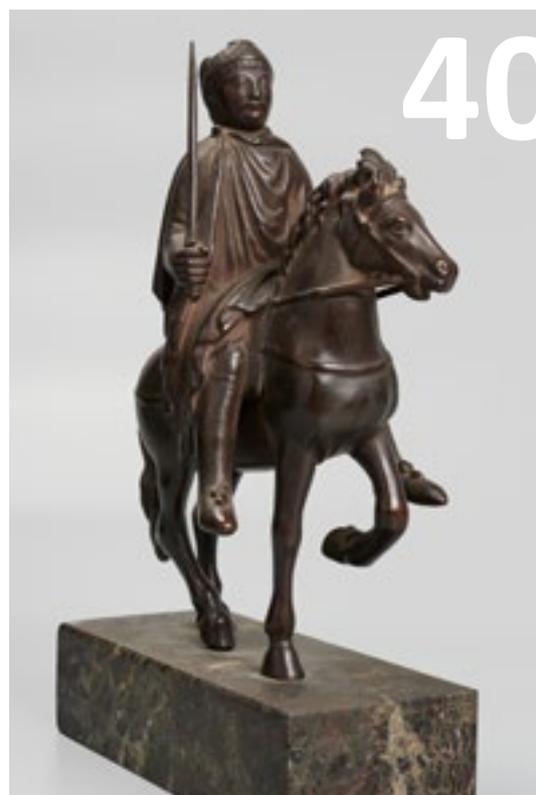
This mission also continues in the digital realm: with the service portal, the administration has redesigned its knowledge database and the processes behind it. Not only can all information now be found clearly in one place, but researchers can now also access a lot of information at the click of a mouse.

In general, digitalization is constantly changing the university.

With the new digital strategy, research, teaching and administration are being rethought. This ranges from robotics to ethical dimensions, from the new Marvin high-performance computer to the employees who are networking research and administration in new ways as digitalization managers. They listen to the faculties and bring in the needs of the faculties in order to develop solutions for requirements. In this *forsch* you will find some examples of where things are currently happening.

*Forsch* itself is also changing: under many articles you will find a QR code that will take you to all the additional digital offers, such as the read-aloud podcasts or long-form interviews. Have you noticed that the layout has also changed? You can look forward to a new concept for *forsch*! We hope you enjoy reading it.



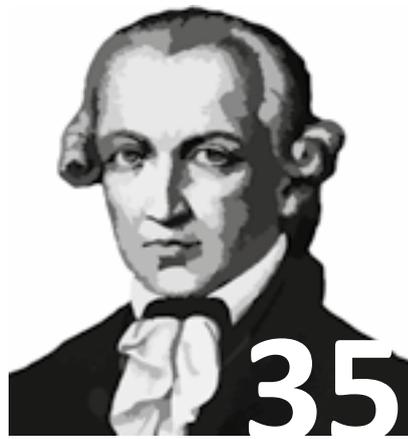


2	Editorial
3	Table of Content
5	New work behind a historic façade: Feature on the relocation of the university administration to the former Herold building
10	„A stroke of luck for the university“: Rector of the University of Bonn elected for a third term of office
11	“Releasing Untapped Potential”. University Council Chairperson Professor Dieter Engels on the work of the University Council
13	It makes a difference: Energy strategy shows effect
15	Where Canaanites “Covered” the Ancient Egyptians. Professor Ludwig Morenz undertook an expedition to the origins of the written alphabet
20	Numerous ERC grants for the University of Bonn

---

## 21 How the digital strategy is changing the university

22	„Where science fiction becomes reality“: Hendrik Wüst visits the University of Bonn
23	Danger = fear: How our brain works in extreme situations
24	When the „digital twin“ warns: Matthias Braun researches the ethical significance of health simulations
25	Digital bridge builders: the digitalization managers network the faculties at the University of Bonn
27	Experience virtual collaboration: How digital teaching can be innovatively designed at the university
28	Learning to understand artificial intelligence: How computer science students together with researchers at the University of Bonn to find AI solutions
30	New supercomputer for cutting-edge research



- 
- 31 Searched. Found. Done. How the new Service Portal of the university helps researchers
  - 32 forschKOMPAKT
  - 33 New high-profile professors

---

## 35 Kant's project of Enlightenment

300th birthday celebrated with congress in Bonn

- 37 Instructions for eternal peace: Why we need the rule of law for a peaceful world according to Kant
  - 39 Borders Are Arbitrary, but Inviolable: Kant's doctrine of world citizenship, his view of migration and its contemporary significance
- 

- 40 A Discovery in the Attic Dating from the Early Days of the University. Casts of the Shrine of the Three Kings rediscovered
- 41 The Benefits of a Little Narcissism for Managers: Psychologist Gerhard Blickle investigates what managers need
- 43 Launch of the Uni Bonn App
- 44 Podcasts for Students
- 45 "Writing Can Be Fun" How to write a successful term paper. In conversation with writing consultant Katja Reinicke
- 47 Between two worlds: Iranian master's student Sepideh Tafazzoli about writing theater plays
- 49 Developing and promoting talent: How the Deutschlandstipendium works
- 51 The MULTIPLIERS project connects school pupils and the University
- 53 The Excellence University invites you: The self and the others
- 54 Personalia
- 66 Imprint

Employees often hold spontaneous meetings in the unit's open space.

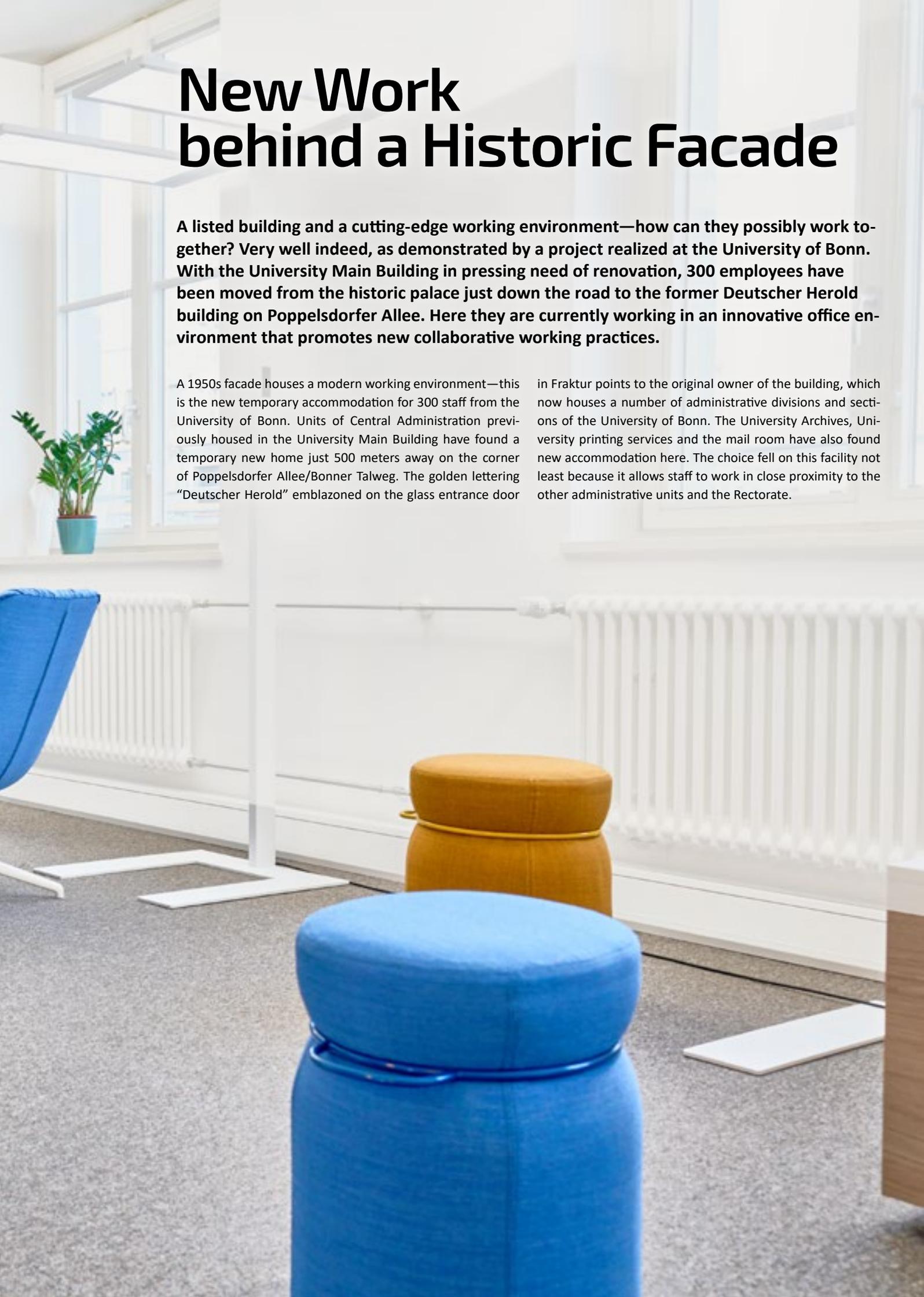


# New Work behind a Historic Facade

**A listed building and a cutting-edge working environment—how can they possibly work together? Very well indeed, as demonstrated by a project realized at the University of Bonn. With the University Main Building in pressing need of renovation, 300 employees have been moved from the historic palace just down the road to the former Deutscher Herold building on Poppelsdorfer Allee. Here they are currently working in an innovative office environment that promotes new collaborative working practices.**

A 1950s facade houses a modern working environment—this is the new temporary accommodation for 300 staff from the University of Bonn. Units of Central Administration previously housed in the University Main Building have found a temporary new home just 500 meters away on the corner of Poppelsdorfer Allee/Bonner Talweg. The golden lettering “Deutscher Herold” emblazoned on the glass entrance door

in Fraktur points to the original owner of the building, which now houses a number of administrative divisions and sections of the University of Bonn. The University Archives, University printing services and the mail room have also found new accommodation here. The choice fell on this facility not least because it allows staff to work in close proximity to the other administrative units and the Rectorate.



## **A further step towards the renovation of the University Main Building**

The move to the Deutscher Herold building was caused by the pressing need for extensive renovation work in the University Main Building. Although the yellow baroque palace is as beautiful as ever, its outdated electrical system and old windows are in urgent need of replacement. Fire safety needs to be brought up to date, and the plaster is even crumbling in places. It will take at least ten years to bring the Bonn landmark up to date—a truly monumental undertaking.

Despite the considerable disruption involved in the process, the University of Bonn has recognized the opportunity contained within this challenge. “The move to the Herold was a good opportunity for us to design the office space in such a way that meets the needs of a modern university administration,” explains Holger Gottschalk, Provost of the University of Bonn. After all, the self-image of Central Administration has changed significantly in recent years, moving away from an authority toward a modern academic management body.

## **Incorporating the New Work initiative into university development**

Seeking to rise to this challenge, the University took the decision not only to modernize the Herold building before the move, but to convert it into an innovative office location that offers an environment conducive to modern approaches to project work and collaborative working practices. “New Work is a key ingredient of our approach to university development. The design of the new rooms at Deutscher Herold seeks to facilitate new forms of collaboration,” says Gottschalk.

The new accommodation hosts some 300 workstations in both traditional offices and open space rooms, several meeting and seminar rooms, kitchenettes and a parent-child room, all over an area of more than 5,000 square meters. “Greater flexibility, more space for interaction and exchange and an attractive working environment—these were the most important concerns of the employees. We have created a variety of different room types as to cater for the greatest possible range of needs,” explains Marion Duisberg, director of the Facilities Management division, which was responsible for overseeing the structural changes involved. This new concept will facilitate the future accommodation of additional staff in an area that corresponds to that of the Main Building. In so doing, we will meet official requirements to reduce rental costs through the realization of new models of working.

## **Innovative offices increase employer attractiveness**

The Provost is convinced that the new office landscape will also make the University of Bonn more attractive as an employer: “In view of the prevailing shortage of skilled workers, it is becoming increasingly important to offer a modern working environment in which employees feel comfortable,” says Gottschalk. “The project has therefore brought the University a big step forward in terms of employer branding.”

A passer-by would never guess that the neoclassical facade of the Herold building accommodates a state-of-the-art working environment. The initial view of the building interior is also dominated by its historical elements: mosaics, light natural stone cladding and bronze ceiling chandeliers all point to the origin of the building in the 1950s. Moving from the stairwell onto one of the office floors, the visitor travels from

▼ The PDaP’s open space houses three desks and a high meeting table for discussions, collaborative working and networking.





▲ Two small high-backed sofas create a shielded space for conversations with up to four people.

mid-century modern to the present in just a few steps: white walls, sound-absorbing carpeting, height-adjustable desks with two monitors and an ergonomic office chair, acoustic elements, plants and a variety of seating in the University colors of yellow, blue and gray. The effect is modern, bright and inviting—a stark contrast to the rooms of the University Main Building.

#### The teams were involved in the design of their rooms

The sections redeployed to the Deutscher Herold building invited the input of their staff in the design of their new work spaces. Michael Prill, head of the Digitalization of Administrative Processes Program (PDaP) first held a workshop with his team to reflect on the fundamentals. How do we work together? How are we productive as a team? “The move was a trigger for us to take a closer look at these questions,” says Prill.

Then it came to the detailed planning: “We mapped out all the forms of work for which we needed the office: areas for concentrated work, collaboration, hybrid meetings and project work.” Over the course of several workshops with an interior designer and other sections quartered in the building, the PDaP team developed a multi-functional office landscape for its nine members.

#### An open, collaborative space

The area housing the PDaP team provides three individual offices each with a desk and a small meeting table to enable concentrated individual work, telephone calls and pair discussions. The team also set up two project rooms—one classic and one multi-functional with a video conferencing facility and tables whose tops can be folded up and used as whiteboards. These rooms host project work, hybrid meetings and large-scale video conferences.

„Open space does not mean open plan, but seeks to facilitate collaborative working practices, discussions and networking,“

Michael Prill

A large open space with three desks and a high meeting table for standing or high stool-seating also houses two small high-backed sofas which combine to create a shielded environment for discussions of up to four people. The team has deliberately dispensed with telephones and video cameras: “Open space does not mean open plan, but seeks to facilitate collaborative working practices, discussions and networking,” emphasizes Prill.

#### Some divisions have abolished personal offices

Personal offices have been abolished at the PDaP. Before starting work in the morning, staff are required to select their workstation according to the task that is due next—a project room for a team brainstorming session, for example, or an individual office for an undisturbed phone call. As such, they often change rooms several times a day. The PDaP is not alone in adopting this practice. Many divisions located in the Herold building no longer have a fixed workplace for all their employees. This increased flexibility, together with impact of working from home, has enabled managers to implement a slight reduction in the allocation of office space per person.

To ensure that collaboration in the new office environment runs as smoothly as possible, the PDaP has adopted a clean desk policy. Everyone clears their workstation completely in the evening so that it can be used by someone else the next day. To this end, all employees have their own roll container in which they can store their work equipment and personal belongings.

Not all divisions in the Herold building have completely abolished personal offices. The Human Resources division for example, which occupies two floors of the building with around 90 employees, has taken a different approach. As the division still uses a lot of paper files, data protection requirements mean that most members of staff still have their own office. “The sensitive discussions that we conduct require strict confidentiality, for which we need our own office,” explains the deputy director of the division Thomas Rosenkranz. Nevertheless, the division also has an open space which staff enjoy using. The travel expenses team for example, meets there regularly to develop ideas.

#### More opportunities for interaction

It is not only the open space that creates more opportunities for interaction. The fact that the division is no longer spread out as in the Main Building, but is housed much more compactly

generates synergies between sections that previously had few points of contact. The heads of section are also located in close proximity. “The move has made meetings in the division more intensive and communication more relaxed and open. Our employees

find this very positive,” says Rosenkranz.

Human Resources Development, Organizational Development and Health Management reports similar experiences. 20 people in four teams work here. Before the move, the unit was housed in the Alte Sternwarte, mainly in individual offices. "We were really isolated at times and often fell out of the loop on important matters," says Head of Unit Nicola Thiele, describing a situation that had been exacerbated by the COVID-19 pandemic. The move to the new premises made a fresh start possible. It soon became clear how the unit wanted to use its open space, and it decided to establish an open interaction area. "We want to live the idea of New Work, collaborating much more closely and networking better with each other," says Thiele. This is clearly working: "Staff now often meet in the open space for spontaneous meetings. The various teams are also mingling much more than before."

**All furniture is flexible**

The front area of the open space houses several standing desks and two conventional desks—"the two most popular workstations on our floor," says Thiele. A mobile monitor is available for hybrid meetings. Various seating options are distributed across the rear area. As all the furniture is on casters and can be rearranged with ease. The open space has not just had the effect of strengthening collaboration within this unit, but is open to all employees in the building, who use it for a number of purposes including meetings.

Even though the new office environment has been well received, Thiele reports some initial concerns. Whilst some were concerned that they could come to work and not find a desk,

„We try out what works. What doesn't work, we do differently.“ Nicola Thiele

others wanted to know where they could leave their personal belongings. Thiele was able to allay many of the anxieties through good communication: "I reported as much as possible to the team," she says.

**The spontaneous development of the room booking system**

The team responds to challenges arising from the new working situation with agility: "We try out what works. What doesn't work, we do differently," says Thiele. A good example of this is the room booking system. Lacking a tool with which to

perform this task when they moved in to the new building, the team spontaneously developed one themselves. Magnets bearing the name of individual members

of staff are affixed to a whiteboard set up in the entrance area, showing the various rooms in a plan of the office. The magnets can be moved to reflect changing occupation of each room and the current status of each member of staff: working from home, on a business trip or on vacation. "This has worked very well so far," says Thiele.

In general, the New Work project implemented at the Deutscher Herold building seems to have been a success. Nicola Thiele's unit recently held a team day to reflect on the new working environment. "It was really nice to see how positively everyone has received the new rooms and how comfortable people feel here," she reports. The working atmosphere in particular has changed for the better. Thiele has also noticed this in herself: "I am much happier going to the office than I used to be, because I like it here so much."

*Miriam Wagner*

▼ The highly mobile furniture in the rooms of Human Resources Development, Organizational Development and Health Management is designed to enable the quick realization of flexible working configurations. Mounted on casters, the furniture is easy to rearrange.





## „A stroke of luck for this University“

Rector of the University of Bonn elected for a third term of office

There was great joy on all sides when, at the end of January, Rector Prof. Dr Dr h.c. Michael Hoch was re-elected - unanimously in the first round of voting. The University of Bonn's election assembly appointed Rector Prof. Dr. Dr. h.c. Michael Hoch for a further four-year office term starting in April 2025. This will be the third term of office for the developmental biologist, who was born in 1961. University Council Chairman Prof. Dr. Dieter Engels says: "Professor Hoch is a stroke of luck for this University. He has succeeded in creating an unprecedented spirit of optimism that continues to this day. He has shown the University and its members what they are capable of and motivated them to achieve top performance in many areas. This spirit must now be carried forward. No one could do this better than Michael Hoch."

### **The University of Excellence Bonn as a milestone**

The results of Prof. Hoch's time in office so far are impressive: Under his leadership, the University of Bonn was one of the big winners of the Excellence Strategy competition initiated by the federal and state governments. With the approval of six Clusters of Excellence in 2018 and its designation as a University of Excellence in 2019, Bonn even emerged as the most successful university in the national competition.

The promotion of equal opportunities and diversity was and is a particular concern of his. Through targeted initiatives and programs, he has promoted a cultural change within the University in this area. Since 2015, he has succeeded in significantly increasing the proportion of female professors, which was still below average when he took office, to almost 30 percent. Progress has also been made in the strategic cross-sectional areas of digitalization, sustainability, knowledge transfer and start-up support. Internationalization was driven

forward under his leadership through the expansion of the University's global network and the establishment of strategic partnerships. The positive development is also reflected in the relevant global university rankings, in which the University of Bonn has moved into the TOP 5 in Germany, the TOP 20 in Europe and the TOP 100 in the world.

### **Strengthening teaching and young academics**

Prof. Hoch is delighted with the continued support from all parts of the university: "I would like to thank the members of the Senate and the University Council most sincerely for their renewed great trust. Together with all status groups, we have developed the University of Excellence magnificently and successfully expanded our strategic cross-sectional areas. In the coming years, we need to consolidate our outstanding position in the face of tough international competition and confirm our great success in the Excellence Strategy. This also means that we will provide even better support for young academics in all career phases and significantly strengthen teaching with our own University excellence strategy. I am very much looking forward to this, together with my entire Rectorate team!" Prof. Hoch experienced the extent of his support at the University of Bonn last year when the German Association of University Professors and Lecturers (DHV), the professional association representing academics in Germany, awarded him the honorary title of "Rector of the Decade" after he was named "Rector of the Year" three times (2020, 2021 and 2023). This award is based on an annual survey of the association's members at universities. They praised Prof. Hoch's leadership and innovative potential in particular, as well as his excellent communication skills and empathy.



# “Releasing Untapped Potential”

University Council Chairperson Professor Dieter Engels  
on the work of the University Council

**The University Council of the University of Bonn was established 15 years ago. No one knows the body better than Professor Dieter Engels, who has served as chairperson of the council for the last 10 years. Professor Engels recently embarked upon his third term of office. Andreas Archut caught up with him for an interview.**

**Hello, Professor Engels! The University Council was established in 2008 amid considerable “labor pains”. Some students even protested against it. What is the situation today?**

**Hello, Professor Engels! The University Council was established in 2008 amid considerable “labor pains”. Some students even protested against it. What is the situation today?**

*That is no longer the case. Initially, students in particular said that we were far too “business-orientated”. But when I pointed out to the then chairperson of the General Students’ Committee that none of our members came from the business world, this criticism ended. Today, we meet regularly with student representatives to discuss a range of issues. At our last council meeting, for example, the chairperson of the General Students’ Committee gave us an insight into student life. The focus then is usually on current topics such as teaching, BAFöG, the housing situation here in Bonn or mobility issues such as the student ticket. We are kept informed about a range of everyday concern*

**You are probably often asked what the University Council actually is and does and about its composition.**

*The answer can be found in the Higher Education Act: Our role is to advise the Rectorate and monitor its work. The law deliberately specifies these tasks in this order. In addition, the nine external members of the University Council belong to the University Electoral Assembly, which elects the members of the Rectorate. As (voluntary) chairperson, I have the largely unknown task of being the supervisor of the rector and the chancellor.*

**The electoral assembly has just re-elected the rector for a third term of office from 2025.**

*When Professor Hoch was first elected, the University Council still carried sole responsibility for the election of the rector. At first, it fell mainly to me to find a suitable candidate. After talking with Professor Hoch for the first time, I very soon realized that he was “our man”. He was very enthusiastic and full of plans, yet also willing to listen to our ideas. This university has always been one of the leading German universities, and the new rector was tasked with releasing its untapped potential. We trusted Professor Hoch to do that. And that is exactly what he did.*

**After the election, you described Professor Hoch as the “rector of the century”. Was that “advance praise” for his third term of office?**

*He has set himself a lot of goals, also with regards to the student body. I am confident that he will realize his plans. I know what I am talking about. Professor Hoch and I sit down together every year at the end of the year and look at the goals we defined together. Have we achieved them? If yes, great. If not, why not? But the answer hardly ever turns out to be no.*



### **How do meetings of the University Council work in practice?**

*As a rule, the Finance Committee of the University Council meets first, which primarily deals with financial issues and administrative projects, i.e. construction, leases, IT and building services. This is followed by the meeting of the University Council. The gender equality officer and the chairperson of the Senate are also present; we place great value on a good relationship with them. At each meeting, the rector and the other members of the Rectorate report on matters of strategic and current importance and a range of changing priorities. We finish with financial matters. We pass resolutions on all these issues, approve Rectorate proposals, or make demands of the Rectorate, which we then address again two or three meetings later.*

### **Is the University Council in demand as a source of advice?**

*Yes, very much so. This is partly due to our composition. We have four internal members, local professors who have an overview of the entire University. The diverse range of backgrounds from which the nine external members are drawn—academia, culture, administration and politics, including two former ministers of science and research—enables the University to draw on a wealth of experience and external perspectives.*

### **Which developments in university governance would not have taken place at the University of Bonn without the University Council?**

*Successes always have many parents. But, we would probably not have been so fortunate as to appoint Professor Hoch, and the University Council was also involved in the appointment of Holger Gottschalk, our excellent provost. Thirdly, we have made sure that the rector is surrounded by an excellent management team which draws on the input of advisors. Our university can only survive in national and international competition with effective management structures. That is why we also insisted on the establishment of a single Rectorate building, in which all members of the Rectorate and their staff can meet. None of this can be taken for granted. There were voices saying it was all far too expensive. But sometimes you have to invest money to generate revenue. The Rectorate has played a major role in enabling us to become a University of Excellence and gaining access to very considerable financial resources.*

### **Is that the former President of the Federal Court of Auditors speaking?**

*Yes. Acting economically does not always mean choosing the cheapest solution, but utilizing resources in such a way that they can be increased. And not just money, but opportunities for research and other output can be expanded without aiming for commercial profit. This is the crucial difference between companies and universities. We in the University Council have always acted to ensure that we attract the best minds in the world to Bonn and provide them with good conditions for research and teaching. This costs money, for example for laboratories, technical equipment and generally*

*good working conditions. Unfortunately, not everyone has an aesthetically pleasing working environment that is conducive to creative work.*

### **As the long-standing chairperson of the University Council and who also studied in Bonn, have you learned anything new about our university?**

*Not much. But it became clear that some things had changed during the celebrations marking our 200th anniversary in 2018. What enthusiasm! What a sense of community! These feelings really surprised me. When I was a student, things were much more sober and sedate. The University was seen as very conservative. That has changed in my view. The University has also become younger and more female. When I studied law, the faculty was almost exclusively male. That has been changing for ten years now, and the University Council has had great influence over this development. It is very pleasing that the Rectorate has made a specific commitment—with regard to the Excellence Strategy—to fill 30 percent of all professorships with women by 2026. This target has almost been achieved. That fundamentally changes the atmosphere!*

### **What are your plans for your third term of office?**

*We want to consolidate the path taken by the Rectorate, Senate and Council. We also want students to realize what a fine university they are studying at. We want to come into even closer contact with city society. I dream of the University dominating the cityscape and remaining a city-center university, like Cambridge or Oxford. That would also be good for the city, even if it doesn't feel like this has been recognized everywhere yet.*

### **Do you have internal targets?**

*The future of the theological faculties is personally very important to me. The decision taken by the Cardinal of Cologne to close the Albertinum and found his own university in Cologne as a "competitor" poses a threat to both the Faculty of Catholic Theology and ultimately also to the Faculty of Protestant Theology. We must remain unstinting in our efforts to ensure that theological issues can be addressed in the research and teaching conducted at the University of Bonn—perhaps even in an interdisciplinary manner with other religions.*

### **What other challenges do you see as facing the University?**

*Competition between universities is increasing. Advances in technology mean that we are able to reach students and researchers throughout the world. We cannot yet fully comprehend the opportunities that artificial intelligence will offer. How will it affect research and teaching? Which degree programs will we have to redefine? The challenge is to prepare following generations for something still unknown to us. We have already discussed this with our own experts at the University at an internal conference. But that was at best a starting point; the real match has yet to start!*

**Thank you very much for your time.**

**„We trusted Professor Hoch to do that. And that is exactly what he did“**

▼ Listen to more interview in our podcast





## It makes a difference!

Energy strategy is having an effect

**Russia has been waging a brutal war of aggression against Ukraine for over two years. A spiral of sanctions has temporarily led to a drastic increase in energy costs and suddenly made energy a potential scarce commodity. The University of has responded to this tense situation with a university-wide energy strategy that aims to reduce energy consumption by 20 percent within a year - with impressive success, as a recent evaluation shows.**

Looking back, Anika Veith describes the implementation of the energy strategy adopted by the Rectorate in fall 2022 as challenging and instructive. At the time, the Head of Energy Management led one of seven energy teams that advised the institutes and the Rectorate of the University of in their energy-saving efforts. „Our teams were put together in such a way that heating, air conditioning and energy management

experts sat at the same table as those responsible for the various properties,” explains Veith. „Together, we looked for practicable solutions to significantly reduce energy consumption in the 40 buildings that together account for more than 90 percent of the University’s energy consumption.“ For example, in the botanical gardens with their historic greenhouses.



A review of the plants in the rainforest greenhouse showed that the temperature could be lowered by six degrees without endangering the most important plants. Thanks to these and other measures, more than 20 percent of heat energy was saved in the gardens in the first month.

In the Bonn University and State Library on the Adenaueralle, various adjustments have also reduced energy consumption by around 1.8 million kWh, which is more than half of what it was in previous years. The greatest savings were achieved by dispensing with full air conditioning with the very energy-intensive processes of humidification and dehumidification, which has been maintained to this day. Summer cooling has also been reduced - but temperature peaks on hot summer days are still moderately cooled.

The results of all these efforts are impressive. „More than 12 million kWh have been saved on heating alone at the University of - enough to heat the homes of around 1,150 two-person households for a year,“ says Veith happily. The target of 20% savings compared to the average for the 2017-2021 period was therefore exceeded by 126% in the area of heating. The 20 percent savings target for gas was also significantly exceeded at 171 percent. In total, almost 18 million kWh of energy was saved through all measures.

Raising awareness among university staff also played an important role in this success. Under the motto „Because it concerns us all - make a difference!“, all activities that each and every individual could implement were bundled together. In addition to these very positive figures, Provost Holger Gottschalk takes away a really impressive message from the evaluation: „Among other things, we have reduced the operating times of the heating systems, but the fact that we are so successful is due in particular to the fact that the employees

and students themselves have become active and have committed themselves to reducing energy consumption.“

It is therefore important to stay on the ball and leverage further savings potential, explains Holger Gottschalk. „We don't just want to achieve a one-off success with the energy strategy, we also want to reposition the University of in the area of energy consumption in the long term.“ For example, promoting the expansion of photovoltaic systems is an important building block for the sustainable orientation of the University of „We are still a long way from reaching our goal with our efforts. But the past year has shown that we can achieve enormous things if everyone pulls together,“ says Gottschalk

*Nils Sönksen*

### Solarstrom für die Uni

Seit 2019 wird die University of bereits mit ökologischem und nachhaltigem Strom versorgt. Um auch selbst einen Beitrag zur Energiewende zu leisten, hat das Rektorat den Aufbau von 6 Photovoltaikanlagen (PV) genehmigt. Dafür wurden rund 750.000 Euro veranschlagt. Die Anlagen könnten dann jährlich geschätzt mehr als 300.000 kWh Solarstrom produzieren, was in etwa dem Jahresverbrauch von 100 Zweipersonenhaushalten entspricht. Das Besondere: Der vor Ort produzierte Strom wird ins Uninetz gespeist und kann so selbst verbraucht werden. Die erste von sechs Anlagen wurde Anfang des Jahres am Katzenburgweg in Poppelsdorf installiert und hat eine Leistung von jährlich rund 82.000 kWh.



# Where Canaanites “Covered” the Ancient Egyptians

Professor Ludwig Morenz undertook an expedition  
to the origins of the written alphabet





It was a steep climb every day - from the camp to the temple plateau. On the left is the inspector of the Egyptian Antiquities Authority, Mohammed Nur ed Din.

**The track winds through sand and stone, taking its travelers where the Internet reception is poor and the starry night sky is magnificent. After a 10-year hiatus, egyptologist Ludwig Morenz and his team have returned to a remote camp near Serabit el Khadim. The researchers are working to digitize thousand-year old inscriptions. This is where alphabetic writing began, with the Canaanite transformation of the complicated Egyptian hieroglyphs into individual letters.**

The morning sun is on the horizon as Professor Ludwig Morenz shoulders his rucksack. Together with his assistant David Sabel, the young Bedouin Barakat—the son of our host Sheikh Rabia Barakat—the Egyptian doctoral student Sherouk Shehada and the inspector of the Egyptian Antiquities Authority Mohammed Nur ed Din, he leaves the camp and sets off on the steep path leading through the Sinai Mountains to the tunnels of Serabit el Khadim. The unbearably hot summer temperatures mean that the experienced egyptologist planned his excavation of several weeks for November. As he tells us: “It is still advisable to set off early in winter; the ascent is more pleasant in the shade, and we want to make the most of the day.”

This is the first time that Professor Morenz has returned to Egypt since 2014, and he has come to complete two tasks. Whilst he is planning to make a three-dimensional digital recording of the temple, he will also search for inscriptions in the abandoned tunnels of the Canaanites in order to complete his research into the origins of the written alphabet. Professor Morenz and his team also used the camp in the sheltered depression in the mountains back in 2014. The journey from the capital Cairo by off-road vehicle takes hours, initially along wide tarred roads that become increasingly narrow. Then the track finally winds its way here through sand and stones.

#### **An unbelievable number of stars**

On the ascent, the travelers look back at the camp: on the one side they see the stone building used by an Egyptian expedition, on the other a number of white tents. Professor Morenz decided to spend his nights on a mattress under canvas. He tells us: “There is virtually no light here at night. When you step out of the tent, you can see an incredible number of stars.” Only occasionally do tourists drop by looking for the remnants of Egyptian-Canaanite culture. Otherwise, the egyptologist can devote himself to his research undisturbed.

Not much has changed in the camp over the years: meals are taken by the fire, where the Bedouins usually bake fresh bread for the researchers. There are more substantial dishes in the evening, such as meat stew. “The food is healthy and very varied,” says Morenz. Around ten years ago, there was a separate tent with a washing bowl for personal hygiene. Now we have a shower room. The egyptologist explains where the water comes from in the desert: “Apparently it has to be brought here by tank truck.”

#### **Climbing the mountain to use the telephone**

Another thing has changed: an intermittent Internet connection is now available. “We used to have to drive up a mountain in an off-road vehicle to make a phone call or send an email,” says Morenz casually. After all, he is not interested in luxury, but the pursuit of knowledge. The “treasure” he is hunting is far from having been fully unearthed, although Professor Morenz has already published several books on the achievements of the Canaanites, who in adapting the hieroglyphs and culture of the ancient Egyptians, established the first written alphabet.



Morenz and his companions crunch their way over sharp-edged rock up to a plateau in the middle of a terraced landscape. At the top, the egyptologist kneels to take a closer look at one of the many inscriptions on one of the stelae. Then it is on to the Canaanite mines, some of which are blocked. David Sabel winds his way through the narrow tunnels, taking photographs of the inscriptions. “The Canaanites and Egyptians dug here for copper and turquoise around 4,000 years ago,” says Morenz. While the copper was mainly used for tools, the turquoise was used for jewelry, make-up and burial objects.

The walls of the tunnels display written Canaanite characters at a number of locations. Although strongly simplified imitations of ancient Egyptian hieroglyphics, the inscriptions combine signs with phonetic symbols, thereby constituting the invention of pure phonetic writing. Only when read letter by letter does each individual word—and thereby the meaning of the inscription—become clear. The egyptologist from the University of Bonn is looking for characters that have not yet been published in order to complete his research into the ori-

gins of alphabetic writing. He is also conducting an analysis of their cultural context.

### Sacralizing the landscape

Morenz and Sabel have now arrived at an L-shaped inscription. “These characters were used to sacralize the mine,” explains Morenz. Like the Egyptians, the Canaanites also used the signs to invoke the protection of various deities. There is another mine from the same period nearby. Further signs can be found on the columns there.

The five-strong team starts moving on again. Whilst Barakat lights a fire to prepare fresh flatbread for lunch, Morenz and Sabel march along the plateau to an ancient Egyptian temple complex, which is very close to the mines. The entanglement of the ancient Egyptian and Canaanite cultures is manifested here in architectural terms through the proximity of the tun-

▼ The team at a stela dedicated to the Egyptian goddess Hathor (from left): David Sabel, Mohammed Nured Din, Ludwig Morenz, Sherouk Shehada and Barakat.



nels with the temple. Several archaeological finds adorned with both Canaanite and Egyptian inscriptions bear witness to the close links between the two cultures.

Countless stelae rise into the blue winter sky. The ancient Egyptians immortalized themselves here, covering parts of all four sides of the towering stone blocks with hieroglyphics. Identical characters can have different meanings. Morenz is working with David Sabel to create a three-dimensional digital image of the temple complex which he will use to decipher the inscriptions. To this end, Sabel takes countless photographs, all from slightly different perspectives, which will later be merged into a 3D computer model.

### **An intercultural contact zone dating back thousands of years**

“The Canaanite inscriptions were primarily made here to sacralize the area,” says Morenz. “Work in the mines was both arduous and dangerous, and the Canaanites made a humble

petition to their Gods for protection.” Serabit was an intercultural zone of contact between Canaanite and Egyptian expeditions, which repeatedly traveled to the area. This resulted in a rich concentration of written signs from both cultures. Morenz is clear: “There is still a lot to discover in the area.”

The team makes its way back at around 7 pm. It is already dusk on the descent to the camp. After a half-hour break for dinner, they continue working on their laptops, sorting the data. Then it’s an early night, as they plan to set off again tomorrow at first light. Johannes Seiler

**Johannes Seiler**



Ludwig Morenz at a stele with hieroglyphic inscriptions on four sides, typical of the Serabit el Chadim temple complex.

„There is still a lot to discover.“

Ludwig Morenz

# University of Bonn Awarded ERC Grants

Once again, the University of Bonn has been very successful in acquiring grants from the European Research Council (ERC).

Three researchers received an ERC Consolidator Grant: Professor Jan Hasenauer from the LIMES Institute, Professor Florian I. Schmidt from the Institute for Innate Immunity and Dr. Evgeny Shinder from the Mathematical Institute.



Working under the aegis of the INTEGRATE project, funded with some €1.9 million, Professor Hasenauer develops simulation models with which to predict the success of tumor treatments. Placing his focus on breast, stomach and kidney cancer, he plans to make more data available training the simulation models via machine learning, thereby improving the reliability of the predictions.



The DEFLAMMATION project funded with some €2 million and run by Professor Schmidt conducts research into the foundations of the immune system. “My hypothesis is that a complicated signaling network interprets information which can prevent or reduce the inflammation response,” explains Schmidt. This research requires new cell biology tools.



The project established by Dr. Evgeny Shinder is titled “Motivic invariants and birational geometry of simple normal crossing degenerations” and has a budget of just under €2 million. Dr. Shinder is a mathematician working in the field of algebraic geometry, a branch of pure mathematics concerned with the relationships between algebraic equations and geometric shapes. He has long hoped to adopt a new approach to established problems of fundamental importance.



How can inflammatory reactions be stimulated or inhibited? How do inflammasomes function as inflammation switches on the molecular level? These and other questions constitute the focus of the work of Professor Matthias Geyer from the Institute of Structural Biology. To this end, he has been awarded a coveted Advanced Grant from the European Research Council worth some €2.5 million over the next five years.



Professor Alexander Blanke from the Institute of Organismic Biology has been awarded a Proof of Concept Grant by the European Research Council. This program grants researchers €150,000 for up to 18 months to help them launch ideas developed in previous ERC projects as a commercial venture. SuspensionFlow aims to develop an innovative prototype of a microplastic filter for use in washing machines and other applications.



The economist Professor Christian Bayer from the Institute of Macroeconomics and Econometrics has also been awarded a Proof of Concept Grant. His BASEforHANK project seeks to develop a software tool for political decision-makers that models how policies would affect the macroeconomy and the distribution of income and wealth.



# Uni Bonn digital - things are moving forward!

Fascinating research in the fields of robotics and artificial intelligence. An app that serves as a student ID card. And people who are reconnecting the university from within and finding overarching digital solutions: The University of is pursuing ambitious goals with digitalisation. It wants to establish itself as a digital presence University of and is focussing on future-oriented and internationally networked research, innovative teaching and IT services. Current examples show what we have already achieved with our excellent research, teaching and a university-wide digital strategy.



# Transforming Science fiction into reality

**The state premier of North Rhine-Westphalia, Hendrik Wüst, visited the Humanoid Robots Lab at the University of Bonn on Thursday afternoon. Talks centered on current research projects in the field of robotics and the challenges associated with the use of robots in human environments. The state premier was able to enter virtual reality with a robot and watch a three-armed robot harvesting peppers.**

How can a robot recognize a pepper hidden by a leaf? How can we teach a robot how to interact with a human? State Premier Wüst was able to see for himself the innovative research projects conducted at the interface of robotics and AI by the Humanoid Robots Lab. One example was PRIVATAR, a project working to develop a privacy-enhancing robot that enables sick children to use a mobile avatar to be present in the classroom. He also watched a three-armed AI-supported harvesting robot developed by the PhenoRob Cluster of Excellence pick peppers.

“The University of Bonn is transforming science fiction into reality,” said Hendrik Wüst after his visit. “Artificial Intelligence is more than just a technology; it is a transformative opportunity that can help form our daily lives and shape our future.” He spoke of how the Humanoid Robots Lab shows us how we can take advantage of this opportunity in our daily life: “Domestic assistants and interaction-capable learning avatars provide a new form of support in our everyday life.” He stressed that North Rhine-Westphalia maintained the densest concentration of excellent university and research

activities in Europe. “The projects conducted at the Humanoid Robots Lab are helping to maintain the position of our state at the forefront of innovation,” he said.

“If robots are to take on a greater share of domestic tasks, we need to ensure that their behavior can be explained intuitively to users,” said Professor Maren Bennewitz, head of the Humanoid Robots Lab. “Our research projects take this as their starting point and attempt to use machine learning and AI to develop practical approaches to improve the interaction between people and machines.”

As Rector Michael Hoch noted, the excellence of the research in the area of robotics conducted at the University of Bonn places it at the forefront of development. “In particular, the Lamarr Institute for Machine Learning and Artificial Intelligence and our Phenorob Cluster of Excellence are outstanding examples of our cutting-edge expertise. The establishment of the Center for Robotics, which brings together the various research projects conducted at our university, is the next step in pursuing innovative and transdisciplinary approaches in this area.”

▼ NRW Minister  
President Hendrik Wüst  
at the Humanoid Robots  
Lab



The establishment of the Center for Robotics, which brings together the various research projects conducted at our university, is the next step in pursuing innovative and transdisciplinary approaches in this area.”

Rector Michael Hoch





◀ In the large Bach Lab, players face various challenging scenarios.

# Danger = Fear?

## How Our Brain Works in Extreme Situations

An African Savannah. Something is moving in the head-high grass. Your pulse quickens. Your pupils dilate. You grip your spear tighter. Suddenly, a massive elephant crashes through the grass. Hertz Professor Dominik Bach and his team use AI and virtual reality simulations of this and other similar scenarios to learn how the brain and body function in extreme situations so as to reach a greater understanding of these responses and work to address anxiety.

A visitor to the 7x17m Bachlab in the north of Bonn cannot see a great deal of the research conducted there, and for good reason. “We need space so that our test subjects can move easily,” explains Hertz Professor Dominik Bach. Before each experiment, they are fitted with multiple sensors at different positions on their bodies in order to transfer their movements with millimeter precision to a computer model via motion capture technology. They are then fitted with 3D glasses that allow them to immerse themselves in virtual reality and experience various scenarios—just like a computer game. Their hand movements and actions are transferred to the simulation via controllers—and they experience the artificial reality as their own.

While the players interact with the various challenging scenarios, the team receives direct information from the sensors. “We now have the computing power to understand the various complicated movement patterns of the human body thanks to various algorithms,” says Dominik Bach. Together with his team, he applies models and methods taken from the theoretical neurosciences and artificial-intelligence research to decode the working of the human brain. The brain uses mathematical operations to control actions, and Bach’s research aims to describe these operations in detail.

The team is particularly interested in demonstrating the li-

miting effects of these functions. Professor Bach outlined the focus of his current investigations: “Is it possible to leave a dangerous situation and readily return to a normal pattern of movement? How do you prepare for such dangers?” This foundational research is intended to benefit people who are constantly surrounded by danger, such as sewer divers. The team also hopes to develop approaches to training people not subject to danger on a regular basis, to encounter it. A second aspect focuses on the clinical application of the research to a range of therapies such as the treatment of phobias. “We want to reach an understanding of how people react to treatment for phobias and the reasons for their failure. This could result in direct benefits for patients.”

### TRA „Life and Health“

*Dominik Bach’s work in the “Life and Health” Transdisciplinary Research Area focuses on the interface between neuroscience, psychiatry and computer science. The research area deals with life in complex structures, ranging from the interaction of the smallest molecules to the interplay of separate organisms in ecological systems. Developing a better understanding of the complexity of life is one of the most profound areas of research. If researchers succeed in decoding the underlying mechanisms of life, this will pave the way to a better understanding of diseases and the development of new treatments.*

*Sebastian Eckert*



# When Your Digital Twin Raises the Alarm

Matthias Braun researches the ethics of health simulation



▲ Matthias Braun.

It is Monday. Your “digital twin” warns of an impending heart attack in four weeks and two days and tells you to urgently change your diet and go to the heart clinic. It may have saved your life.

This vision of the future could soon become reality thanks to advances in simulation technology and AI. But what do digital twins mean from an ethical and social perspective? Do they only bring advantages for human beings? What are the drawbacks and implications of this technology both for individual lives and wider society? Matthias Braun, Professor of Social Ethics at the Faculty of Protestant Theology is currently exploring these questions.

Three things combine to make up a digital twin. “Firstly, an individually tailored simulation that secondly, provides real time simulations of the states and modes of operation of buildings, cities and other systems and, more recently, the human body and, thirdly which predicts their future states,” says Braun.

Digital twins are designed to perform a range of tasks such as projecting individual health developments on the basis of diet, exercise and genetic markers. They can also serve to generate virtual images of organs, bodily functions and even a whole human body. The projections that they create can be used to predict health risks, the progression of a disease and therapeutic success.

This vision of the future raises many legal and ethical questions. Who owns the data? Who is allowed to make decisions regarding the simulated self? Matthias Braun seeks to ad-

dress these questions from the standpoint of the ethical concept of the body. Just as with a prosthesis, its owner should have the right to decide what should happen to the digital twin.

Other questions relate to the consequences of the projections made by a digital twin. “How far will people trust their digital twin? Will they change their behavior in light of its assessment? Should there be consequences if they ignore predictions that later turn out to be correct?” asks Braun.

## Better stroke therapy with digital twins?

Digital twins could be used to support decisions regarding the treatment of strokes in as little as eight years’ time. The European consortium Gemini (the Latin for twin) has recently been researching this matter. Nineteen institutes under the leadership of the University Hospital Amsterdam have received a Horizon grant worth €10 million from the European Commission to tackle the project. Professor Braun is responsible for conducting research into ethical and regulatory issues.

The researchers initially want to test the treatment for individual stroke patients on their twins. To do this, doctors enter the patient’s medical data, such as blood pressure, heart rhythm and information from their brain scan. Therapies are then simulated on the digital twin to develop an individual treatment.

“If it becomes clear that there are several promising options to choose from, the question this ultimately poses is who should make the decision on the patient’s behalf,” Matthias Braun explains. “We are particularly interested in how much moral and legal agency simulations like these should be given in an emergency. Is the simulation capable of deciding ‘by proxy’ and, if so, should it be allowed to?”

## More Information

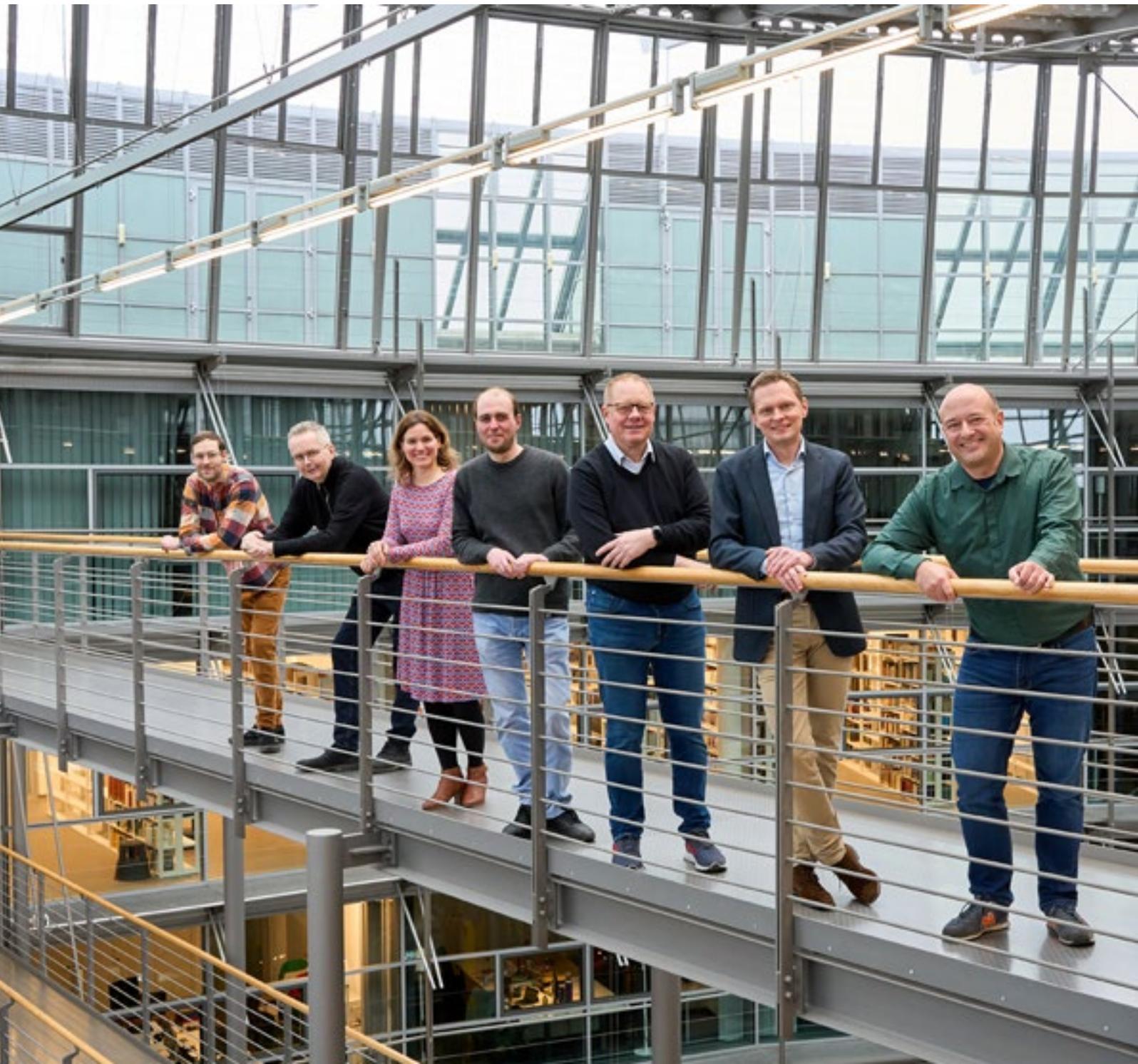
Matthias Braun is Professor of (Social) Ethics at the University of Bonn’s Faculty of Protestant Theology with a focus on ethics and governance in socio-technical systems. He has received an award from the European Research Council (ERC), conducts research in Collaborative Research Center 1483 and was awarded the Falling Walls Prize in the social sciences and humanities category. At the University of Bonn, he is a member of a number of research groups including the Modeling, Life & Health and Individuals & Societies Transdisciplinary Research Areas.



# Digital Bridge Builders

Digitalization Managers Network the Faculties  
at the University of Bonn

Every Monday, seven digitalization managers at the University of Bonn meet to discuss the digital future. From teaching and room planning tools to workflow automation and topics relating to the University's overarching IT governance, they discuss ongoing digitalization projects in the faculties or pass on feedback from the faculties and departments. News, open questions and adjustments are all on the agenda in order to create bespoke digital structures for the University. Where are the stumbling blocks? Who still needs to be brought on board? Digital managers collaborate with key players in the University to create the structures for its digital transformation.





The decision taken at the University of Bonn to establish seven dedicated digital managers within the faculties is unique within Germany. “We found it important to ensure that the faculties are supported in their efforts to establish their own structures for the digital transformation of their teaching, research and administration,” stressed Carolin Müller from the University’s Digital Science Center (DiCe). Whilst this concerns strategic coordination within the faculties—such as in the Faculty of Medicine, where Valentin Stein heads the faculty’s internal strategy commission—central digitalization projects have also been established to address cross-university issues.

Such issues often involve hurdles to operational implementation. For example, the new student ID is to be available in digital form via the University of Bonn app. Nevertheless, the University often recommends that students do not take their cellular telephones into many examinations.

This is where the work of the Digis—as the digital managers are informally known— begins. They take up feedback from the faculties, point out pitfalls and work with all the stakeholders to develop solutions. Involved at an early stage, they act as a link between the faculties and the project managers. “On the one hand we have an advisory role and help make decisions, for example when it comes to projects involving the administration or other central units, such as University IT,” says Mats Liedhegener, Digitalization Manager at the Faculty of Agriculture. The managers work closely with stakeholders such as members of staff in the Digitalization of Administrative Processes Program (PDaP) and University IT (HRZ). They collaborate on a range of tasks, such as oversight of the introduction of a central document management system, where they work to clarify relationships to existing systems and requirements. On the other hand, however, there are instances in which the Digis manage projects in their faculty, which can later be adopted across the University, such as the development of electronic examinations and standardized plagiarism detection software.

### Design and communication

The nature of their role means that the Digis work within the structures of faculties and institutes. “We often need to convince actors in the faculties that the use of other processes and tools will make their work easier,” says Jens Barth, the digital manager at the Faculty of Mathematics and Natural Sciences. They are not trying to enforce a one-size-fits-all solution: “We don’t want to change everything, but to do things in a way that makes sense locally.”

► Our Digis: Mats Liedhegener, Faculty of Agriculture, Martin Stuke, Faculties of Protestant Theology and Catholic Theology, Petra Störzing, Faculty of Law and Economics, Department of Economics, Stephan Herritsch, Faculty of Philosophy, Spokesperson of the IT Strategy Commission of the Faculty of Medicine: Prof. Dr. Valentin Stein, Gregor Wiescholek, Faculty of Law and Economics, Department of Law, Dr. Jens Barth, Faculty of Mathematics and Natural Sciences.

The Digis are also working to establish digital networks that link the faculties. “We are increasingly exploiting synergies between the IT capabilities of the faculties without abandoning the faculties and their bespoke needs. In so doing, we are trying to move away from the use of stand-alone IT solutions that were born of a lack of time or information,” reports Gregor Wiescholek from the Department of Law.

The seven Digis all come from very different backgrounds. The expertise and experience that they bring from their different areas complement each other very well and lead to a fruitful exchange, which benefits the further collaborative development of a range of digitalization projects. Some have worked as university researchers and at CERN. Others have gained experience in large media and digital groups or bring legal expertise to the table. The panel is completed by Professor Valentin Stein, who has long been committed to the cause of the digital governance at the Faculty of Medicine using its own IT structures.

### An important building block in the University digital strategy

The University of Bonn’s new digital strategy is called “Going Forward Together”. “The University digital strategy has been based directly on the faculties’ own visions for the digital transformation of our university,” says Professor Maren Bennewitz, Vice Rector for Digitalization and Information Management and speaker for DiCe, which is responsible for the implementation and further development of the digital strategy. It was therefore only logical that the University created new positions with responsibility for the management of the digitalization in the faculties as a first step even before the strategy was developed. “The digitalization managers are a very important component of the University-wide aspects of the strategy,” says Dr. Benjamin Seyfferth from DiCe. He is satisfied with the results so far. “It represents a form of collaboration previously unknown at the University of Bonn. The decentralized contribution to our digital transformation is fundamental to the future of our University.”

### More about the digitalization strategy:

[www.digital.uni-bonn.de](http://www.digital.uni-bonn.de)

*Sebastian Eckert*





◀ The double church in Schwarzhendorf was digitally recreated.

# Experiencing Virtual Collaboration

## Developing innovative digital teaching methods for the university context

Have you ever moved a church altar? This is no problem for art history students at the University of Bonn. Deploying cutting edge simulation technology to digitally explore the Schwarzhendorf Doppelkirche and its almost 875-year history, they are able to jump from the upper church to the lower church gallery into the nave and then look up into the rafters. Dr. Christian M. Stracke, coordinator of the ViCo digitalization project tells us that “the immersive 3D world offers students many opportunities to discuss objects and frescoes”. He is working to coordinate the introduction of pioneering digital collaboration tools at the University of Bonn to improve university teaching.

Dr. Hanna Christine Jacobs from the Department of Art History knows that the church is a fascinating example of the interaction between architecture and painting, yet faces the challenge of explaining this holistic phenomenon using two-dimensional slides and notes. In this situation, immersive 3D virtual imaging opens up undreamed-of didactic possibilities. “We can take the ‘virtual elevator’ to get close to ceiling paintings,” she enthuses. Dr. Jacobs has used the new technology repeatedly in teaching. “It is a real benefit to the student experience, enabling a hands-on approach and small group working practices. This brings a whole new way of studying medieval art history”.

Another new tool for improving digital collaboration is the annotation tool Recogito+, which enables teachers and students to work together to transcribe, analyze, edit and research documents, graphics, texts and videos. Students of German Language and Literature have played a key role in developing and have tested it on Middle High German sources within the scope of their master’s seminar. “Students can now work independently and in groups to annotate documents. This facilitates precise and structured text work and helps diverse groups to support each other with their different knowledge and skills,” says Michael Ventur, coordinator of the Collaborative digital work in text studies project, who co-supervised the introduction of the tool. Another advantage of the technology is that it enables collaboration in both

real time and an asynchronous fashion.

The comprehensive roll-out of JupyterHub at the University of Bonn brings special benefits for students of the natural sciences, who can use it to write texts, solve statistical and mathematical problems and perform programming tasks. The results of this work can be shared in a virtual environment, which facilitates cooperative improvement. Collaborative scientific computing—for example in the computer-aided analysis of large quantities of satellite data—also becomes much easier, as Stracke tells us. “We can now host a single, shared learning environment, in which all participating students can work together to discuss and edit the files and then submit them virtually.” JupyterHub is also integrated into eCampus and can be used to run other specialist programs, for example statistics programs, from anywhere in the world. “We want to make it as easy as possible for lecturers, students and researchers to work together digitally in the future,” summarizes Stracke.

*Sebastian Eckert*

### New fields in research and teaching

The ViCo project is part of the University of Bonn’s Digital Strategy in research and teaching. The University of Bonn is planning to use the potential of digital technologies and tools to create an ideal and future-oriented environment for creative academic and scientific work, thereby furthering the development of its outstanding fields of research and teaching.



# Learning to Understand AI

How computer science students are working together with researchers from the University of Bonn to develop AI solutions

**Analyzing thousands of historical newspapers at the touch of a button, automatically detecting carcinomas and burial mounds: artificial intelligence will also change research. But what is the best way to go about it? The University of Bonn has developed a system that is unique in Germany, in which researchers and computer science students collaborate both in the development of AI and machine learning solutions and to reach a shared understanding of artificial intelligence and research data.**

In the beginning was data, and the data was processed. “Every machine learning and AI project collapses without well-structured or annotated data,” says Moritz Wolter from the BnTrAlnee project team (see information box). “This is the only way we can train AI to recognize patterns and thereby be of use.”

The implications of this situation can be demonstrated with the historical newspaper analysis project conducted by Privatdozent Dr. Felix Selgert, from the Department of History. “Our aim is to establish the nature of the economic situation in many areas. To do this, we study job advertisements in the *Kölnische Zeitung*,” says Dr. Selgert. However, unlike contemporary newspapers, those printed in the late nineteenth and early twentieth centuries were set in a comparatively unstructured fashion. Different font sizes and line spacing and unexpected column breaks make them difficult to read for the uninitiated. Computers always fail to make sense of these newspapers at the first attempt. “Like us humans, computers need practice,” says Wolter. “Without the correct data, the

systems are unable to recognize patterns and develop their understanding.” This is important; otherwise researchers can quickly fall into the AI trap. This means that humans need to lay the groundwork, correct the data and point out errors and sources of error.

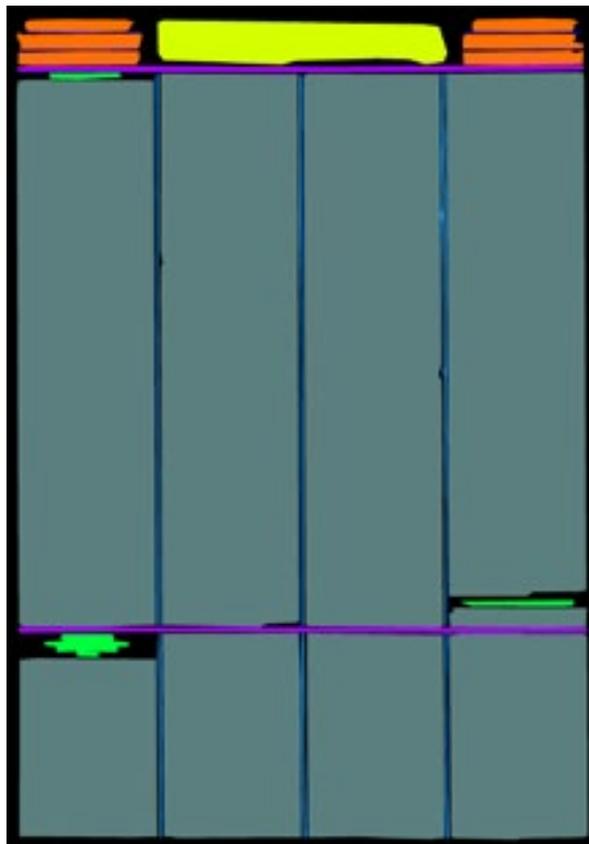
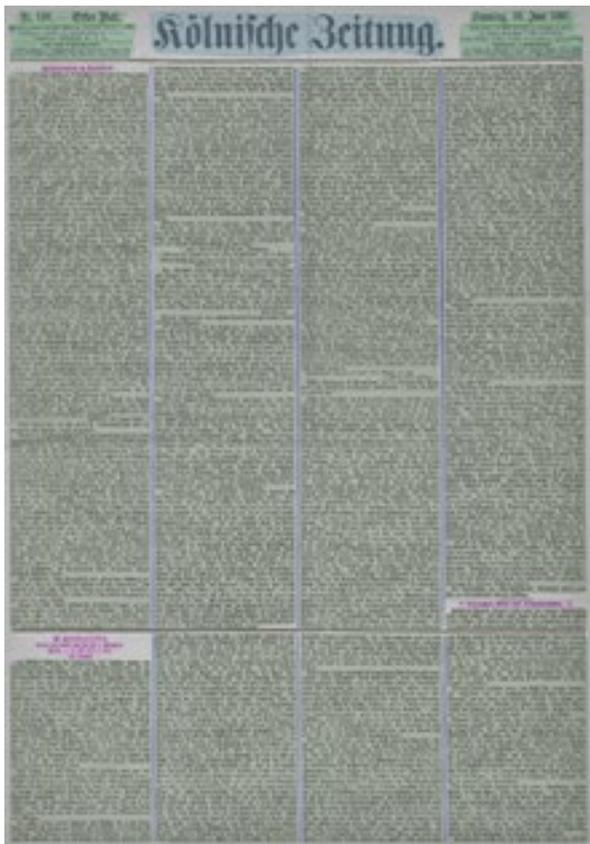
Not only the researchers looking to use AI in their work, but the computer science students assisting them also benefit from involvement in this program, as it provides them with the opportunity to complete the practical programming work required as part of their degree program. At BN-Trainee, they learn about the challenges experienced by and questions posed in a range of academic disciplines. This is not only a challenge, but brings great profit for both sides. They are required to work together in the development of a shared understanding of the challenges involved in their project. “Computer scientists working with AI start off with an interest in the data, but understanding very specific research questions and the requirements that they place on the AI are also important for the analysis,” says Wolter. This leads them to develop new models or adapt existing ones, thereby benefiting subsequent teams. “Once a solution has been developed, it is comparatively easy to apply it to other challenges,” says Elena Trunz, a computer scientist from the project team. “Some methods drawn from machine learning are incredibly versatile,” she says.

Dr. Barbara Wichtmann from the Faculty of Medicine uses artificial intelligence to evaluate MRI scans of prostate cancer. She uses the same model deployed by Professor Matthias Lang from Digital Humanities to identify various archaeological structures—charcoal pits, bomb craters and burial mounds—on aerial photographs. Another project realized within the scope of BnTrAlnee uses AI to analyze the strengths of medicines, their effectiveness and dispensing practices.

**Inspiring students to work with machine learning**

▼ Working together at BnTrAlnee: Matthias Laupichler, Prof. Dr. Reinhard Klein, Moritz Wolter, Felix Selgert, Elena Trunz





◀ How an AI recognizes the structure of old newspapers.

## and AI

The development of collaborative working practices is only one of three objectives of BnTrAInee. The project seeks to inspire computer science students not only to work with AI, but collaborate with researchers from other disciplines. “Computer science students are not naturally focused on the field of AI. Indeed, not everyone can deal with AI and machine learning after their training in Bonn,” says Elena Trunz from the project team. That is why we seek to foster an interest in this area and its wide range of possible applications.”

## Making experts fit for AI

The third aim of the program is to impart knowledge about AI and machine learning to researchers from a range of disciplines with no specialist understanding of it. One approach taken to this end is learning by doing. Experienced researchers from the fields of medicine, neurobiology, history or linguistics are given a three-week intensive course in the fundamentals of math, they learn procedures and the programming language Python. Working together, they solve the tasks set and discuss and analyze the best-practice approaches adopted by other participants. A central advantage with this approach is the presence of a computer scientist. Indeed, as Elena Trunz tells us, “this is also the difference to a normal course, in which participants are often left alone to complete tasks. Indeed, the courses are extremely well received. By developing an understanding of programming,

machine learning and AI functions, participants in the program are then able to run projects and data themselves on high-performance computers such as ‘Marvin’, the University of Bonn’s new mainframe computer.”

Professor Reinhard Klein sees considerable potential in the project that he manages. “I am convinced that we can roll out the benefits of AI across the University. The sort of co-operative approach that we pursue means that we can also help smaller research projects on a modest budget to perform data analyses in a cost-efficient fashion, using our project funds.”

### Part of the Digital Strategy

The University of Bonn’s Digital Strategy sets out the measures and structures required for its digital transformation. The BnTrAInee project is a measure in the Digital Skills strategy area and aims to spread AI skills across discipline boundaries.

[www.digital.uni-bonn.de](http://www.digital.uni-bonn.de)



# A New Supercomputer for Top-Level Research

**The University of Bonn has made a major upgrade to its research infrastructure, through the acquisition of 'Marvin', a new high-performance computer. After the startup and test phase, all researchers at the University of Bonn can profit from this new piece of equipment, which will provide a powerful boost in the areas of high-performance computing, artificial intelligence (AI) and machine learning.**

Marvin's ability to process and analyze vast amounts of data opens up new research possibilities in areas such as robotics, climate research, astrophysics, life sciences, sustainable crop production and even the humanities. "Marvin will allow interdisciplinary collaboration on complex projects between researchers from different fields, enabling them to find answers to current research questions and innovative solutions to pressing problems," says Professor Maren Bennewitz, University of Bonn Vice Rector for Digitalization and Information Management, who was instrumental in the acquisition of the mainframe, which represents a major milestone in the University of Bonn Digital Strategy.

"Marvin's ample capacity means researchers can conduct top-level research, enjoying easy access right here on campus," says Professor Petra Mutzel from the High Performance Computing and Analytics Lab (HPC/A-Lab). Together with University IT, the HPC/A-Lab manages the central University high-performance computing infrastructure, advises researchers and trains them in its use. Projects like BNTrAinee (see p. 28) ensure close networking of existing AI expertise with

various specialist disciplines in order to develop needs-based teaching and learning programs. "Rolling out this supercomputer at the University of Bonn is definitely a major milestone, and we are looking forward to being able to provide highly sophisticated scientific computing services," says the director of University IT, Dr. Rainer Bockholt.

## Examples from Research

Marvin helps climate researchers in Bonn to integrate satellite data with numerical models of the Earth's system. "This helps us to improve modeling, which enables more accurate prediction of droughts and changes in sea level," says Professor Jürgen Kusche from the Institute of Geodesy and Geo-information. For example, researchers working in the area of sustainable agriculture at the PhenoRob Cluster of Excellence connect AI algorithms with sensors in order to run simulations that enable targeted crops fertilization or more sustainable weed control. More information is available in the podcasts (see QR code).

▼ Guests were able to take a look at the computer at the opening ceremony.

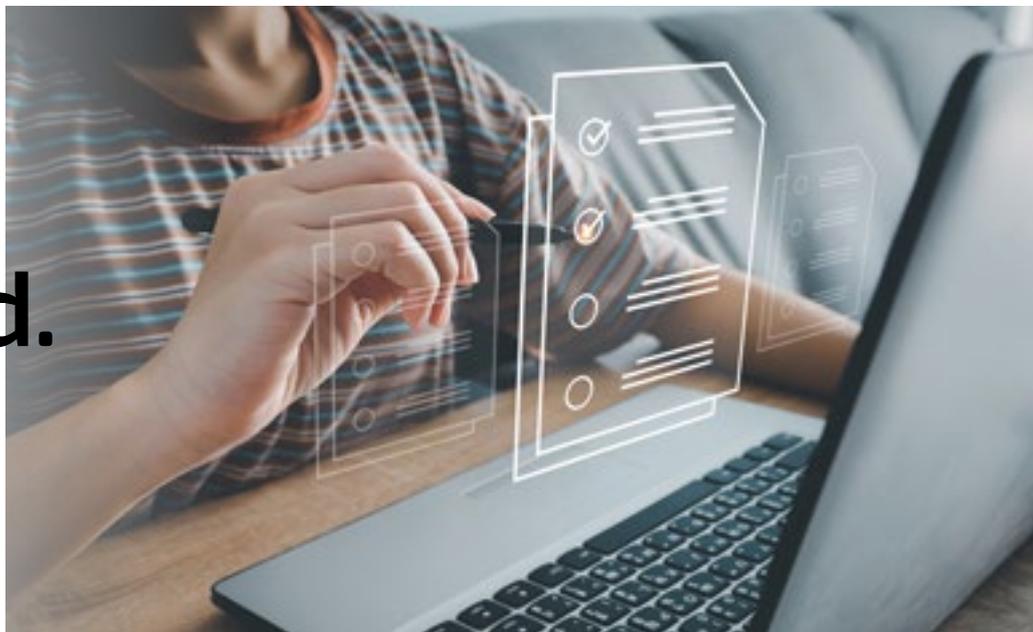


## Infrastructure upgrades: part of the Digital Strategy

The University of Bonn's Digital Strategy sets out the measures and structures required for its digital transformation. The Bonna 2 / Marvin project was realized under the aegis of the sets of objective Infrastructure for research, teaching and services established to realize the new Marvin HPC cluster. With the acquisition of a high-performance level 3 computer, the University of Bonn has passed a further key milestone on its journey towards creating a cutting-edge research infrastructure to enable simulation, machine learning and data analysis.

More: [www.digital.uni-bonn.de](http://www.digital.uni-bonn.de)

# Searched. Found. Done.



They are the silent backbone of the University of Bonn: around 750 employees in the central administration ensure that the 7800 employees and academics can work and research as efficiently as possible.

With the new service portal, the University of facilitates access to the information required by the University of administration. All content can be found in one place. For the first time, however, they have been fundamentally reorganized thematically, checked, revised and processes presented in a more comprehensible way. Many inquiries can now be triggered at the click of a mouse, true to the motto: „Searched. Found. Done“.

This meant a lot of work for the administrative staff. During the time-critical changeover from the outdated intranet to the modern collaboration software Confluence, it was not only necessary to merge information from different departments and standardize information statuses. Around 300 editors also had to be trained to keep the new portal up to date. This meant a lot of analysis in advance, especially for the thematic „self-service pages“, where all the information can be found. „We have to precisely match the individual and very different requirements of the departments and the needs of researchers in the University of administration with many laws, regulations, guidelines and contracts,“ explains Martina Flickinger-Pflüger from the Human Resources Management department.

This is also reflected in the large number of different processes and forms required to organize and document the procedures. For example, the requirements for hiring new employees with third-party funding are completely different to those for appointing professors. „It was particularly important to us that the information was easy to understand.

That’s why new pages and topics were tested for usability by decentralized volunteers from the various levels of the university,“ explains Lena Zimmer from University Communications. Together with Daniel Epple from the Central Student Advisory Service and Sebastian Jaron from the Digitalization

of Administrative Processes programme, she managed the implementation in around a year before the old intranet had to be shut down.

The portal serves as a guide to the University of’s services and digital forms. Many departments have used the changeover to launch services at the click of a mouse, to rethink and simplify their own processes, but also to expand services for academics.

This includes the Human Resources Department, as Flickinger-Pflüger explains: „We have continued to develop our services. One measure was to create an additional access channel for inquiries from researchers and employees, which we achieved through a central telephone number and a central email address. This provides easy access to us for many questions relating to your own employment relationship or HR issues in general, who can help you directly as a first step. In the background, we have implemented a ticket system and a direct assignment to the individual clerks and advisors, who can then process the inquiries precisely.“

Around 3,600 tickets were received by the HR department in the first quarter; in addition, there are calls in the double-digit range every day. „It is important for us to ensure good availability and to stay in contact. For example, the responsible colleagues report back directly to the specialist departments with the ticket inquiry in order to clarify more complex issues and process the cases quickly,“ says Flickinger-Pflüger.

Provost Holger Gottschalk sees the service portal as an important contribution by the administration to effective research and teaching at the University of Bonn. „We want to become an excellent administration, because this is the only way we can profitably support our researchers and teaching staff as well as all other employees and give them as much time as possible for their core tasks. With the service portal, which is accessible around the clock, we are fulfilling a promise on the way there.“

*Sebastian Eckert*



# Clusters of Excellence: Two New Initiatives in with a Chance

The University of Bonn has some excellent news to report, with two new cluster initiatives given the green light to apply for funding from the Excellence Initiative of the German government and federal states. The news was announced by the German Research Foundation and the German Council of Science and Humanities. The two cluster initiatives have gone into the next round of the selection procedure together with 40 other proposals chosen from 143 applications from across Germany. The University of Bonn was already granted funding for six Clusters of Excellence in 2019, more than any other university in Germany. All the existing clusters are submitting renewal applications, meaning that the University now has the potential of hosting eight Clusters of Excellence.

One proposal with the title “Color meets Flavor” seeks to explore the interplay between strong (color) and weak (flavor) interactions. The proposal, submitted jointly between the University of Bonn, TU Dortmund University, the University of Siegen and Forschungszentrum Jülich plans to combine a theoretical and empirical approach to investigating the physics of quarks and how these fundamental building blocks of matter form complex bonding states. The project also aims to investigate the properties of the Higgs boson particle and continue the search for the axion.

▼ Information on the six existing Clusters of Excellence



A further new initiative called “Our Dynamic Universe” focuses on the fact that the structure and development of the universe are controlled by countless phenomena that take place on very different time scales lasting from fractions of a second to billions of years. Submitted jointly with the University of Cologne, the application for a Cluster of Excellence links astrophysical processes through a combination of observations with new instruments, theory, innovative simulation and data science methods and laboratory astrophysics.



▲ New cluster initiatives (top from left): Vice Rectors Irmgard Förster, Andreas Zimmer, Maren Bennowitz with Rector Michael Hoch and Dean Walter Witke. Below: Vice Rector Annette Scheersoi, Cristiano Porciani (speaker for Our Dynamic Universe), Jochen Dingfelder (speaker for Color meets Flavor) and Ulrike Thoma (Color meets Flavor). Photo: Lena Zimmer/University of Bonn Photo: Lena Zimmer/University of Bonn

## A new center for medical data usability and translation

Data is vital to progress in medical research, which in turn improves treatment options. Within this process, it is essential that both medical and legal issues are kept in focus. The new Center for Medical Data Usability and Translation (ZMDT) at the University of Bonn seeks to combine these elements through interdisciplinary collaboration. Ina Brandes, Minister for Culture and Science of North Rhine-Westphalia was present at the opening ceremony of the new center. Federal Minister of Health Professor Karl Lauterbach was present via video link.

▼ Information about the ZMDT



## New Collaborative Research Center

The new NuMerIQS Collaborative Research Center (CRC) seeks to advance our understanding of dynamics and structure formation in quantum systems. To be established at the University of Bonn by the German Research Foundation, the CRC will add to the top-level research performed at the University. Forschungszentrum Jülich and the Max-Planck-Institut für Kohlenforschung are also involved in the new CRC. Around €8 million will flow into the research network over the next around four years. The Matter Transdisciplinary Research Area at the University of Bonn has supported the creation of the new CRC.

◀ ceremonial opening of the ZMDT (from left): Dean Bernd Weber, ZMDT Director Alexander Radbruch, Dean Jürgen von Hagen, Minister Ina Brandes, University Hospital Bonn Director Wolfgang Holzgreve, ZMDT Director Louisa Specht-Riemenschneider and Rector Michael Hoch

# New High Profile Professorships

## Planetary Health as a holistic health concept

Ina Danquah has accepted a new Hertz Professorship at the University of Bonn that combines different disciplines in a unique fashion. The nutritionist and expert for public health and epidemiology is working within the Sustainable Futures Transdisciplinary Research Area to establish the new specialism of Innovation for Planetary Health. She is also a member of the Board of Directors of the Center for Development Research (ZEF) at the University of Bonn.

The Hertz Professorship in Innovation for Planetary Health was set up to enable the integrated study of a range of concepts to come closer to realizing the UN Sustainable Development Goals. "Transdisciplinary approaches have become an integral part of climate and health research," says Professor Ina Danquah, who began her work in the Sustainable Futures Transdisciplinary Research Area at the University of Bonn at the beginning of October. Planetary Health is a holistic concept that takes into account interdependencies between a healthy environ-

ment, human health and the health of all living beings on our planet. Professor Danquah is convinced that "the participation of all the relevant groups is vital to the development of effective and acceptable adaptation strategies to counter the consequences of climate change."

The new Hertz Professor has spent almost ten years researching nutritional behavior and its relationship to the disease burden in sub-Saharan Africa. "Through my work as a nutritional epidemiologist, I have seen how rural populations in sub-Saharan Africa are still plagued by malnutrition and infectious diseases," says Professor Danquah. Women of childbearing age and children under the age of five are especially vulnerable to these phenomena. At the same time, the number of people with obesity and chronic diseases continues to rise sharply in cities.

Professor Danquah: "These problems are linked closely to the climate emergency." Crop failures result in the loss



of essential nutrients in the main food crops and exacerbate the problem of malnutrition. At the same time, modern diets with high proportions of animal-based and ultra-processed foods contribute to the strain placed on planetary systems. These diets are not only unhealthy, but are linked to higher greenhouse gas emissions, increased water consumption and land use, greater nitrogen and phosphate inputs and loss of biodiversity. "I want to make a contribution to reconciling prosperity, health and planetary balance so that future generations can live a fulfilled life on a healthy planet," says Professor Danquah.



## Building bridges between legal worlds

Conducting her research at the interfaces between private law, commercial and business law, tax law and public law, the legal scholar Professor Birke Häcker sees herself as a bridge-builder between the legal cultures of and approaches to law taken in different countries. Professor Häcker now holds a Schlegel Excellence Chair in Law at the University of Bonn, where she will work to explore new fields of research. Her focal point is core private law and

comparative law with a focus on English common law.

Before moving to the University of Bonn, Professor Häcker held the Chair of Comparative Law at the University of Oxford, where she headed the Institute of European and Comparative Law until the end of 2022. "As I enjoy switching between the two very different legal worlds, I also conduct a lot of research into English law and



common law in general,” Professor Häcker told us. “That is where my passion for comparative law originally came from.” In her work, she always focuses on systems with very different historical backgrounds and evolved characteristics, with special reference to the German, English and French legal traditions.

A number of core concerns lie at the heart of the new Schlegel Professorship. Working from a historical and comparative-dogmatic perspective, Professor Häcker plans to develop the best possible understanding of German and English private law. Conceiving of her role as a bridge builder between the legal worlds in the sense of mediating between the different traditions, institutions and legal cul-

tures, she also plans to use her new position at the University of Bonn to contribute to the study of “Comparative Common Law”. A relatively new field of study which she herself helped to establish, this approach compares the legal systems prevailing in many English-speaking countries, which in addition to statute law, rely on important past judicial rulings to shape the development of law.

One aspect of this field which Professor Häcker finds especially interesting is the propensity of different legal systems to reach—at least apparently—contrasting conclusions to identical questions. For example, the principle prevailing in Germany that requires fault on the part of the person being held liable—so that parents for exam-

ple, are not automatically liable for the actions of their children but only to the extent that they have neglected their duty of supervision—is a principle specific to Germany. As Professor Häcker explains: “other legal systems take a different approach.” French law for example, has a long tradition of enforcing strict parental liability, but in a manner that poses no problems from an insurance law perspective. The situation is similar in many cases with employer liability in cases of damage to third parties resulting from employee misconduct. “This is a clear reminder that we cannot and should not treat our own familiar legal system as the measure of all things.” The study of comparative law serves to reveal problems and sometimes also points the way to their possible remedy.



## Lisa Sauermann returns to the University of Bonn

The Hausdorff Center for Mathematics (HCM) at the University of Bonn has again succeeded in attracting a top mathematician back to Germany; Lisa Sauermann recently accepted the appointment as Hausdorff Chair at the Bonn Cluster of Excellence; she comes to this high-profile position from the Massachusetts Institute of Technology in Cambridge, USA, where she was assistant professor.

Her research concentrates on probabilistic combinatorics, which solves combinatorial problems using probability theory and is a discipline that deals with discrete mathematical structures. “We are interested for example in the maximum possible number of sets, or other objects under certain conditions,” she explains. “These kind of questions arise in a wide variety of contexts, and I use algebraic methods in addition to probability theory.”

There are numerous applications for combinatorics within mathematics and other related areas, such as coding theory and computer science. The pronouncedly ‘applied’ nature of her research explains Professor Sauermann’s employment by the University of Bonn Institute for Applied Mathematics, where she accepted the offer of a prestigious Hausdorff Chair at the Hausdorff Center for Mathematics (HCM)—a Cluster of Excellence at the University of Bonn set up to attract expert researchers at the cutting edge of their fields.

Widely regarded as a highly gifted mathematician since her youth, she competed several times in the International Mathematical Olympiad whilst attending a special school for mathematics in Dresden, winning four gold medals and one silver—thereby becoming the competition’s most success-



ful participant ever at that time. Upon finishing school, Sauermann read Mathematics at the University of Bonn, where she also taught high school students as a member of the Bonn Math Club. “In my schooldays, math was mainly something I did for fun,” she relates. “I have always enjoyed sharing my love of mathematics with younger people.”





# Kant's Enlightenment Project

Celebrating Kant's 300th birthday with a conference in Bonn

He was the founder of the German Enlightenment. His thinking was cosmopolitan, despite never having left Königsberg. Immanuel Kant was born 300 years ago in Königsberg, now Kaliningrad. His philosophical and academic achievements remain. The Categorical Imperative may still be familiar to many from school. This edition of *forsch* presents two key areas of Kant studies conducted in Bonn, reveals what you can expect in Bonn this year, and provides some scintillating insights that will help you shine during the Kant tercentenary.

# 1

## **Kant's routines**

Kant followed a set of routines to insulate himself from external influences and keep him free to think. These included getting up at 5 am, drinking a morning coffee and wearing his special black coat. His daily walk at 7 am was so punctual that the people of Königsberg were said to be able to set their watch by it. "These famous habits developed mainly in the last phase of Kant's life," says Professor Christoph Horn..

# 2

## **Kant's invitations to lunch**

Although Kant lived a rather secluded life, he often hosted lunches and discussion groups, and invited leading members of the Königsberg citizenry to his home to discuss current affairs. The only condition: no philosophy.

# 3

## **Liberal attitudes develop after a pietist upbringing**

Kant was born in Königsberg, contemporary Kaliningrad, to what today would be considered evangelical parents. He attended a Pietist grammar school. "For Kant, the Enlightenment represents both a personal release from the narrow confines of his early life and a movement of socio-political liberation," says Professor Horn.

# 4

## **His most important works**

Of his central works, Kant's Critique of Pure Reason (1781) addresses the limits and scope of human knowledge. Whilst the Critique of Practical Reason (1788) focuses on morality—the categorical imperative, freedom and ethics— Kant addresses aesthetics, teleology, nature, art and taste in the Critique of Judgment and presents his first treatment of ethics in the Groundwork of the Metaphysics of Morals (1785).

# 5

## **The categorical imperative**

Kant argues that an action is morally good if it can be generalized, i.e. the meaning of an action can reasonably be accepted by all people as a general law without contradicting itself or harming others. Kant stresses the innate dignity and moral value of every human being; we are not permitted to use others as a means to our own advantage, but must always respect their dignity.

# 6

## **Marking Kant's 300th birthday with a conference in Bonn**

A conference organized in Bonn to celebrate the tercentenary of Kant's birth will discuss 'Kant's Enlightenment Project' with special reference to contemporary political developments. Up to 400 speakers are expected in Bonn between September 9 and 13. The 14th Kant Congress was originally to take place in Kaliningrad, but Russia's invasion of Ukraine made it impossible to celebrate the liberal thinker in his birthplace. Further information about the conference and how to participate in it is available here: [kant2024.uni-bonn.de](http://kant2024.uni-bonn.de).

# 7

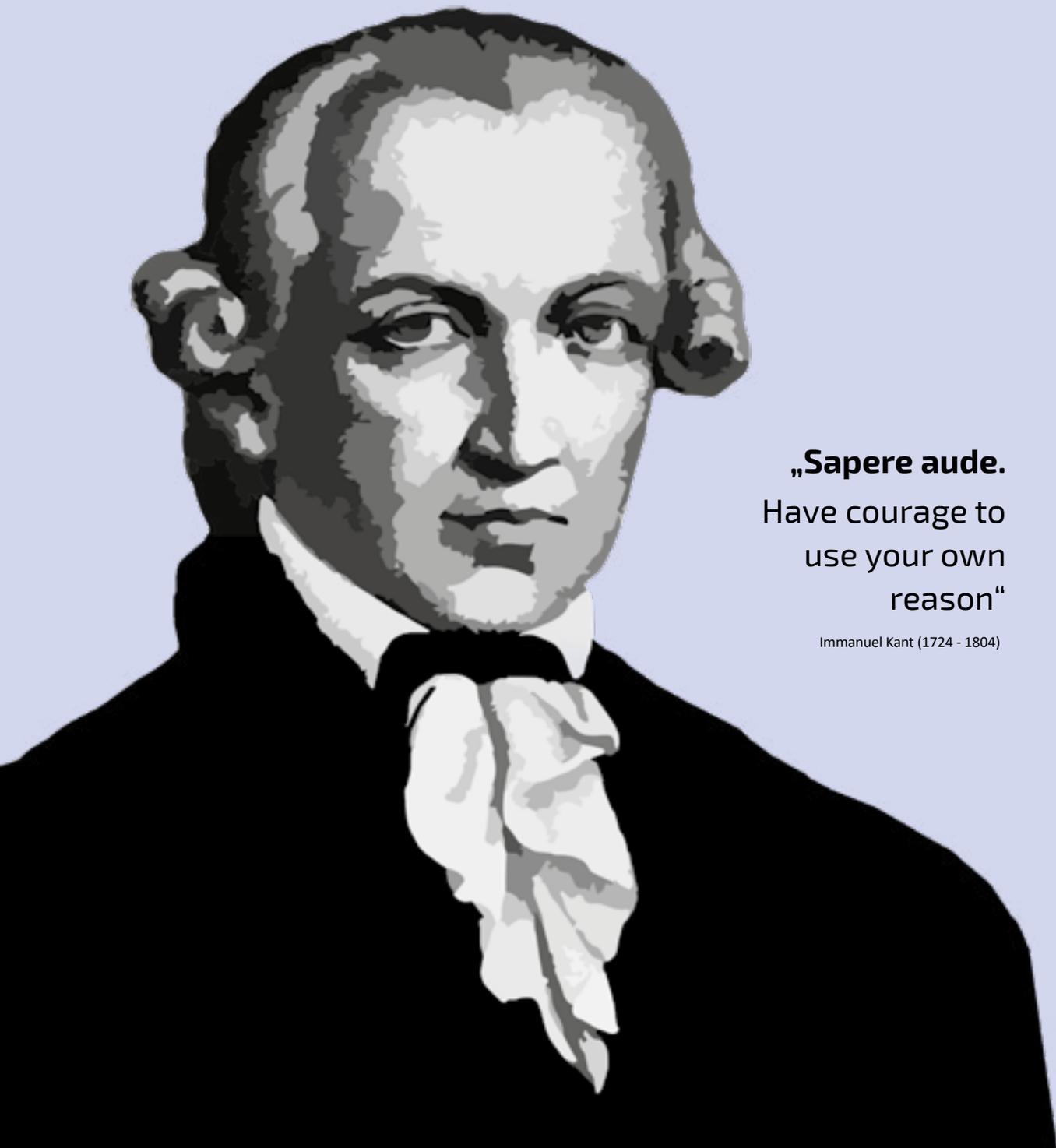
## **The Digital Kant Center provides accompanying information**

The new Digital Kant Center in North Rhine-Westphalia offers digital content to accompany the Kant Year. Bonn's philosophers are currently considering the issues of 'Kant and the problem of an international peace order' and 'Kant and the problem of migration'. The project is funded by the state of North Rhine-Westphalia with some € 1.8 million. Its work includes the Kant Today podcast, regular workshops, the Kant in Five Minutes video series and the weekly Digital Kant Lectures. Dazu gehören der Podcast „Kant-Heute“, regelmäßige Workshops, die Videoreihe „Kant in fünf Minuten“ und die wöchentlichen Digital Kant-Lectures.

# A Guide to Perpetual Peace

Why, according to Kant, is the rule of law essential for a peaceful world?

The Russian invasion of Ukraine and Hamas' attack on Israel are just two of the many conflicts that continue to shake the world. War would just seem to be part of human nature. Although making this observation 230 years ago, the polymath Immanuel Kant (1724-1804) then proceeded to formulate a 100-page blueprint for perpetual peace. Professor Rainer Schäfer from the Digital Kant Center NRW in Bonn discusses the practicality of Kant's concept and its relevance for the 21st century.



**„Sapere aude.  
Have courage to  
use your own  
reason“**

Immanuel Kant (1724 - 1804)



Kant views war as the scourge of humanity. In the 1790s, princes waged wars against each other, often out of self-interest. Whilst Russia and Austria were fighting the Ottoman Empire, the newly founded United States had defeated the British a few years earlier. In France, the revolution had radicalized and the young republic was soon locked in combat with a coalition of monarchical states. Kant lived in a bellicose world that repeatedly claimed thousands of victims; peace existed only in the kingdom of heaven.



Perhaps it is no coincidence that Kant begins his work with an anecdote. “In the preface, he describes how he passed by an inn called ‚Zum ewigen Frieden‘ (‚Perpetual Peace‘). The jolly Dutch innkeeper had christened it so because it was right next to the cemetery,” says Schäfer. “Kant wanted to develop a secular version of this otherworldly concept. In other words, perpetual peace on earth realized through the establishment of justice”.

Kant’s theory of peace is based on a hostile state of nature, in which conflicts are interrupted only by temporary ceasefires. How do you get from this point to a peaceful global world? Certainly not by calling for complete unilateral disarmament, says Schäfer. “It is naive to argue that states should no longer have the physical means to wage war, because in a bellicose world, states that are obviously unable to defend themselves present an easy target for attack, as was the case in Ukraine.

Kant is thus not demanding that states should no longer want to wage war. Indeed this proposition would contradict his view of human nature. Rather, they should no longer be able to do so,” says Professor Schäfer. According to Kant, wars between nations should not just be prevented, but made impossible; he sees that “this is the only way to achieve lasting peace. This in turn requires states to be constituted by law, which Kant saw idealized in the republic for which all states strive.”

## „Kant wanted to develop a secular version of this otherworldly concept. In other words, perpetual peace on earth realized through the establishment of justice“

While a state constituted by law is legitimized domestically by a form of constitutional law that binds its citizens to the sovereign legal order, the problems start when this principle is transferred to the international sphere. “How can states coexist whilst retaining their freedom to act? as Kant so beautifully puts it,” asks Schäfer. This requires

a sophisticated system of international law that organizes states as equal actors in a global federation for peace. In this way, states are encouraged to shape policy in a way that establishes the rule of law and serves the cause of peace. Their intergovernmental treaties are completely transparent.

In reality, this normative approach seems to fail the litmus test. Ukraine, which is striving towards democracy and European integration, is currently defending itself against an invasion by authoritarian Russia. “When we look at the United Nations, we see the attempt to establish the sort of international organization for which Kant calls. Yet at the same time, we also see the dangers of which Kant warned. Relations between dictatorships and constitutional states show that Kant’s system can only work if all states are constituted by law. Otherwise, illegitimate actors will continue to take illegitimate decisions on the inter-state level.

# Borders Are Arbitrary, but Inviolable

Kant's doctrine of world citizenship, his view of migration and its contemporary significance

**Everyone has the right to visit and reside in a foreign country: thus a central aspect of Immanuel Kant's doctrine of global citizenship. In this interview, Professor Christoph Horn (University of Bonn) from the Digital Kant Center NRW explains Kant's view of migration, why he considered the drawing of borders to be arbitrary, and the contemporary relevance of this doctrine.**

**When asking about Kant's view of migration, people immediately think of the word "cosmopolitanism". What exactly did Kant mean with this term?**

*The right to world citizenship is a central concept in the thought of Immanuel Kant and developed from his efforts to regulate the legal relationship between individuals and third countries. He saw that in failing to regulate the legal relationship between individuals whilst they reside outside their home state, the international law of his time exhibited a central deficit. His doctrine of world citizenship postulates the individual right to move to a foreign country and to reside and work there without hindrance.*



**Is that a liberal doctrine?**

*Although Kant is viewed as a liberal, we cannot class him as a national liberal, as he lived in a pre-national time. He views the groupings that constituted an individual state as an arbitrary phenomenon not rooted in any considerations of ethnicity or descent.*

*The same applies to their borders, the drawing of which he regards as the result of historical contingency or political decisions that are not necessarily justified by considerations of justice or morality. At the same time, he regards these borders as inviolable, as re-drawing them to reflect considerations such as ethnicity would have unforeseeable consequences. Even today, many nation states have a heterogeneous population, for example France. Moreover, a range of conflicts have demonstrated the deleterious consequences of establishing state boundaries along ethnic lines, including the Balkan wars of the 1990s. This explains why Kant views immigration as relatively unproblematic.*

**How do the peoples of different states relate to each other?**

*The individuals constituting a state, i.e. the units of the population within its boundaries, exist in a state of competition. Although they have the right to accept or reject new entrants to their community, they cannot do so on the grounds of group hegemony and the desire to maintain the dominance of a single culture, language or religion. For Kant, the host countries must also benefit from the new arrivals. He assumes that there were enough countries willing to accept immigrants, such as North America in his day.*

**What does this have to do with our current understanding of migration?**

*Contemporary migration is an issue of great complexity and is the result of a number of factors associated with the habitability of the world such as climate change, but also with issues such as poverty, political persecution, the growth of illiberal societies and war, such as that in Ukraine. At the same time, it is necessary to*

*bear in mind that the nature of German particularism in the 17th century meant the decision to move between one of the many small German states—say between Königsberg and Bavaria—itsself represented an act of migration. Kant's time also witnessed large streams of migration, albeit for different reasons. French Huguenots and Dutch or Austrian Protestants left their country due to a lack of religious freedom and found refuge in Prussia.*

**What does Kant have to say to us today?**

*A central tenet of Kant's thought is obedience to the law, provided it is anchored in valid philosophical considerations, i.e. derived from general reason. Since the law is morally justified, obedience to it does not pose any problems. If the state is unjust however, you can just emigrate to another, more just state. This is also one reason why Kant rejects a global universal state, as a universal monarchy can degenerate into a dictatorship. It also explains why he views the right to migration to be fundamental.*

**„Although Kant is viewed as a liberal, we cannot class him as a national liberal.“**



# A Discovery in the Attic Dating from the Early Days of the University

## Casts of the Shrine of the Three Kings rediscovered

▼ Cast of St. Felix of Africa

Removal work can sometimes unearth real treasures. Professor Harald Wolter-von dem Knesebeck's heart began to beat faster as he opened a wooden crate in the attic of the art history department in the University main building. He had just stumbled across a number of white and dark shiny casts, including parts of the Cologne Shrine of the Three Kings, that had been resting there half-forgotten for almost fifty years. Research conducted by art history students at the University of Bonn has shown that they date back to the beginnings of the University, from the holdings of the predecessor of the Paul Clemen Museum, which was re-established in 2013.

Professor Wolter-von dem Knesebeck was rooting through the many crates in the University attic because the institute, library and museum which he manages have been forced by the renovation of the University Main Building to move to temporary accommodation. Whilst some of the holdings of his Department of Art history are to go into storage, others are moving to the new exhibition rooms at 26 Poststraße. One of the crates he found bore the name of his former colleague Hejo Klein. Opening it, he found numerous objects made of plaster and iron, including two plaster casts of the famous Shrine of the Three Kings in Cologne Cathedral. Professor Wolter-von dem Knesebeck now uses the find as a teaching example. Together with his colleague Dr. Anne-Katrin Sors from the University of Göttingen, he deploys them in tutorials designed to introduce students to the techniques of identifying and inventorying objects.

In so doing, he is completing the work of his former colleague Hejo Klein, professor at the University of Bonn from about forty years ago. Measuring, describing and identifying objects is one of the key skills learned by students of art history. This task begun by Professor Klein, professor at the University of Bonn from 1987, has now been completed by today's students. As Professor Wolter-von dem Knesebeck told us: "there were still some unidentified and inventoried pieces that were put 'in storage', i.e. in the attic."

Interestingly, one of the casts of the goldwork shows St. Felix in knight's armor, whose relics rest in the shrine together with those of the Three Kings. The collection found in the attic of the University also includes a fragment of the face of the figures of one of the Biblical prophets surrounding the shrine at its base. Casts of these figures are almost completely preserved in the art collection of the University of Göttingen; students from the University of Bonn were able to study them within the scope of an excursion.

All of these casts were commercially available for purchase in the late 19th century and made it also to Bonn before the First World War. They bear witness to the widespread academic and popular enthusiasm for all aspects of the Middle Ages and its culture during the belle époque. Made as traditional plaster casts, the iron casting techniques developed in Prussia and Saxony in the 19th century and new electrical galvanoplastic molding processes, reproductions of a range of different figures were popular amongst public and private collectors alike. It was at this time that Paul Clemens, then professor of art history at the University of Bonn acquired the reproductions of all types for the collection that he had established at the University. This includes the reproduction of the only Carolingian bronze depicting an emperor on horseback.

Today, casts are considered as significant art historical objects in their own right. Study of their production techniques provides information about the factory, craftsmen and artists who made them and the canon of works that the young discipline of art history was developing at the time.

Following the one made by Klein, the recent find was probably the third time that these objects have been "rediscovered". The loss of the inventory book of the University art historical collection in the devastating bombing raid of October 18, 1944 necessitated the first recataloging of all objects, a process that kept many students and researchers busy. As Professor Wolter-von dem Knesebeck says: "the current third inventory provides good experience for our students." Moreover, they have not just had the opportunity to find out about the casts: excursions to Hildesheim Cathedral and the Cologne Cathedral Treasury enabled them to view the originals. Students from both Bonn and Göttingen are planning to present the results of their research in workshops held in the new exhibition rooms in Poststraße



VIC



FLAW

# The Benefits of a Little Narcissism for Managers

Psychologist Gerhard Blickle investigates what managers need

**Managers need to show leadership, inspire and motivate their staff, and establish good working conditions. Professor Gerhard Blickle, head of Work, Organizational and Industrial Psychology and his team are studying the personality traits that managers need in order to perform these diverse tasks. Their work has highlighted the importance of narcissism as a personality trait.**

## **What does a high level of narcissism mean for a team?**

*In team meetings, almost only one person speaks, mainly about themselves. This person listens impatiently, interprets questions as criticism and views criticism as a declaration of war. Such teams experience high levels of staff turnover and the team leader often views those who leave as ungrateful, demanding or out of their depth. Such managers do not want to deal with equals, but seeks to build up an admiring, self-sacrificing coterie of followers. However, some mild forms of this phenomenon can be beneficial for those in leadership roles.*

## **How much narcissism does a manager need?**

*A little, but not too much. A manager should be confident, believe in their ability to solve tasks and challenges and know the strengths and weaknesses of their team. They should not be sensitive or conflict avoidant. A good manager needs analytical skills and engages with polite questions and positive criticism without branding their interlocutor as a traitor or an idiot. Instead, they value such behavior as key to success. Role clarity is important for employee satisfaction. They also enjoy working in a team of whose successes they can be proud. When managers praise their team, it's good for everyone.*

## **Is narcissism synonymous with power and self-confidence?**

*Narcissism is not a binary concept, but manifests itself in degrees. There are pathological narcissists, grandiose narcissists, people with above-average narcissistic tendencies, people with a high level of self-confidence and more modest people. The more pronounced the level of narcissism a person exhibits, the greater is their self-confidence, the urge to be admired and their conviction that they deserve special treatment. This in turn conditions sensitivity to criticism, resentment, rivalry and open aggression towards all those who question their special position.*

## **Can a manager survive in everyday working life without a degree of narcissism?**

*Leadership positions are usually associated with representative tasks and a competition for resources and status. Peop-*

*le who strive for admiration and who do not shy away from conflict thrive in such a role. Yet as with most things in life, many roads lead to Rome. A lot of management tasks can be solved through the application of social intelligence. The socially aware have a keen appreciation of boundaries and how not to cross them. People exhibiting a high level of narcissism on the other hand, lack this 'inner brake', and often interpret their extreme behavior as a legitimate form of self-defense against the resentment and incompetence of others.*

## **How can the team respond to the exaggerated narcissism of their manager?**

*Leave the team and look for another job.*

## **Is it possible to recognize extreme narcissists within the scope of the recruitment process?**

*Narcissists exhibit their pathology during assessment procedures and interviews, as they find themselves in a situation of competition. One approach that interviewers can take is to ask candidates how they dealt with past situations that they found difficult.*

## **Which other personality traits are important for a manager?**

*A successful organization needs emotionally stable and resilient leaders who treat their staff fairly. Managers who display respect and appreciation towards their employees often reap the reward of a proactive team that deals with problems rather than passing them up the chain of command.*

## **How did you come to investigate narcissism from an occupational psychology perspective?**

*We deal with the lighter sides of darker personality traits in an attempt to demonstrate their functional characteristics. For example, if you really want to solve problems, you need self-confidence, a very positive mental attitude and the willingness to fight to succeed.*

## **Where can I develop an insight into this interesting matter?**



*From your staff. Managers should always take the time to listen properly to their employees and be grateful when they raise problems, rather than immediately taking offense. The real problem is often not employees who complain, but staff*

*that say that they have everything under control when they do not. Managers should signal that they are happy to help with problems. Even an initial failure is an opportunity to solve a problem in the second round.*

### The current study

Professor Gerhard Blickle is currently working together with Franziska Böhm and Professor Andreas Wihler from the University of Exeter in a study of 640 managers from the manufacturing industry, the public sector, retail and logistics, to investigate how narcissism affects employees. Analysis of 1,259 respondents has shown that a small dose of narcissism in managers is associated with a high level of satisfaction amongst team members with their manager. Too much narcissism, on the other hand, leads to a tendency towards aggressive rivalry and a decline in employee satisfaction. Publication: <https://doi.org/10.1016/j.paid.2023.112230>

## Launch of the , Uni Bonn App!

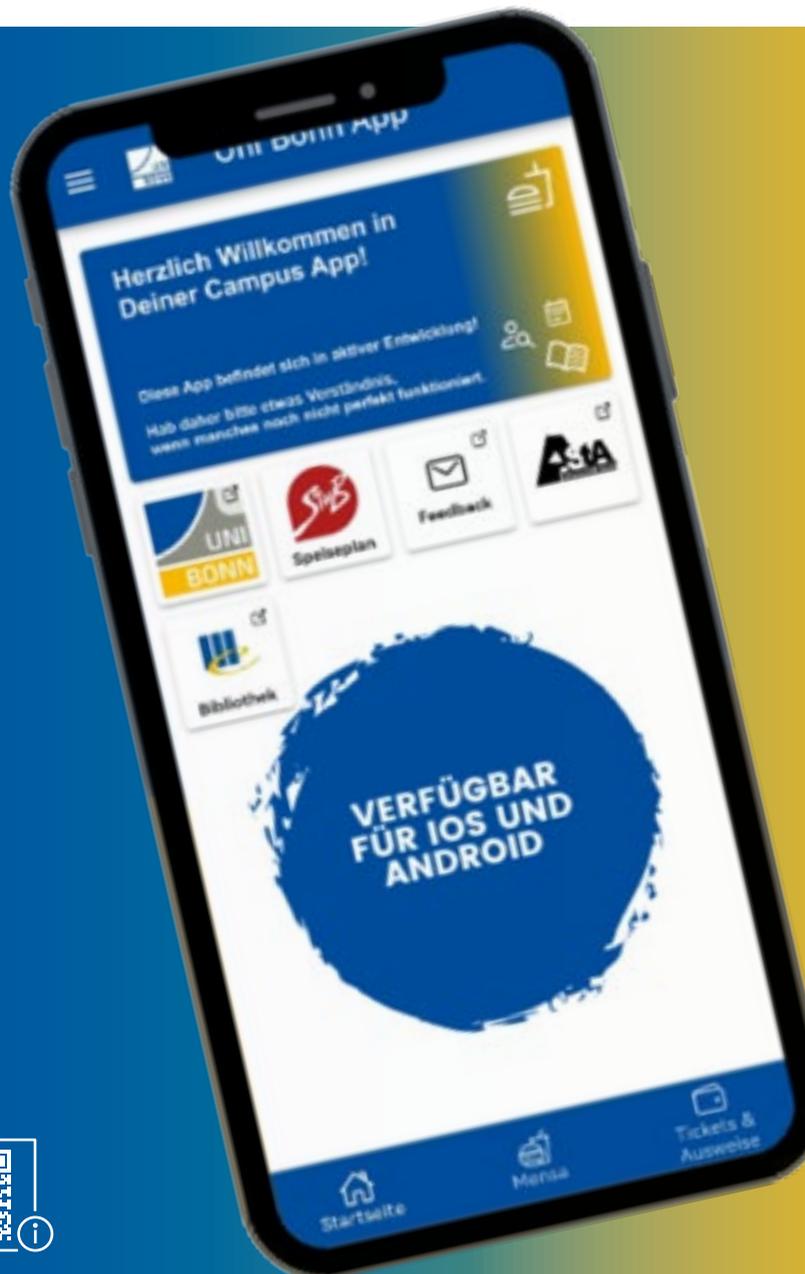
Digital media and apps have become an integral part of our everyday lives. Almost everyone always has their smartphone with them. Reason enough for the University of Bonn to rethink its structures and service provision and develop them in line with its Digital Strategy. The new Uni Bonn app will be officially launched in summer semester 2024. The app will enable students to have their student ID with them at all times; University staff will never be without their brand new digital ID card!

The Uni Bonn app will function as the central location for accessing the most important documents and information about studying and working on campus. Examples include the Studierendenwerk canteen menu and the student transit pass which is now available in digital form.

Its increased use of digital platforms and the introduction of the new Uni Bonn app means that the University of Bonn is not only passing further milestones in its Digital Strategy, but is also effecting a reduction in its ecological footprint; the elimination of printed student ID cards will save paper.

April 2022 saw the University of Bonn launch its "Campus App" project in the NRW network. The first beta version of the Uni Bonn app was available in November 2023. You can find the app in the iOS and Android App Stores.

All information about the Uni Bonn app can be found on the University of Bonn website: [https://www.uni-bonn.de/en/studying/uni-bonn-app?set\\_language=en](https://www.uni-bonn.de/en/studying/uni-bonn-app?set_language=en)



# With „Studierendenfutter (student food) well through your studies

The „Studierendenfutter“ podcast from the University of Bonn focuses on topics for students. There is a new episode about once a month. The aim is to draw attention to what the University of Bonn has to offer and to make students fit for a healthy and good time at university. The Podcasts are in German

## ▼ Study doubts



„Am I doing the right thing here? At some point during their studies, most students doubt whether they have chosen the right course. Johannes and Mia tell us what that feels like.

## ▼ Healthy studying



How do you stay healthy during your studies? What offers are there at the university? How can you do sport cheaply - or integrate sport? The experts from Health Management Healthy Campus Bonn and University Sports at the University of Bonn will tell you.

## ▼ Coping with stress



The exam is approaching, hands and feet are trembling. Are beads of sweat gathering on your forehead at the thought of the approaching deadline? This episode reveals how to deal with stress and exam nerves effectively and even use them positively.

## ▼ Start of studies



Looking forward to your studies? A lot of things are overwhelming in the first few weeks? Don't worry: these tips and tricks on learning strategies, timetables and support will help you get through the first semester.

# “Writing Can Be Fun”

How to write a successful term paper.

In conversation with writing consultant Katja Reinicke

**A blank sheet of paper, a blinking cursor on the screen. The deadline is looming ever-closer, yet you are unable to write anything useful: for many students, writing term papers constitutes a major challenge. From choosing a suitable topic to correct citation, there are a number of hurdles to success. If these seem insurmountable, you can seek support from the Studierendenwerk’s writing advice service.**

A writing consultant for Studierendenwerk Bonn, Katja Reinicke provides help and assistance to students of all faculties in writing their term papers and final theses. The consultation sessions that she runs four days a week are free-of-charge to students attending the various institutions of higher education in Bonn. Students can visit her in-person between 9 am to 5 pm Mondays and Tuesdays or benefit from a Zoom or telephone consultation between 9 am and 2.30 pm on a Wednesday. Although there is currently a three to four-week waiting list, she also tries to make appointments at short notice in very urgent cases.

“My experience is that writer’s block is rarely a matter of aptitude,” she says. Instead, Reinicke focuses on the effects of self-doubt in inhibiting academic performance.

“Writer’s block  
is rarely a matter of  
aptitude”

People with keen perception and high standards are sometimes just their own worst critic. She has found the answer to be the provision of encouragement, support and a healthy dose of pragmatism in order to help students approach their texts in a structured and creative fashion. “When advising students, I always seek to build their confidence so that they can articulate what they know,” explains the writing consultant.

To this end, she focuses on showing students how to structure their project into manageable stages, so that it appears less daunting. Her mantra: “writing can be fun!”

In this sense, she offers a bespoke service that focuses on the individual strengths of each student. She provides support both over the long-term and for those who just need some short-term tips on how to succeed in their first term paper.

*Julian Dämpfle*

## Writing advice consultation hour

Monday – Tuesday: 9:00h – 17:00h  
Wednesday: 9:00h – 14:30h



◀ Scan here  
for tips and  
literature

# Writing Tips

## Have the courage to take an independent perspective

Be spontaneous! Apply the brainstorming approach by writing words and ideas quickly into clusters. Use the cluster to trigger associations and activate your passive knowledge about the topic of your paper. Switch off your inner censor and run with your first ideas. You can always improve on them later.

Face the central academic task of finding your own slant on the topic. Trust your instincts and use them as a starting point. Begin writing and see where it takes you in your research.

## Have the confidence to seek the limelight

Think of yourself as part of a wider community of researchers. No one ploughs a lone furrow: use contacts and networks and form working groups.

You can also develop a confident, independent academic style by working in close consultation with your lecturer. Profit from their experience and believe that they want you to succeed and deliver high-quality work.

## Helpful tips

A range of useful academic writing materials is available here: *Fürchte dich nicht - schreibe! Die Heldenmethode für Haus- und Abschlussarbeiten* by Katja Reinicke, published by utb-Verlag 2018, and available in the University of Bonn writing portal or from other universities.

## Take brave decisions

Draw up a mind map of questions and use it to develop a structure for your paper as early as possible. Keep it compact and transparent—the more the chapter titles reveal about your thesis and findings, the better!

Delve into the deeper levels of your topic and break it down into sub-questions. In this way, you can carve up your text into a number of smaller, bite-sized chunks, the sum of which combine to create a compelling analytical structure for your overall argument.

## Write while you are thinking

Regard thinking and writing as processes belonging together and abilities that you do already master. Like all processes, they are always subject to change—be prepared to change and grow with them.

Never aim for perfection or being “super”: instead, do something new and imperfect that you can improve upon later. Be prepared to learn from your mistakes! Then true success will come.



# Between two worlds

Iranian master's student Sepideh Tafazzoli won the DAAD Prize of the University of Bonn and a prize at the Festival of European Anglophone Theatrical Societies with her play *For the Sake of the Cobblestone Street that Takes Me to You*. In her play, she broadens the audience's view of the complexities of life in Iran - and the feeling of being caught between two worlds.

## Sepideh, how did you feel coming to Bonn?

*I wanted to study English literature with a focus on the Renaissance and the 16th century. I came to Bonn more by chance than anything else. I really like it here: it's very international and just the right size. I had a few reservations at first because I'm more used to life in big cities. But the strong sense of community here has changed my perspective. However, finding suitable accommodation is a challenge, especially for international students. There are long waiting lists and reservations. For example, I had difficulties finding an apartment for my second degree despite my first Master's degree. Especially as a young student from the Middle East, it is a challenge to be accepted as a tenant. I found it frustrating that certain population groups were obviously favored.*

## Your play won a prize at the Festival of European Anglophone Theatrical Societies (FEATS): What inspired you to write it?

*Our play explores the concept of liminality: the experience of standing between two worlds without being fully integrated. We were inspired by personal experiences, particularly in relation to immigration and the feeling of alienation and foreignness, both in the country of origin and the host country. The*

*piece also draws parallels between this feeling of transition and revolutionary movements. In this way, the uncertainty and fluidity of this time becomes clear. Through the characters' interaction with the judges, who symbolize security and freedom, the play highlights the value of human life in the midst of political turmoil. The desire for a peaceful world in which individuals do not constantly feel out of place underscores the overarching message of acceptance and understanding across borders and cultures.*

## How objective is German reporting, especially when it comes to the situation in Iran?

*In Iran, you have to take into account the complexity and nuances. These are often overlooked in German reporting. After the death of Kina Mahsa, I spoke to my mother during a family visit about the discrepancy between media coverage and the reality on the ground. Yes, there are cases of police brutality and repression. This contrasts with the everyday life and resistance of the Iranian people. But the media tends to sensationalize individual aspects. For example, the headscarf can certainly be*



*used as an instrument of repression. At the same time, it is part of a deeply rooted cultural and religious practice of many local people. Reducing it to a symbol of oppression is a problematic simplification. A discussion must carefully consider the cultural, religious and political contexts. The media often focuses on certain narratives, which distorts understanding. Added to this is the fluctuating global attention to the ongoing problems. We need a balanced approach to discussion that recognizes the complexity of the problems.*

**Does the play have a direct reference to the Jina Revolution in Iran?**

*Not directly. But it certainly inspired me. The play presents real court cases. Even if you were to replace them, the message would remain the same. The social movement in Iran fits into the concept of liminal spaces and has influenced the narrative, but serves as an example. I dedicated the play to the brave and courageous people of Iran. I don't want to give too much away, but I included sound recordings of real people at the beginning to honor their struggle. Nevertheless, it was important to me that the piece has a broader*

*Interview mit Pauline Acker und Gustav Mebs*





# Ann-Sophie Groß, Scholarship Holder

One of those who benefited from a Deutschlandstipendium scholarship during their studies is Ann-Sophie Groß. After graduating in dentistry from the University of Bonn, she went on to study human medicine at the Technical University of Munich, whilst completing a doctoral thesis in dentistry at the University of Bonn. All with great success: her efforts were rewarded with the grade magna cum laude. Dr. Groß would like to work in the area of oral and maxillo-facial surgery. During her studies in Bonn, Groß was supported by a Deutschlandstipendium scholarship for a total of two and a half years, for which she is very grateful. "I benefited greatly from the scholarship. In order to study dentistry, you really have to buy every item you need for your studies yourself—every penny counts at the end of the month."

A Deutschlandstipendium scholarship enabled Groß to do even more. In 2017, during her dentistry studies, she was able to work as a volunteer in an aid project for children in Jamaica and in the dental clinic at the University Hospital of Jamaica. As she tells us: "I wouldn't have been able to gain this valuable experience without the funding from my Deutschlandstipendium scholarship." Indeed, not only did Dr. Groß benefit financially from the scholarship, but also in terms of the ideas that it enabled her to develop. "The intensive contact with my sponsor was great. She is a dentist herself and gave me lots of valuable tips on training," says Groß. She also has nothing but good to say about the formalities involved in the scholarship: "the application was easy, the approval came quickly."



## Deutschlandstipendium Scholarship Program

The Deutschlandstipendium scholarship program seeks to support talented and high-achieving students from participating institutions who demonstrate a commitment to voluntary work. Holders of the scholarship receive a monthly grant of €300 over the period of a year, amounting to a total of €3,600. The scholarship can also be extended. While half of the funding comes from private individuals, the other half is financed by the federal government. The payments enable the scholarship holders to concentrate fully on their studies and develop their individual talents. Each scholarship holder is assigned to a sponsor.

The program was launched on the federal level in 2011. Rolled out in Bonn at the start of winter semester 2013/14, a total of 1,312 scholarships have since been awarded to students at the University of Bonn. Private individuals, companies and foundations have donated some €2.4 million for this purpose.

# Dr. Carl-Christian Knobbe, Sponsor

“It is clear that success and appreciation reinforce motivation. As such I think it is vital to give young people the appropriate recognition when they achieve great things as within the course of their studies.” This is how Dr. Carl-Christian Knobbe explains his motivation to provide financial support to students at the University of Bonn as part of the Deutschlandstipendium scholarship program. Knobbe, who himself studied law in Bonn and completed his doctorate at the University, now works as a judge at Cologne Fiscal Court. He has been a member of the board of trustees of the University of Bonn Foundation since 2016 and has also been active as a sponsor since then. Knobbe finds that the Deutschlandstipendium scholarship program succeeds “in a very charming way”; whilst scholarship holders feel that their efforts have been recognized and rewarded, the funding which they receive enables them to continue their studies. “Both components are equally important for the scholarship holders,” says Knobbe.

In Knobbe’s view, the Deutschlandstipendium scholarship program provides sponsors with the opportunity of supporting deserving students without being required to involve themselves in a lengthy selection process. “Without knowing suitable candidates personally, this would hardly be possible” he points out. Another advantage of the program in his eyes is the fact that federal government finances half of the scholarship, thereby “making the funding even more effective.” Dr. Knobbe knows from his own experience that it is not only the sponsored students who benefit from the program, but also the sponsors. As he says, “we have the opportunity to get to know fascinating young people involved in a wide range of disciplines and thus participate in the life of the university in a special way.” Sometimes the contacts thereby established can even lead to career opportunities that profit both parties.

The scholarship is coordinated by the University of Bonn Foundation. During the current funding period 2023/24, 220 students will be supported by a Deutschlandstipendium scholarship at the University of Bonn—28 more than in the previous year. Of the current recipients, 125 are women and 22 have a migration background. The application phase for winter semester 2024/25 runs from April 22 to May 22, 2024. Funding always starts on October 1 and ends on September 30 of the following year.

Jennifer Brauweiler  
[deutschlandstipendium@stiftung.uni-bonn.de](mailto:deutschlandstipendium@stiftung.uni-bonn.de)  
+49 228 73-4607





### Did you know?

The city of Bonn is “European Forest Capital 2024”, a title bestowed by the European Research Institute (EFI) in recognition of the importance of the forest for Germany’s former capital and its residents. Sustainable forest and timber management in Bonn is an important part of efforts to mitigate the climate crisis and adapt to the changing conditions. The EFI has awarded the title of European Forest City annually since 2014. The aim is to raise awareness of the importance of Europe’s forests and make people aware of the myriad forest functions and benefits—and of the threats and challenges forests now face.

Several events will be held this year in connection with the award, in cooperation with the City of Bonn, the University of Bonn, the Rhine-Sieg-Erft Regional Forestry Agency and other international and regional project partners. Among the latter were the Liebfrauenschule, participating in the EU Multipliers project hosted by the University of Bonn.

# Logging or Habitats?

## Schoolgirls study trees in the Kottenforst

A forest is more than just a bunch of trees ... it is a treasure trove of the natural world! Some 75 pupils of the Liebfrauensschule who wanted to learn about forest ecosystems and biodiversity underwent training to become “Tree Experts” as part of the EU-funded MULTIPLIERS project coordinated by the University of Bonn. This spring they visited the “Marteloscope”, which is a kind of classroom out in the middle of the one-hectare Kottenforst in Bonn.

The forest is a place to learn about nature conservation, biodiversity and sustainable forest usage. In the training course, participants have to make forestry decisions in a software-guided process.

Equipped with tablets and binoculars, the students set out in search of clues and ended up learning how to measure the economic and ecological value of a tree—based for example on species, height, girth and the number and kind of microhabitats it supports. The course was led by staff members of Wald und Holz NRW, the State Forest and Timber Management Agency of North Rhine-Westphalia, and researchers from the European Forest Institute (EFI) in Bonn.

Then in mid-March the students held presentations about their experiences at the MULTIPLIERS forest day held in Kottenforst, talking about individual trees with their attending family members in relation to forest management considerations. Assuming the role of forester, they made decisions on how to manage the forest, such as, is a given tree to be felled for economic reasons, i.e. for timber, or should it be protected for ecological reasons, as part of the forest habitat? The students functioned as multipliers at Forest Day, disseminating their newly acquired knowledge on forest use vs. protection to others, just like the project name indicates.

Staff members of Wald und Holz NRW and of the EFI were on hand once again to answer more involved questions about forests and forestry research. „The topic is treated much more abstractly in school books,” explains Sabriye Ali Oglou, state teacher-in-training, “starting with general questions like ,should we cut down this forest completely to build a playground, and would this create jobs?’” One difference is that the perspective explored here—considering the future of each individual tree and such things—is not part of the process. “Learning about the profession of forester and nature conservation approaches is much more valuable an experience than working in textbooks only.”

The students’ parents and siblings were surprised at how interesting the learning content was: “We often go for walks in the woods, but now I have gotten to know the forest in a whole new way. I never thought about how foresters have to make decisions of such complexity regarding each individual tree,” said one girl who took the course. “What I really liked was coming to see trees from such different angles, both the economical and the ecological, and learning so much. I en-

joyed the group discussions the most. It was good to find out about what a forester really does, and how research can aid this work. It became clearer to me how man really needs the forest, and how extremely important it is as a natural habitat,” relates Linda, a pupil at the Liebfrauensschule.

That indeed was the purpose behind the forest module of the Horizon 2020 MULTIPLIERS project. Vice Rector for Sustainability Professor Annette Scheersoï and her Biology Didactics team are the project coordinators, working to make the teaching of science at school more authentic and practically oriented. School pupils from six EU countries are intensively studying current global challenges together with scientific experts. Upon the completion of each module the students assume a “multiplier” role vis-a-vis family, friends and classmates, passing on their knowledge and experiences, like at Forest Day in Kottenforst, with hands-on activities.

Professor Annette Scheersoï: “MULTIPLIERS is such a great project because it is totally practical in nature. The project aims to open schools and create spaces for research-based learning about scientific topics. We have thus rolled out a number of different educational programs for school pupils of different age groups. We are very proud of all our young multipliers who are now disseminating the knowledge they recently acquired at the University of Bonn on tree ‘vaccination’, forest protection and other topics throughout our society, and we wish to thank all the researchers who supported the project.”



# „The other is always part of the self“

The event „ME and OTHERS - individual, group and social community“ offered an exciting journey into our own identity and the relationship between ourselves and others. Renowned researchers from the University of Bonn provided insights into current scientific findings and explored the question of what this „I“ actually is.

Human geneticist Markus Nöthen provided an initial approach to answering this question. According to Nöthen, the genome has the positive task of being a kind of backbone of the self. It is only because of the constant characteristics of the genome that the person does not change every time they wake up. The individual human genome, of which each person has two, results from relatively small differences. The challenge with identical twins, according to Nöthen, whose research includes an extensive twin study, is that identical genomes pose a problem when it comes to differentiating one from the other. Clemens Albrecht, holder of the Chair of Cultural Sociology, offered a different perspective on the question of the self and the other. Using a simple thought experiment, he showed those present that a person always constitutes themselves through the expectations expected of them from outside, i.e. the expectations of expectations. In the end, he concluded, the you is therefore always already present.

## Creating identity for societies

Argelander Professor Julia Binter used restituted cultural objects from Namibia to show that the topic of identity can also be integrated into a wider social context. Using the example of a doll from the Ethnological Museum in Berlin, German and Namibian researchers investigated the cultural objects that came to Germany through colonial entanglements with a view to a new Namibian identity. According to the joint conclusion of the researchers, cultural assets have an identity-forming role.

The program was rounded off with a performance by the University of Bonn's jazz choir and the „Tippgemeinschaft“ group from the University of Bonn's litterarium. „The thunderous applause at the end of the event showed that this mixture of discussion, scientific impulses and cultural debate struck a chord,“ said Prof. Dr. Dr. h.c. Michael Hoch, Rector of the University of Bonn, who hosted the evening. Are you interested in other events in the series? You can find them on the website.

### Event information

What: „Humans and animals. Man as animal?“, fourth event in the series

„The University of Excellence Bonn invites you“

When: 4.12.2024

Where: Lecture hall I, main building of the university, Am Hof 1, 53113 Bonn



# Imprint

Published on behalf of the Rectorate  
half of the Rectorate of the University of Bonn

**From the Department of University Communication**  
Dechenstraße 3, 53115 Bonn  
Telefon 0228/73-7640  
E-Mail: [forsch@uni-bonn.de](mailto:forsch@uni-bonn.de)

## Editorial Stuff

Prof. Dr. Andreas Archut (verantw.), Sebastian Eckert, Klaus Herkenrath, Gregor Hübl, Katrin Piecha, Tanja Kühn-Söndgen, Johannes Seiler, Nils Sönksen, Miriam Wagner

## Layout

kreativrudel GmbH & Co. KG  
[www.kreativrudel.de](http://www.kreativrudel.de)

## Englische Übersetzung

Zentraler Übersetzungsservice

## forsch online und Archiv

Sebastian Eckert / Triantafillia Keranidou

## Printing

Köllen Druck+Verlag  
Ernst -Robert-Curtius-Str. 14  
53117 Bonn-Buschdorf  
Phone.: 0228/98982-82  
Fax: 0228/98982-4082  
Mail: [verlag@koellen.de](mailto:verlag@koellen.de)

Circulation: 8.000

## Photos

Title Montage mit Adobe Firefly, Idee / Umsetzung Sebastian Eckert, Originalfoto von Volker Lannert

S. 2 Montage mit Adobe Firefly, Idee / Umsetzung Sebastian Eckert, Originalfoto von Volker Lannert

S. 5-9 Gregor Hübl

S. 10 Kay Herschelmann

S. 11 Barbara Frommann

S. 13, 14 Volker Lannert; Grafik: Ulrike Syrakas

S. 16, 17 Ludwig Morenz

S. 18, 19 Sabel

S. 20 Foto Schmitt: UKB/Alessandro Winkler; Foto Prof. Dr. Jan Hasenauer: Barbara Frommann; Foto Dr. Evgeny Shinder: Evgeny Shinder; Foto Prof. Dr. Matthias Geyer: UKB/Katharina Wislisperger; Grafik Ulrike Syrakas.

S. 21 Gregor Hübl

S. 22, 23 Volker Lannert

S. 24, 25 Gregor Hübl

S. 27 Uni Bonn / ViCo Projekt (Screenshots)

S. 28 Gregor Hübl

S. 29 Felix Selgert

S. 30 Volker Lannert

S. 31 Shutterstock (shutterstock.com) MarutStudio

S. 32 Exzellenzcluster: Lena Zimmer; Foto Neues Zentrum für Medizinische Daten-

nutzbarkeit und Translation: Volker Lannert

S. 33 Foto Ina Danquah: Gregor Hübl; Foto Prof. Dr. Dr. h.c. Birke Häcker: Barbara Frommann;

S. 34 Foto Lisa Saueremann: Barbara Frommann

S. 38 IZPH

S. 39 Katharina Wernli Photography, Zurich [www.katharinawernli.com](http://www.katharinawernli.com)

S. 40 Uni Bonn

S. 41 Montage/KI. Idee Sebastian Eckert, Gregor Hübl, generiert mit Adobe Firefly

S. 43 Firma ARMIN HOEHNER

S. 44 Gregor Hübl

S. 45, 46 Shutterstock (shutterstock.com) Papiere: pics five / Block: Inspiration GP

S. 46 Volker Lannert

S. 47, 48 Barbara Frommann

S. 49, 50 khipu GmbH

S. 51, 52 Multipliers

S. 53 Volker Lannert

## QR Codes explained



News



Visual Story



Read more



Podcast



HATS OFF  
TO YOU,  
GRADUATES!

**WELL  
DONE!**

6. JULI 2024

# UNI FEST 24

**#unifest2024**

**Jetzt anmelden!**  
Register now!



**bis zum** | **until**  
**31. Mai** | **May 31st**

[www.uni-bonn.de/unifest](http://www.uni-bonn.de/unifest)