RESEARCH REPORT
Humboldt-Universität zu Berlin

2021–2022
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“TOGETHER, WE CAN THINK ABOUT THE BIG PICTURE WHILE AT THE SAME TIME GOING INTO DEPTH AND DETAIL. TOGETHER, WE CAN POSE NEW QUESTIONS, TRY OUT NEW METHODS, AND ENCOURAGE EACH OTHER TOWARDS CRITICAL REFLECTION. SOMETIMES, THIS REQUIRES COURAGE, PERSONAL COMMITMENT, AND PERSISTENCE. AND THIS IS PRECISELY WHAT MAKES RESEARCH AT HUMBOLDT-UNIVERSITÄT SO APPEALING TO ME: OUR RESEARCHERS ALWAYS STRIVE TO MAXIMISE THE GAIN IN KNOWLEDGE FOR BOTH RESEARCH AND TRANSFER. IN DOING SO, THEY CONTRIBUTE TO ADDRESSING COMPLEX GLOBAL CHALLENGES AND TRANSFORMATIONS.”

Christoph Schneider,
Vice President for Research
Dear Readers,

It is with great pleasure that I present to you the research report of Humboldt-Universität zu Berlin for the years 2021 and 2022!

The years of the reporting period, and 2021 in particular, were still characterised by the lockdown and pandemic mode in research, teaching, and administration. However, after a total of four online semesters, we were able to return to an in-person summer semester without restrictions in April 2022.

Following the relaunch of the research report last year, which covered the years 2019 and 2020, you are now holding the second volume of the redesigned research report in your hands: Short “profiles” of the institutions give you an insight into the main research topics, outstanding research projects and publications of the individual departments, faculties, mono-faculties and central institutes. In addition to this wide-ranging spectrum of Humboldt-Universität zu Berlin, we will highlight three topics: early-career researchers, academic freedom, and artificial intelligence.

At Humboldt-Universität, as in many places in Germany, the perspectives of often temporary employment relationships, the diversity of career paths, and favourable academic conditions for researchers in their early career stages are also being actively discussed. Together with the Research Service Centre and the Humboldt Graduate School, we have strengthened our focus on supporting academics in the early stages of their careers. As a signal within the university, these efforts include the renaming of the University Senate’s Research Commission into “Commission for Research and Academic Careers”. Furthermore, we introduced the R1 to R4 classification proposed by the European Commission as a nomenclature of academic career stages into the HU discourse. Please have a look at the interesting conversations that Evangelia Nikoloudakis from the Research Service Centre had with four HU researchers from levels R1 to R3 about their current research projects, their plans for the future, and the social relevance of their work (from page 128 onwards).

Since Russia’s attack on Ukraine in February 2022, Humboldt-Universität has put its collaboration with academic institutions in Russia on hold, interrupting decades of partnership. At the same time, HU has expanded its support services for academics and students affected by persecution, war, and displacement. Read the article “Science in exile” (from page 102), which sheds light on how HU has been supporting students and researchers at risk and refugees since 2015 and is committed to academic freedom. Academic freedom – understood as the liberty to research, teach, and engage in discourse regardless of ideology, identity, or state authority – is an indispensable prerequisite for excellent research and an asset that must be protected at all costs, not only in Germany, where this academic freedom enjoys constitutional status in Article 5 of the German Basic Law!
In November 2022, the launch of the chatbot ChatGPT caused a media stir and numerous discussions about artificial intelligence (AI). AI systems have been the subject of research for many years and are used in a wide range of research approaches and practical applications. AI is already part of our everyday lives, often unnoticed. In the future, AI will also increasingly lead to social, political, and economic changes, although we cannot fully grasp and foresee the extent and risks. On pages 90 to 93, you can find an insight into the projects, opportunities, and challenges of research work on artificial intelligence at Humboldt-Universität.

Major societal challenges and transformations – Grand Challenges – are also the focus of the Berlin Consortium of Excellence. Together with our partners Freie Universität Berlin, Technische Universität Berlin and Charité – Universitätsmedizin Berlin, we as the Berlin University Alliance were able to set further milestones in 2021 and 2022. These developments increasingly show how Berlin, through the interaction of the BUA, other universities, and non-university research institutions, is growing together into an integrated research space, fostering a unique culture of collaboration within Berlin’s research landscape. The daily commitment of researchers from the consortium partners has been pivotal in contributing to Berlin’s excellence in research. A brief snapshot of this contribution is documented on pages 62 and 63.

Equally gratifying is the fact that, as a result of the very high funding volume in 2021, a new peak in third-party funding expenditures was achieved in 2022, totaling 136 million euros. Consequently, the share of third-party funding expenditures in HU’s overall budget (26 %) has seen a slight uptick compared to previous years. The number of approvals in the reporting year 2022, following a low in 2020 and a subsequent high in 2021, has stabilised and remains within the expected range. The fluctuations in the total sum of third-party expenditures are likely a consequence of pandemic-induced lockdowns, and we are eager to observe how these variations will be contextualised in the development of the coming years.

My sincere thanks go to all the academics at Humboldt-Universität zu Berlin who, through their continuous and outstanding research work, contribute to the academic success of our University. I would also like to thank the institutions and individuals who support university research on a structural, organisational, and financial level. Once again, this year, I would like to thank the heads of the departments and the vice deans for research for their dedicated cooperation in compiling the profiles. My special thanks also go to the staff of the Research Service Centre from the Unit for Research Information and Monitoring, who compiled and prepared the data required for this report, and coordinated the texts.

Dear readers, I hope you enjoy reading, browsing, and discovering.

Yours,

Christoph Schneider
FACULTIES, DEPARTMENTS, CENTRAL INSTITUTES
The Faculty of Mathematics and Natural Sciences achieved a number of great research successes in 2021 and 2022. These include first of all excellent and wide-ranging research results, which are explained in more detail in the descriptions of the individual departments. Also, scientists received internationally recognised awards and there were newly acquired structure-building projects, outstanding new appointments and structural innovations. A highlight was the awarding of the Fields Medal to Prof. Viazovska for her work carried out as a postdoc at HU Berlin at the Berlin Mathematical School. Also outstanding are the three ERC grants given to Prof. Klingler (Mathematics), Prof. Kümerle (Geography) and Prof. Rauschenbeutel (Physics). Major new projects were the NFDI project FAIRmat, the Berlin Quantum Alliance, and the Einstein Research Unit Climate and Water under Change, all of which are researching urgent questions for the future of our society.

They are in addition to the total of three Clusters of Excellence, nine Collaborative Research Centres and five Research Training Groups in which the Faculty is involved. Among the overall 14 newly appointed permanent or temporary professors, the two Einstein Strategic Professorships held by Prof. Mendling (Computer Science) and Prof. Hecht (Chemistry) stand out. Structurally of great importance is the founding of the Central Institute “Center for the Science of Materials Berlin”, which bundles the diverse materials science research at the location. This has already resulted in the Cluster of Excellence proposal “Energy Materials @ work”, in which colleagues from physics, chemistry, mathematics and computer science intend to work together to research new energy materials.

DEPARTMENT PROFILES

Faculty of Mathematics and Natural Sciences

DEANS 2021–2022: Prof. Dr. Elmar Kulke, Prof. Dr. Caren Tischendorf

1 Department of Chemistry
2 Department of Geography
3 Department of Computer Science
4 Department of Mathematics
5 Department of Physics
Department of Chemistry

Main research topics
The Department's research groups are arranged around two thematic pillars: the life sciences pillar (focus: chemical biology, bioanalytics, enzyme catalysis) and the material sciences pillar (focus: new functional materials, optical systems, catalysts, batteries). The Cluster of Excellence “Unifying Systems in Catalysis” works with particularly strong participation of the Department of Chemistry (7 working groups). The W2 “S”-professorship “Hybrid Materials: Forming and Scaling” was filled by Prof. Eva Unger, jointly with HZB. The W3 key professorship “Organic Chemistry and Functional Materials” was filled with Prof. Stefan Hecht, PhD. He is also Einstein Professor and founding director of the “Center for the Science of Materials Berlin” (CSMB), which hosts working groups from the Adlershof and Berlin areas in the field of functional materials. In 2022, two of the Department’s junior research groups (Dr. Dumele and Dr. Gräber) were able to obtain funding as Federal Ministry of Education and Research (BMBF) junior research groups (> 2 million euros each). The Department has obtained a temporary professorship from the Berlin Programme for the Promotion of Equal Opportunities for Women in Research and Teaching (BCP). The procedure for filling the BCP professorship with the designation “Optical Spectroscopy at Interfaces” is currently underway.

Research highlights 2021–2022
Outstanding research results have been obtained and published in each of the various sub-disciplines (see below). Under the leadership of Prof. Dr. Emil List-Kratochvil, a cluster initiative (“em@work”) was launched in the field of functional materials. Working groups of the Department are participating in an Interdisciplinary Centre “Life in Space and Time”.

Important publications 2021–2022

Department of Geography

Main research topics

The Department has a diverse research portfolio, but focuses primarily on research into the interactions between people and the environment in the context of global change. In particular, this includes research on climate change, change in land use and food security, global health, biosphere transformation and biodiversity loss, urbanisation, and issues of equity in the context of environmental and social sustainability. Researchers at the Department regularly contribute to public debates and decision-making processes, for example on topics such as the gentrification and transformation of cities, extinction of global species and climate change.

Research highlights 2021–2022

In 2021–2022, the Department made significant contributions to research on urbanisation, change in land use, climate change and nature conservation, among other things, which is also reflected in the high number and quality of publications. New third-party funded projects were launched during this period concerning global water security, sustainable land use, nature-based solutions in cities and urban climate change. The Einstein Research Unit Climate and Water under Change (CliWaC) in Berlin/Brandenburg started in 2022 together with many other colleagues at HU, TU, FU and non-university institutions (e.g. IGB). The ERC Consolidator Grant SystemShift was also introduced during this period. Support came from various funding bodies such as the European Union, the Federal Ministry of Education and Research (BMBF), the German Research Foundation (DFG) or also the Einstein Foundation. The Department has been significantly involved in a number of scientific networks, such as Future Earth (various networks), Geo.X. or the Landsat Science Team.

Important publications 2021–2022

Department of Computer Science

Main research topics

The Department of Computer Science is primarily dedicated to three key research areas, each of which comprises several research groups: “Data and Knowledge Engineering” (fundamentals, design and application of algorithms and tools for processing large, volatile and possibly unstructured data sets), “Algorithms and Structures” (research into fundamental principles underlying the efficient solvability of problems) and “Model-Based System Development” (methods and tools for modelling, developing and analysing large-scale computer science systems).

Research highlights 2021–2022

- In the context of the Collaborative Research Centre 1404 “FONDA – Foundations of Workflows for Large-Scale Scientific Data Analysis” (spokesperson: Ulf Leser), which is based at the Department, two junior professorships were filled: Thomas Kosch (Human-Computer Interaction for Scientific Software) and Joel Rybicki (Distributed Computing).
- Graduates of the Department have been awarded many prizes: Dissertation Prize of the HU Berlin (Meike Zehlike), Tiburtius Prize of the Berlin Universities (Phillipp Schoppmann) and Dissertation Prize Adlershof (Jannes Münchmeyer).
- An Einstein Strategic Professorship for Process Science (Jan Mendling) has been established at the Department, to which a research group at the Weizenbaum Institute for the Networked Society is also assigned.

Important publications 2021–2022

Department of Mathematics

Main research topics

- Basic research in algebra and geometry: This area includes the research groups of Algebraic and Arithmetic Geometry (Klingler, Farkas, Kramer, Groß-Klönne), Differential Geometry (Mohnke, Schüth, Wendl, Walpuski) and Mathematical Physics (Staudacher, Borot).
- Applied Mathematics with the research focus on Mathematical Statistics (Reiß, Spokoiny), continuous and nonsmooth Optimisation with partial differential equations (Hintermüller, Hante, Walther) as well as Applied Analysis and Numerical Approximation of partial differential equations with and without constraints (Mielke, Zwicknagl, Carstensen, Tischendorf).
- Mathematics and its Didactics (Kramer, Filler, Wilke Berenguer).

Research highlights 2021–2022

- ERC Advanced Grant “Tame Geometry and Transcendence in Hodge Theory (TameHodge)” for Bruno Klingler (2021–2026).
- Fields Medal for former HU postdoc Maryna Viazovska (EPF Lausanne) in 2022. The decisive discovery on sphere packing in dimension 8, which led to the award of the Fields Medal, took place in Adlershof in 2014.
- Further development of the Cluster of Excellence MATH+.
- MATH+ Distinguished Fellowships for Gavril Farkas, Bruno Klingler and Alex Mielke (2022).

Important publications 2021–2022

Department of Physics

Main research topics

With twenty full professorships, three bridge professorships into other fields of the natural sciences, five junior research groups, as well as numerous honorary and “S”-professorships, which ensure an intensive exchange with non-university research institutes in the Berlin area and especially at the Adlershof location, the spectrum of topics researched at the Department of Physics is very broad. It ranges from research into the most fundamental questions of our understanding of nature – the structure of time and space, and matter and the forces of nature – to the targeted use of quantum phenomena based on photons, individual atoms or atoms in crystalline solids, and the design and production of novel hybrid inorganic-organic material systems for optoelectronic applications, to the description of complex systems such as the climate, social networks or pandemics, as well as didactic questions.

Research highlights 2021–2022

In the years 2021 and 2022, a number of large-scale research projects with spokespersonships at the Department of Physics were approved. Noteworthy are, among others, the Berlin Quantum Alliance and an Einstein Research Unit of the Berlin University Alliance – both on the topic of quantum information processing, as well as FAIRmat, a consortium of the German National Research Data Infrastructure (NFDI) for condensed matter physics. Also worth mentioning is the role of a colleague as coordinator of an ERC Synergy Grant. At the end of 2022, the IRIS research building was ceremoniously handed over to Humboldt-Universität. It is now being used intensively by the Center for the Science of Materials, which was also founded in 2022.

Important publications 2021–2022

Research in the Faculty is characterised by interdisciplinary topics. The One Health approach represents a joint consideration of human, animal and environmental health and their interfaces. Research is conducted on agriculture, food and nutrition security, the biochemical and molecular basis of infection models and neurological processes, but also on biological, experiential and behavioural environmental factors that determine mental health. The second focus area, Life in Transformation, studies sustainable and resilient food systems, among other things, which go hand in hand with a change in resource-related behavioural patterns, business models and value chains, as well as societal regulation. The transformations of living conditions have far-reaching consequences for mental health. Research components of this interface also include theoretical methods and modelling, which also connect the molecular, cellular and entity-based research levels. From the perspective of neuroscience, the description of human and animal behaviour and its explanation as a function of the nervous system, both from the perspective of psychology and biology, is crucial here. The focus on spatial and quantitative life sciences provides the framework for a corresponding Interdisciplinary Centre.
Albrecht Daniel Thaer Institute of Agricultural and Horticultural Sciences

Main research topics
Research at the Thaer Institute is conducted under the guiding principle of “sustainable food production in a social context”. It is divided into four central research areas: 1) Sustainable food production: resource-conserving and climate-friendly agricultural and horticultural production systems; 2) Protection and use of resources and biodiversity in agricultural systems; 3) Transformation of agricultural and food systems; 4) One Health: integrated health of humans, animals, plants and ecosystems.

Research highlights 2021–2022
During the reporting period, several collaborative projects funded by the German Federal Ministry of Education and Research (BMBF) and the German Academic Exchange Service (DAAD) started at the Thaer Institute: The FoodCLIC project aims to develop and implement integrated urban food policies that ensure access to healthy, affordable and sustainably produced food through an innovative conceptual framework (CLIC). The aim of the InNuSens project is to generate transdisciplinary knowledge that will lead to the improvement of existing and the establishment of new nutrition-sensitive value chains for underutilized horticultural crops in East Africa. Additionally, in 2022, the junior research group PECan was launched, focusing on key issues related to climate change.

Important publications 2021–2022

The BMBF junior research group “PECan”, headed by Achim Hagen, explores the interactions between climate, political and financial systems.
Main research topics

The Department of Biology is one of the liveliest and most interactive life science departments in Europe. Our broad research spectrum, ranging from molecular bioscience, structural and systems biology to biodiversity, addresses questions at experimental and computational levels. Numerous third-party funded collaborations and training networks enliven the research fields of neuroscience, quantitative biology, biophysics with optogenetics and infection biology.

Research highlights 2021–2022

- 2021 Albert Lasker Award for Basic Medical Research for Prof. Peter Hegemann
- 2021 Einstein Professorship for Theoretical Neurophysiology for Prof. Susanne Schreiber
- 2021 Max Planck Fellowship for Prof. Marc Erhardt
- 2022 Louisa Gross Horwitz Prize for Prof. Peter Hegemann
- 2022 The German Science and Humanities Council (WR) approves new building for Optobiology
- 2022 Approval of 2nd funding period for CRC 1315 (Spokesperson: Prof. Matthew Larkum)
- 2022 Hosting of the 21st International Conference on Systems Biology
- 2022 Einstein Foundation Award: Doctoral Program for the International Doctoral Program in Computational Neuroscience at the BCCN Berlin
- 2022 Berlin Nature Conservation Prize for the project “Urbanity & Diversity” to researchers at the Späth Arboretum of the HU

Important publications 2021–2022

Department of Psychology

Main research topics

Since its foundation, the Department of Psychology has followed the tradition of an empirical natural science. The overriding goal is a better understanding of human experience and behaviour. Three main research areas are the study of the bio- and neuroscientific foundations, the acquisition of knowledge for the prevention, diagnosis and therapy of mental disorders, and the research and design of healthy working and living conditions throughout the entire human lifespan.

Research highlights 2021–2022

The reporting period saw the start of funding for the German Centre for Mental Health (DZPG) at the Berlin-Brandenburg site (Prof. Dziobek & Prof. Lüken) and funding for the DFG research group “Towards Precision Psychotherapy for Non-respondent Patients: From Signatures to Predictions to Clinical Utility” (FOR 5187; Prof. Lüken). Together with partner universities from the USA, a NIH grant could be obtained on the topic “Is the Worsening of Midlife Health and Well-Being a US or Cross-Cultural Phenomenon?” (Prof. Gerstorf). The ERC Consolidator Grant funded project “How Visual Action Shapes Active Vision (VIS-A-VIS)” (Prof. Rolfs) started its work, as did the BUA Exploration Project on Social Cohesion (Prof. Specht, Prof. Hess, Prof. Gerstorf together with colleagues from HU, FU and TU). The development of the study aptitude test for the Bachelor of Psychology, funded by the state of Berlin, was completed and used for student selection in winter semester 21/22 & winter semester 22/23 (Prof. Ziegler).

Important publications 2021–2022

The spectrum of subjects at the Faculty of Humanities and Social Sciences (KSBF) ranges from predominantly humanities-oriented subjects such as cultural history and theory, art and visual history, and archaeology to educational and social sciences, as well as Asian and African studies, extending to rehabilitation and sport science. In addition, the Center for Transdisciplinary Gender Studies (ZtG) and the Berlin Institute for Empirical Integration and Migration Research (BIM), two central, HU-wide research institutions, are affiliated with the KSBF. This wide range of different disciplinary cultures and – qualitatively and quantitatively oriented – empirical research paradigms is reflected in the diverse academic profile of the Faculty. In recent years, however, some thematic focal points have emerged that are also researched across disciplines and departments: In addition to the thematic complex of migration/inclusion, this is particularly true for questions of gender and diversity research as well as for the Digital Humanities. The academic profile of the KSBF is also underpinned by numerous large-scale projects (clusters of excellence, junior research groups, etc.) and international collaborations, including those within the framework of Humboldt-Universität’s strategic partnerships.
Department of Archaeology

Main research topics

Research at this Department focuses on (field) archaeology, object and image studies on the one hand, and semiotic and linguistic issues on the other. Focal points include: research on settlements and cities, sanctuaries, tombs and landscapes (in Egypt, Greece, Italy, Jordan, Sudan, Cyprus) as well as on phenomena of image-based representation and communication; the development of language and writing as well as the formation and development of registers in the course of multimodal communication; history of collections. A special focus lies upon the Digital Humanities.

Research highlights 2021–2022

- Digitisation: increased use of digital knowledge generation and transfer (e.g. 3D technology for researching the Athenian Agora, Villa of Sorrento, Forum Romanum), 3D Lab & Digital Lab AKNOA
- Field research projects in Egypt (Ramses City, Valley of Kings), Italy (Capo di Sorrento, Ostia, Pietragalla), Jordan (Petra), Sudan (Musawwarat as-Sufra’), Cyprus
- Approval of new third-party funded projects, including research on Cypriot territorial states (DFG-ANR), research on the city centre of Petra (DFG), research on the City of Ramses (DFG)
- Subproject “Register Knowledge in Ancient Egypt” in CRC 1412
- Organisation of workshops and conferences, e.g. “Berliner Arbeitskreis Junge Ägyptologie”, “Register in Ancient Languages”
- Initiative for barrier-free science communication using the example of the project “Pi-Ramesse: Explore the Capital of Ramses II.”

Important publications 2021–2022

Main research topics

“New Area Studies” are the Department’s trademark, within which regions are understood as open and dynamic configurations along a scale of local-regional-transregional-global. This concept is implemented by means of research projects on topics such as migration and (digital) mobility, multilingualism, religion, gender and social justice. These combine social, cultural and linguistic approaches and can be assigned to the Department’s focal areas of Cultural Politics, Linguistic Ecologies in Transition and Fragmented Lines of Social Structures.

Research highlights 2021–2022

- Innovation: Various online conferences were organised at the IAAW, including: the annual conference of the African Theatre Association in July 2021, the congress of the Association pour l’étude des littératures africaines in September 2021 and the international conference “West-Central African Linguistic History Between Macro-Sudan Belt and Niger-Congo: Commemorating Diedrich Westermann’s Legacy and the 100th Anniversary of the Professorship for African Languages in Berlin” in November 2021.
- Cutting-edge research: With the launch of the ERC project “Domestication of ‘Hindu’ Asceticism and the Religious Making of South and Southeast Asia” (ERC Synergy Grant, 2019), the IAAW was able to win another international collaborative project.
- Awards: “The International Quarterly for Asian Studies (IQAS)” published at the IAAW was awarded the HU Berlin’s Open Access Award 2022.

Important publications 2021–2022


Department of Education Studies

Main research topics
The Department offers research-based and profession-oriented research, teaching and continuing education on education and learning along the course of life. It considers its research to be education and educational sciences that are social-science-based and humanities-based, as well as interdisciplinary and internationally oriented, with the following cross-sectional topics: basic questions of educational science, pedagogical organisations, the professionalisation of pedagogical staff in all types of schools and all other areas of the education system, pedagogical action, teaching, lecturing and learning in general and vocational education along the course of life, participation, diversity, inequality and inclusion research as well as dealing with digitisation in educational contexts.

Research highlights 2021–2022
In addition to numerous smaller projects, a total of twelve third-party funded projects were brought to a successful conclusion in 2021–2022, including in the areas of basic research, teaching-learning research, professional competences of teachers, digitisation, continuing vocational training and historical educational research. Furthermore, with the support of the German Government and Federal States Tenure-Track Programme for the support of early-career researchers, the Department has created the W2 professorship “Education Studies with a Focus on Gender and Diversity”, which has expanded the profile of the Department since 2021.

Important publications 2021–2022
Research highlights 2021–2022

- Prof. Dr. Iris Därmann was awarded the prestigious Sigmund Freud Prize for Academic Prose 2022. The prize is awarded to academics who publish in German and make a decisive contribution to the development of language use in their field through an outstanding linguistic style.

- In 2021/22, Prof. Dr. Liliana Ruth Feierstein was a member of the working group jointly set up by the Central Council of Jews, The Standing Conference of the Ministers of Education and Cultural Affairs and the Federal and State Commission of anti-Semitism agents to work on a recommendation for dealing with anti-Semitism in schools.

- Prof. Dr. Claudia Mareis was involved in the development of the exhibition "Design Lab #13. Material Legacies" at the Museum of Decorative Arts (Kunstgewerbemuseum) Berlin (Nov. 2022).

- For her master’s thesis “Making Matter Active Through Form. Fabricating Bio-Inspired Behaviour With Auxetic Structures”, Heidi Jalkh was awarded the HU's “Research to Innovation” innovation prize in 2022.

Main research topics

In the reporting period, research at the Department of Cultural History and Theory was characterised by three main topics – 1.) a history of knowledge and science that is just as interested in the knowledge cultures of the natural sciences and humanities as in those of the design disciplines, in certified and implicit, subversive and marginalised knowledge, 2.) a cultural history of politics, which is concerned with the cultural preconditions for politics and with the forms of the emergence, organisation and practice of politics, 3.) a media theory and history that, in close exchange with the Cluster of Excellence “Matters of Activity”, also includes analogue media and design practices in a post-digital perspective.

Important publications 2021–2022

Department of Art and Visual History

Main research topics

At the Department of Art and Visual History, research is done on how architecture as well as artistic and other imaging processes have evolved in history and shape the present. The combination of approaches from both image history and image theory makes it possible to critically examine the current dynamics of images – in politics and science, cultural and religious conflicts. At the Department of Art and Visual History, the potential of methods from art history and the humanities is used to interrogate historical continuities, upheavals and narratives of progress, as well as the medial construction of reality.

Research highlights 2021–2022

In the winter semester of 2022, the lecture series “Under Shelling. Art Historical Revisions in the Light of the War in Ukraine” sparked lively public interest. The lecture series organised by the Department of Art and Visual History in collaboration with the Mori-Ôgai Memorial and the Department of Asian and African Studies on transcultural exchange processes between Japan and the “West” was also presented to an interested audience. Claudia Blümle curated the exhibition “Stretching Materialities” at the Theatre of Veterinary Anatomy as part of the Cluster of Excellence “Matters of Activity”, which was accompanied by performances, interactive guided tours and workshops. The DFG project “National Heritage”, led by Charlotte Klonk, in which the Act on the Protection of Cultural Property (KGSG) is being researched in the tense relationship between public interests and private property, began its work. In addition, the newly developed Census Hertziana Fellowship was advertised for the first time and awarded to the Ecuadorian cultural historian Juan Mantilla.

Important publications 2021–2022

Department of Musicology and Media Studies

Main research topics

Musicology focuses, among other things, on the area of (digital) edition philology; in the reporting period, work continued on the long-term editorial project of a historical-critical online edition of Felix Mendelssohn Bartholdy’s correspondence (DFG, since 2017). Further research foci include Historical Musicology, Transcultural Musicology, Popular Music Studies and Systematic Musicology. Media studies pursues an experimental-technical approach in the fields of media theory, media archaeology, digital media and media aesthetics, with facilities such as the signal lab, the media archaeological collection, the media studio, the media technology workshops and the media theatre. Another focus is on the intersections of media history and the history of knowledge.

Research highlights 2021–2022

In September 2022, the International Max Planck Research School “Knowledge and Its Resources” was launched, a cooperation between the Max Planck Institute for the History of Science and the three Berlin universities (HU, FU, TU), with two of the three speakers (Viktoria Tkaczyk and Christine von Oertzen) belonging to our Department. The Department has successfully acquired further third-party funding projects: “Audible Temporality. How Time is Structured in – and through – Music” (Einstein Foundation Berlin, 2019–2023) and “Second World Music: Latin America, East Germany, and the Sonic Circuitry of Socialism” (DFG, 2020–2026). It is also involved in the long-term edition project: “Erich Wolfgang Korngold Work Edition” (start 2021, duration: 25 years; a project of the Berlin-Brandenburg Academy of Sciences and Humanities and the Academy of Sciences and Literature Mainz). The Department played a leading role in organising the annual conference of the German Musicological Society on the topic of “Nach der Norm: Musikwissenschaft im 21. Jahrhundert” (September/October 2022). It also organised the symposium “Musik und das Unheimliche” in October 2021 and the conference “Akustische Interfaces” in May 2022.

Important publications 2021–2022

Department of Rehabilitation Sciences

Main research topics

The main topics and research activities of the Department are grouped around the following three thematic clusters: 1.) Inclusive Education, 2.) Language and Communication, 3.) Rehabilitation and Participation. These research topics can be linked to the faculty’s main topics of migration, integration and inclusion as well as diversity and heterogeneity research. The wide variety of concrete research activities of our Department ranges from basic research to practical research with direct application relevance.

Research highlights 2021–2022

A highlight in 2022 was the award of the European Language Label to the European research project “Promoting Deaf/Hard of Hearing Children’s Theory of Mind and Emotion Understanding (ProToM)” (Sign Language and Audio-pedagogy, Claudia Becker), which was completed in August 2021. In addition, the annual conference of the Research Training Group “Inclusion – Education – Schools: Analyzing Processes of Social Participation”, funded by the Hans Böckler Foundation, took place in October 2022, organised by members of the Department and the Center for Inclusion Research Berlin (ZfIB). The conference “Spaces and Limits of Inclusion: Interdisciplinary Research Results” presented 65 contributions to inclusion research. In the same year, the research project “Images and Imagination of Impairment and Disability in the Hans Würtz Collection” (Oliver Musenberg, HU Berlin/Simon McKeown, University of Teesside/UK) was approved. The project is funded by the DFG and the British AHRC.

Important publications 2021–2022


The research project “ProToM” was awarded the European Language Label.
Department of Social Sciences

Main research topics

The following four focal areas shape the profile of the Department of Social Sciences: 1.) Democracy and Transformation, 2.) Migration and the Urban World, 3.) Social and Political Inequalities, 4.) Work and Lifestyle.

Research highlights 2021–2022

- Gottfried Wilhelm Leibniz Prize 2021 for Steffen Mau
- “Urban Futures at Risk” (project funded by the Einstein Foundation Berlin; project head: Talja Blokland)
- “The Impact of COVID-19 on Public Support for the European Union (COVIDEU)” (project funded by the Volkswagen Foundation; project head: Heike Klüver)
- RTG 2458: “The Dynamics of Demography, Democratic Processes and Public Policy (DYNAMICS)” (Participating PIs from the Department: Anette Fasang, Johannes Giesecke, Heike Klüver, Steffen Mau, Hanna Schwander)
- EXC 2055/1: “SCRIPTS” (PIs involved from the Department: Anette Fasang, Johannes Giesecke, Heike Klüver, Steffen Mau, Christian Volk)

Important publications 2021–2022

Main research topics
The continuous expansion of teacher training in the field of sport was a major challenge for the Department of Sport Science during the pandemic. These tasks were mastered well and the establishment of the division of Sports Psychology was also successfully implemented during this time. The junior professorship with tenure-track option has already hired two new employees from third-party funded projects at the end of 2022, who are working on the topic of positive emotions in sport and school sport.

Research highlights 2021–2022
One of the Department’s research foci relates to analyses of voluntary and honorary engagement in sport-related structures of civil society – especially in sports clubs. In the reporting period, the EiS-CP project “Effects of the COVID-19 Pandemic on Sports (Clubs)” was completed and the BLEIB project on the civic engagement of sports clubs in peripheral rural areas of the new federal states was launched. Numerous research projects and publications in the field of sports medicine and sports psychology were realised, particularly in connection with the COVID-19 pandemic. In 2021, the division of Training and Movement Sciences, together with academics from the Charité, the BMS, the Zuse Institute and the FU Berlin, established a DFG research group on the topic of “The Dynamics of the Spine: Mechanics, Morphology and Motion Towards a Comprehensive Diagnosis of Low Back Pain”.

Important publications 2021–2022
Center for Transdisciplinary Gender Studies

Main research topics
Due to the structure of the Center for Transdisciplinary Gender Studies, the main topics arise mostly from the research of the individual professorships and staff members. They lie – often transdisciplinary – in various fields of the humanities, cultural studies, natural sciences, law and social sciences. Particularly noteworthy are: Gender and law/legal gender studies; Gender and health; Gender and globalisation with a focus on feminist economic critique; Gender and postcolonialism; Family/reproductive technologies; Care/work and social inequality; Life writing and queer literary studies.

Research highlights 2021–2022

Conferences:
- “Diverse Families: Parenthood and Family beyond Heteronormativity and Gender Binary” (2021)
- “Unsettling Archives” in cooperation with the Program in Gender & Sexuality Studies; Princeton University (2022)

Third-party funded projects:
- BMBF collaborative project “New Approaches for Integrating Gender Into Environmental Health Research” (2017–2022)
- Joint research project funded by a Princeton-HU Strategic Partnership Grant: “Re-Imagining the Archive: Sexual Politics and Postcolonial Entanglements” (2019–2023)

Important publications 2021–2022

The four departments of the Faculty of Arts and Humanities are highly research-oriented and regularly occupy top national and international positions in relevant rankings. The cultivation of strongly developed and independently represented subject-specific research foci and the significant collaboration in numerous larger interdisciplinary and cross-faculty joint projects are closely linked. Focal points in which researchers from different departments cooperate within the Faculty are, in particular, Digital Humanities as well as Science Studies and History of Science. The research intensity of the departments of the Faculty is evident not least in an exceptional balance of third-party funding for the humanities.
Research highlights 2021–2022

In 2021–2022, there was an outstanding appointment of a junior professor at the Department: Annina Loets (Theoretical Philosophy: Metaphysics and Epistemology), who received the Stegmüller Award of the Society for Analytic Philosophy in 2022. The Centre for Social Critique was extended in 2022 for a second funding period until 2028. A three-year project on “The Ethics of Future Persons, Contractualism and Directed Duties” was approved by the DFG in 2021. The 11th International Congress of the Society for Analytic Philosophy, “Philosophy and the Public”, was organised at the Department of Philosophy in 2022 with 700 participants from more than 30 countries. In 2022, a member of the Department received a Starting Grant from the European Research Council on normativity.

Important publications 2021–2022

Department of History

Main research topics

Research at the Department of History (IfG) is broad and diverse, both in terms of content and methodology. Two overarching research foci of the IfG are concerned with Europe in the global world and with digitality, mediality and historicity. As part of the Department’s/Faculty’s focus area of Heritage, Memory and Society, the IfG realises a wide range of activities and cooperations that have a significant impact in Berlin’s institutional landscape as well as nationally and internationally.

Research highlights 2021–2022

The Department carried out numerous collaborative projects this year and was thus able to strengthen its main thematic areas. These included “Landscapes of Persecution – Recording and Analysis of Political Repression in the Soviet Occupation Zone and the German Democratic Republic” (BMBF), the DFG Priority Programme “Experience and Expectation: Historical Foundations of Economic Behaviour” and the project “Acta Cusana. Sources on the Life History of Nicholas of Cusa”, for which two further volumes of the edition have been completed. Since December 2021, the Federal Ministry of Education and Research (BMBF) has been funding a four-year project “AI-SKILLS: Application-oriented Infrastructure for AI-Communities in Settings for Teaching and Learning” on digital history.

Important publications 2021–2022

Department of European Ethnology

Main research topics
The Department’s research is organised into “laboratories”. Laboratories are spaces across status groups in which topic areas are elaborated upon. The question of the generation of everyday social order and its constantly disputed transformation through socio-cultural, political-economic, technological and ecological key developments is at the centre of all laboratories. We use multi-modal ethnographic methods to empirically pursue these key developments, particularly in the areas of digitisation (of labour), climate impacts & sustainability, urbanisation, post-migrant Europe and gender & sexuality.

Research highlights 2021–2022
The Department has placed particular focus on three areas: Firstly, we have been able to ethnographically emphasise how social relations to nature are changing as a result of current evidence production and data-driven practices. Secondly, the Department has further developed legal and labour research ethnographically, focusing in particular on critical and feminist perspectives. Thirdly, post- and decolonial approaches continue to play a role through historical research as well as research on current social developments.

Important publications 2021–2022
Main research topics
The Department of Library and Information Science investigates how processes of knowledge transfer, quality assurance and processing can be facilitated by means of information infrastructures. The research has four main areas of focus: Information Infrastructures, Information Experience, Openness and Literacy. With this specialisation, the Department occupies a unique position in Germany.

Research highlights 2021–2022
Outstanding research results include the Societal Impact Webpage of the Mercator project “Navigating Societal Impact” (https://societalimpact.de/), the Quidex platform (https://hu.berlin/quidex) from the DFG project “What Matters? Key Passages in Literary Works” and the publication of the classification for interdisciplinary research fields in the Research Core Data Set (https://www.kerndatensatz-forschung.de). The “teaching space” concept was rethought in IBITwin, the IBI’s digital twin, and a guideline on research data management for theses was introduced at the IBI. New research projects on looted material in public libraries (NS-looted Books), on the spread of misinformation in the health sector (DESIVE²), on specialised information services and information needs (FID BBI) and on the skills required for dealing with artificial intelligence (AI-SKILLS) began their work. The Best Paper Awards for outstanding research papers went to M. Gäde and V. and J. Dinneen and H. Bubinger for their contribution (below).

Important publications 2021–2022
DEPARTMENT PROFILES

Faculty of Language, Literature and Humanities

DEAN 2021–2022: Prof. Dr. Stefan Kipf

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The Faculty’s departments conduct research in the fields of literature, cultural studies and the humanities, (art) history, linguistic (including multilingual) knowledge, linguistic diversity and language development, digital methods and specialised didactics. The Collaborative Research Centre “Register” researches situational and functional language variability and promotes junior researchers in an integrated graduate school. The DFG Research Training Group “The Literary and Epistemic History of Small Forms” allows early-career researchers to carry out research in the field of small forms of writing. The Franco-German doctoral programme (HU Berlin – Univ. Paris) conducts research on “Literature and Knowledge, 16th–21st Centuries”. Faculty members are involved in leading roles in clusters of excellence such as “Temporal Communities” and “Matters of Activity”. Other focal points include didactic topics such as the classical languages at Berlin schools, second and multilingualism in English lessons and “Conceptual Thought” as a method. One subject area researched by several departments is the history of Jews, Yiddish, anti-Semitism, and the portrayal of Jews in literature. Another interdisciplinary complex is the cultural-scientific dimensions of medicine and its history, its cultural practices and identity constructions. The Faculty’s diverse research activities are also manifested in a number of other projects in the areas of identity, bias research, the body, migration and cultural transfer as well as global linguistic knowledge; in literary theory, the history of genres, knowledge and science, gender studies, popular culture, media history, children’s and youth literature, neighbourhood language, “conversational brains”, religious concepts or the nodes of Old Norse research paradigms.
Department of German Literature

Main research topics

The Department’s research is long-term oriented towards literary and cultural studies. An important role, linking several professorships, is held in particular by topics such as the relationships between literature and media (for example, in the project “Cultural and Media History of the Groschenheft” as well as in the area of children’s and youth literature), literature and knowledge, as well as the relationships between literature and the history of science in the humanities. Three of the Department’s research groups possess and work on important source material by Christa and Gerhard Wolf, Heiner Müller and the Brothers Grimm. A particular focus during this period was also on the history and theory of genres and forms, for example as part of the work of the DFG Research Training Group “Small Forms” (since 2017).

Research highlights 2021–2022

- DFG project “What Matters? Key Passages in Literary Works”
- DFG project “Research Platform Literary Field GDR: Authors, Works, Networks”
- Completion of the Thyssen project “The Mosse-Women: Key Patterns in Four German-Jewish Lives in Search of Recognition, Professional Achievement and Personal Emancipation”
- Participation in the DFG research group FOR 5022: “Medicine and the Temporal Structure of the Good Life”
- Completion of the work of the Thematic Network (DAAD) “Literature – Knowledge – Media” (2015–2022)

Important publications 2021–2022


HEAD OF DEPARTMENT 2021–2022
Prof. Dr. Michael Kämper-van den Boogaart

DEPARTMENTAL STRUCTURE
With its eleven full professorships, one junior professorship and seventeen positions for research assistants (seven of which are permanent), the Department combines the fields of German Medieval Studies, Modern German Literature, Didactics and Comparative Literature, which are traditionally located in separate departments. On the one hand, the work unfolds along a continuous historical axis; on the other hand, the professorships – according to their denominations – set systematic accents beyond the field of philology and literary history, especially in the areas of media and cultural studies, gender theory, literature in the system of the arts, literary theory, children’s and youth literature and comparative literature.

WEBSITE
https://www.literatur.hu-berlin.de/de

Three research groups work on important source material by Christa and Gerhard Wolf, Heiner Müller and the Brothers Grimm.

10.75 Professorships in 2022 (HU in total: 350 in full-time equivalents [BVZÄ])
232 T€ Third-party funding expenditure by professor in 2022 (HU in total: Ø 390 T€)
10 Doctorates completed in 2022
32 Ongoing BUA and third-party funded projects at the Department in 2022
Main research topics

The research focuses on linguistic inquiries into German and typologically (un)related languages from synchronic and diachronic perspectives, with a primary goal of understanding linguistic variation. The theoretical framework is closely aligned with empirical methods, including corpora, field studies, and language production analyses. Essential research infrastructure, like the faculty’s central laboratory, has been established, complemented by initiatives prioritizing research data management and digital methods.

Research highlights 2021–2022

In 2020, the Department of German Studies and Linguistics took the lead in securing funding for the CRC 1412 “Register”, which investigates situational and functional influences on linguistic behaviour. The Marie Skłodowska-Curie Innovative Training Network “Conversational Brains” deals with adaptation between interlocutors in dialogues. The DFG research group FOR 2537 “Emerging Grammars” focusses on linguistic dynamics, especially in language contact. The BUA project 511 “Labor Know-How as Shared Resources” is a cooperation between the IdSL, Charité, Department of Library and Information Science and the Department of Rehabilitation Sciences. The “Open Humboldt Freiräume” project “Berlin spricht!” developed an interactive digital language map “Languages of Berlin” (https://typlab.linguistik.hu-berlin.de/karte/) with visualisations of important places for Berlin’s language communities.

Important publications 2021–2022

Main research topics
Since 2018, researchers at the Department of Northern European Studies have been researching the holdings of the “Princess Library” deposited in the Berlin State Library as an example of around 300 years of German-Swedish and pan-European cultural transfer. The interdisciplinary research project is being carried out in collaboration with German, Swedish, Dutch and French researchers. The aim is to shed light on different aspects of the library’s current book collection, history, and cultural significance.

Research highlights 2021–2022
In 2021, the Chair of Literary Studies launched the podcast “nordlitt. Skandinavische Literaturforschung im Gespräch”. In 2021, the Chair of Cultural Studies completed the long-term research and publication project “Das Baltikum. Geschichte einer europäischen Region”. In the same year, a research project on German-Finnish relations was started. The Chair of Linguistics continued its research project “Register Emergence and Register Change in Germanic” in the CRC 1412 “Register” in cooperation with Prof. Karin Donhauser and Prof. Lars Zeige (Department of German Studies and Linguistics). In the winter semester 2021/22 and summer semester 2022, the Chair of Medieval Studies received the Award for Excellence in Teaching by the Faculty of Language, Literature and Humanities for the project “Verfemte feministische Forschung sichtbar machen”. The Norwegian Henrik Steffens Visiting Professorship was dedicated to German-Scandinavian book and library history.

Important publications 2021–2022

The completion of the long-term research and publication project “Das Baltikum. Geschichte einer europäischen Region” was achieved.

3
Professorships in 2022 (HU in total: 350 in full-time equivalents [BZÄ])

143 T€
Third-party funding expenditure by professor in 2022 (HU in total: Ø 390 T€)

-12
Doctorates completed in 2022

Ongoing BUA and third-party funded projects at the Department in 2022
Department of Romance Studies

Main research topics

Literary Studies is firmly oriented towards cultural studies and interacts with disciplines such as geography, sociology, psychology, philosophy, among others; Linguistics is characterised above all by its consideration of the structural and socio-historical factors of language change as well as dialectal and communicative variation; Didactics, which is already configured as multilingual, is constantly confronted with transculturality and inclusion. These perspectives are closely intertwined and collectively attest to the interdisciplinarity of Romance Studies at Humboldt-Universität.

Research highlights 2021–2022

In addition to continuing the research projects of 2019–2020 (such as the Research Training Group module in CRC 1412 “Register”, the publication of the volumes of the “Nouvel Atlas Linguistique de la Corse” and the European platform for the thought and work of Simone Weil, in which various members of the Department are involved) and the cooperation with the cultural departments of the Romance-speaking countries, the increasing internationalisation of the Department of Romance Studies was reflected in new projects in the period 2021–2022. Iberoromania and Latin America in particular were taken into account: From joint seed funding with the University of Zurich on possessive nominal constructions in Andalusian and Canarian Spanish to a senior fellowship at the Maria Sibylla Merian Centre Conviviality-Inequality in Latin America in São Paulo for the research project “Interspecific Convivialities: Street Dogs in Latin America”. At the end of 2022, the Franco-German Research Training Group “Literature and Knowledge, 16th–21st Centuries” (HU Berlin – Univ. Paris 3) was launched.

Important publications 2021–2022

Main research topics

Research in literary and cultural studies focuses on the one hand on cultural practices and discursive configurations of the self, on exchange processes between literature and historical forms of knowledge as well as transnational diasporic literature and art, and on the other hand on theory formation in queer, trans and gender studies as well as critical whiteness and intersectionality research. Linguistic research covers syntax, semantics and pragmatics in theoretical as well as computational linguistics, experimental pragmatics and topics in empirical English linguistics. The main topics of didactic research are multilingualism in English teaching, racism-critical foreign language research and approaches to professionalisation in teacher training.

Research highlights 2021–2022

In the field of literary and cultural studies research, the ERC Consolidator Grant “Tales of the Diasporic Ordinary. Aesthetics, Affects, Archives (TODO)”, the binational project “Queer Theory in Transit: Reception, Translation, and Production of Queer Theory in Polish and German Contexts (QUEERIT)” and the “8th Weight Stigma Conference” in July 2022 put new emphasis on postcolonial studies, queer and gender theory and fat studies. Funded by the Friedrich Ebert Foundation and the Berlin Senate Department for Education, Youth and Family, the English didactics division is launching a three-year transfer and school development project “Join the Debate” with the participation of seventy teachers. All professors in English linguistics continue their research within the CRC 1412 “Register”.

Important publications 2021–2022

Department of Slavic and Hungarian Studies

Main research topics

- Transregional perspectives: Soviet and world literature in cultural history (imperial history) (ELC); Underground in Central/Eastern Europe [CEE] (ELC, WLC), Nation Building in CEE and the Western Balkans (ELC, WLC, SL)
- Multilingualism & Migration: Transnational & translingual literature (ELC, WLC, HL); Migration, Diaspora, Multiculturalism (SL); Grammatical innovations (EL, WL); Languages of origin (DR, EL, WL, SL)
- Language system: Grammar, Pragmatics & Intonation (WL); Register & Syntax (EL, WL); Sentence linkages (EL); Teaching materials and competences in the teaching profession (DR); Linguistic mediality (HL)
- Digital Humanities and Corpus Linguistics (DR, ELC, EL, WL, SL)

Research highlights 2021–2022

- Collaborative projects: EXC 2020: “(Post-)Soviet Literary Cosmopolis” (Frank); DFG-FOR “RUEG”: “Dynamics of Verbal Aspect and (Pro)nominall Reference in Language Contact” (Szucsich/Gagarina/Alexiadou); CRC 1412 “Register”: “Expressive Dislocation and Register in Czech & Russian” (Meyer/Szucsich)
- Individual projects: “Migration and Cultural Transfer between Germany and the Albanian Western Balkans” (Voß, BMBF); 3 x DFG Temporary position (Belarusian Literature – Ananka; Eastern Europ. Animation – Rogoff; Migration and Cultural Transfer Germany/Albanian Western Balkans – Jusufi); “Modelling the Question-Statement Opposition in Slavic Languages (QueSlav)” (Meyer, Šimík/Prague, DFG/GAČR), “The History of Pronouns in the Languages of Northern Europe” (Meyer, Willis/Oxford, DFG/ AHRC)

Important publications 2021–2022

Department of Classical Philology

Main research topics

The common interest is the history, theory and transmission of knowledge of ancient literature, culture and science, as well as their post-ancient reception and transformation. This is particularly evident in the treatment of Greek scientific literature, Hellenistic poetry, classical and late ancient Latin literature, the history of ancient medicine, the history of ancient language teaching and the search for language-sensitive Latin teaching as well as Digital Classics. Other important activities include involvement in university politics (Dean’s Office, Academic Senate) and professional politics ("Deutscher Alphilologenverband"), as well as involvement in academic associations ("Berliner Antike-Kolleg", Berlin-Brandenburg Academy of Sciences and Humanities).

Research highlights 2021–2022

The appointment of Lisa Cordes in 2019 has strengthened the Department’s competence in cultural studies and literary theory. Her Feodor Lynen Scholarship for a one-year stay in Cambridge, which she was able to take up in 2021/22, demonstrates the external recognition. Prof. Dr. Caroline Petit (University of Warwick) came to the Department as a Friedrich Wilhelm Bessel Award winner of the Alexander von Humboldt Foundation with a highly prestigious grant. Dr. Anna Izdebska is a Freigeist Fellow of the Volkswagen Foundation with the project “Visions of the History of Greek Philosophy in Late Antiquity and in the Greek and Arabic Middle Ages”. Prof. Dr. Bettina Reitz-Joosse (Groningen) came as an AvH fellow in September 2022 with her project on battlefield palimpsests in Roman literature.

Important publications 2021–2022


Third-party funding expenditure by professor in 2022 (HU in total: Ø 230 T€)

Professorships in 2022 (HU in total: 350 in full-time equivalents [BVZA])

Doctorates completed in 2022

Ongoing BUA and third-party funded projects at the Department in 2022
### Mono-Faculties & Central Institutes

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<td>8</td>
<td>Central Institute Hermann von Helmholtz-Zentrum für Kulturtechnik</td>
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Main research topics

The research profile of the Faculty includes the classic core areas of business administration and economics as well as quantitative methods from the fields of econometrics, statistics and data science. The profile is complemented by research foci on, for example, the effects of transparency on economic processes, the deviation of rational decision-making behaviour in economic processes, mechanisms of new types of financing, economic principles of digitalised markets and behavioural economic implications for explaining current economic processes, such as sustainability, as well as empirical research projects on labour markets and migration issues.

Research highlights 2021–2022

- Acquisition of the research group FOR 5363 “Fusing Deep Learning and Statistics towards Understanding Structured Biomedical Data (DeSBi)” (AI funding initiative of the DFG; with Hasso Plattner Institute, Universität Potsdam, Charité – Universitätsmedizin Berlin)
- European Winter Meeting of the Econometric Society: most important European conference for early-career researchers in economics in December 2022 at the Faculty
- Funding for “Economic Insights: Transfer and Capacity Building” by the Leibniz Association: programme for effective and professional science communication with the participation of the Faculty
- Establishment of the ROCKWOOL Foundation Berlin Institute for the Economy and the Future of Work under the leadership of Alexandra Spitz-Oener (deputy director of the institute and professor of applied microeconomics at the Faculty), among others

Important publications 2021–2022

Main research topics

Since 2004, the Faculty of Law has consistently dedicated itself to three main profiles, which have guided both the appointment policy and the research projects ever since: Internationality, Interdisciplinarity and Practical Relevance. Currently, almost all professorships at the Faculty have international connections, which are reflected in the network of the European Law School, for example, and are also involved in basic subjects such as history of law, philosophy of law, sociology of law, legal theory, comparative law, economic analysis of law or law and religion.

Research highlights 2021–2022

In 2021/22, despite the ongoing restrictions resulting from the COVID-19 pandemic, the Faculty continued to advance major projects. Notably, the Faculty advanced the development of the DFG Research Training Group 2483 “Dynamic Integration – Law in-between Harmonisation and Plurality in Europe (DynamInt)”, which is currently the only DFG-RTG with a legal focus. In collaboration with the Faculty of Humanities and Social Sciences, the IRI Law & Society and the DFG research group KFOR 2235 “The International Rule of Law – Rise or Decline?” were also further developed. Building on the European Law School, the EU-funded research projects EUlysses and Theseus (with Athens) were driven forward with its partner institutions in other EU countries. The Faculty was also involved in the establishment of an Interdisciplinary Centre for Digitalisation at Campus Mitte. Luis Greco was recognized with the 2021 Prize from the Berlin-Brandenburg Academy of Sciences and Humanities for exceptional contributions to the fundamentals of law and economics.

Important publications 2021–2022

Main research topics

Research at the Faculty of Theology is based on three pillars: a traditional strength in source editions – the foundation of all historical work; global international cooperation, with a focus on Southern Africa in addition to the West and Eastern Europe, but also with researchers in Asia and South America; and knowledge transfer, e.g. through the Berlin Institute for Public Theology. A traditional research focus is on the ancient world, including the Ancient Near East. As a second focal point, research on diversity in both past and present has been established.

Research highlights 2021–2022

In 2021, Prof. Dr. Dr. Bernd U. Schipper received an ERC Advanced Grant on the topic "From Texts to Literature: Demotic Egyptian Papyri and the Formation of the Hebrew Bible (DEMBIB)". The newly acquired International Research Training Group “Transformative Religion. Religion as Situated Knowledge in Processes of Social Transformation” was able to start in 2022 together with the Universities of Stellenbosch, Western Cape and Inyuvesi Yakwa-Zulu-Natali under the direction of Prof. Dr. Torsten Meireis. In 2022, Prof. Dr. Dr. h.c. mult. Hans Joas received the German Sociological Association’s prize for an outstanding academic lifetime achievement and an honorary doctorate from Péter Pázmány University in Budapest. The Interdisciplinary Centre “Traditions in Transformations”, which was applied for jointly with the Berlin Institute for Islamic Theology and the Institute for Catholic Theology, was also approved in 2022.

Important publications 2021–2022


DEANS 2021–2022
Prof. Dr. Markus Witte,
Prof. Dr. Dr. Bernd U. Schipper

DEPARTMENTAL STRUCTURE

The Faculty consists of twelve professorships since an endowed professorship for Jewish-Christian relations was filled in spring 2020. The interplay of historically oriented (exegesis of the Old Testament, New Testament, history of Christianity) and contemporary subjects (systematic theology, ethics, practical theology, intercultural theology and religious studies) characterises the Faculty. In this way, historically based contemporary orientation and future perspectives are imparted. Since 1960, the affiliated institute Church and Judaism has been involved in research and knowledge transfer; other institutes were added later.

WEBSITE
https://www.theologie.hu-berlin.de/de

Bernd U. Schipper received an ERC Advanced Grant for his project "DEMBIB".

11.75
Professorships in 2022 (HU in total: 350 in full-time equivalents [BVZÄ])

166 T€
Third-party funding expenditure by professor in 2022 (HU in total: Ø 390 T€)

9
Doctorates completed in 2022

48
Ongoing BUA and third-party funded projects at the Faculty in 2022
Main research topics

The Central Institute for Catholic Theology has established a new programme of “Theological Anthropology” as an interdisciplinary field of research that takes account of the diverse pluralities of modern lifeworlds and identities. Under the title “Theological Anthropology in Plurality”, the concept was discussed with external academics and presented to a broader public at a symposium held in May 2022. In 2022, the IKT, together with the Berlin Institute for Islamic Theology (BIT) and the Faculty of (Protestant) Theology (TF) and in cooperation with the School of Jewish Theology (Potsdam), successfully applied for the establishment of an Interdisciplinary Centre “Traditions in Transformations. Interdisciplinary Centre of Theologies for Research into Cultures of Symbolism, Meaning and Knowledge of Religions”.

Research highlights 2021–2022

For 2021, the conference “Rom in Berlin. 100 Jahre diplomatische Beziehungen zwischen dem Heiligen Stuhl und Deutschland” is particularly noteworthy. It was organised by the IKT under the leadership of Prof. Dr. Günther Wassilowsky in cooperation with the Apostolic Nunciature in Berlin and took place in the presence of Federal Foreign Minister Heiko Maas and Cardinal Secretary of State Pietro Parolin. In the same year, Katharina Pyschny, Benedikt Schmidt and Teresa Schweighofer submitted an application for the research programme “Theological Anthropology in Plurality”. In March 2021, Prof. Dr. Teresa Schweighofer received the Roland Atefie Award of the Austrian Academy of Sciences for her dissertation. In January 2022, Prof. Dr. Felix Körner SJ was appointed Archbishop’s Representative for Islam and a member of the diocesan Commission for Interreligious Dialogue and its board.

Important publications 2021–2022


Main research topics

The Berlin Institute for Islamic Theology takes an inter- and intradisciplinary approach to both historical and contemporary Islamic theology. The focus is on analysing the history of ideas, theological reflection, understanding and questioning pre-modern applied methods and the application of newer methods. Two junior research groups which are funded by the BMBF until the end of December 2023 are realising this interdisciplinarity with particular reference to religious practice. Another important area of ongoing research is Islamic religious education, which focuses on didactic approaches related to the visual arts, instrumental and vocal pedagogy as well as narrative ethics as a method of ethical learning.

Research highlights 2021–2022

Several projects were completed at the BIT, the results of which were made available to the international research community in the form of international final conferences and publications. These include “Wege zu einer Ethik – Neue Ansätze aus Theologie und Recht zwischen modernen Herausforderungen und islamischer Tradition” and “Kanon und Zensur”. The “Linked Open Tafsīr” project contributed to making methods of Digital Humanities productive for Islamic theological studies. The interdisciplinary orientation of each of these projects promoted the networking of research at the BIT with the international research landscape while also promoting further academic penetration of the subject. Furthermore, Prof. Dr. Mira Sievers received the 2021 Young Talent Award of the Berlin Science Award (“Nachwuchspreis des Berliner Wissenschaftspreises”) from the Governing Mayor of Berlin.

Important publications 2021–2022

5. Şeker, N. (2021). Überlieferungsbasierte Koranexegese in Diskursen geschlechter- 
Main research topics
The PSE conducts research into learning and teaching in schools – with a focus on (among other topics) linguistic heterogeneity and diversity – as well as the professionalisation of teachers. In the field of language education, research has focused on the acquisition of register flexibility in teacher training programmes and on corpus-based studies of students’ grammatical and orthographic explanation skills. With regard to inclusion, national and international research was conducted on the effects of (internal) differentiation in the classroom and the perception of inclusive teaching. Based on the work initiated in 2020 on the (school) challenges posed by the COVID-19 pandemic, the research foci were expanded to include digital skills for student teachers, the use of digital learning management systems, the flexibilisation of schools and teaching as well as the (digital) design of pedagogical relationships.

Research highlights 2021–2022
Prof. Beate Lütke heads the DFG-funded sub-project C05 “Development of Specialised Knowledge in Linguistics and Register Flexibility in Early Adulthood” (CRC 1412 “Register”). Internationally, Prof. Marcela Pozas conducted two projects in Mexico on inclusive teaching. The BMBF project “FDQI-HU-MINT” (2019–2023) successfully expanded the research activities on inclusive (subject-specific) didactics and qualification for inclusion in teacher training programmes. The corresponding research results were published with high visibility.

Important publications 2021–2022
Main research topics

The diverse consequences of Brexit as an overarching research focus since 2016 gave way during the reporting period to a new orientation towards an interdisciplinary thematic focus on “Legacies of Empire”. A particular focus of the department of culture/literature was on authors of British origin in Berlin in the period between the world wars, complemented thematically from the historical side by a symposium on “Berlin and the BBC” on the occasion of the 100th anniversary of the BBC. The DFG-funded international research project on the German-British lawyer F.A. Mann, which began in 2020, focussed on law, economics and politics.

Research highlights 2021–2022

The highlights include the exhibition and book publication on “Happy in Berlin? English Writers in the City, the 1920s and Beyond” realised in cooperation with the University of Oxford and, in addition to the aforementioned BBC symposium, the final international conference on the above-mentioned research project on F.A. Mann.

Important publications 2021–2022


The Institute organised an exhibition and book publication on the topic “Happy in Berlin?”.
Main research topics

The HZK makes important contributions in the areas of exhibitions, collecting and cultural techniques, along with innovative approaches in interdisciplinary and transdisciplinary research on a national and international level. This is reflected in research projects and publications as well as in formats geared towards the public, such as its own exhibitions, innovative digital developments and guidelines for research. The departments “The Technical Image” and the Coordination Centre for Scientific Collections in Germany, among others, work in this area. In 2021, the HZK’s research received further support and impetus from the above-mentioned professorships: Daniel Tyradellis, with his extensive expertise in the field of cultural technology and exhibiting, and Sharon Macdonald, who brings her international research unit CARMAH (the Centre for Anthropological Research on Museums and Heritage) to the HZK.

Research highlights 2021–2022

Of the numerous events organised by HZK staff, the “Making Museums Matter” series, which appeals to a broad scientific audience, may be mentioned as an example. The international cultural programme on mental health sponsored by Wellcome, “Mindscapes”, began in 2021 and formed part of an exhibition in the Martin-Gropius-Bau. In July 2021, the Humboldt Lab’s inaugural exhibition, “After Nature”, opened at the Humboldt Forum. It presents historical and current research at the HU and is an ongoing research project of the Third Mission. This also applies to the exhibitions in the Theatre of Veterinary Anatomy, to mention only the exhibitions “Stretching Materialities” and “Daoula/Sheen. West African Silk on its Way”, curated jointly with the Cluster of Excellence “Matters of Activity”.

Important publications 2021–2022

Locations of Humboldt-Universität
Humboldt-Universität is present at many locations in Berlin and has four large campuses.

**CAMPUS MITTE**
Campus Mitte is the oldest campus of HU. It is home to the historic main building Unter den Linden, the departments of the humanities and social sciences faculties, the central university administration and the "Jacob-und-Wilhelm-Grimm-Zentrum", HU's central library.

**CAMPUS ADLERSHOF**
The University's mathematics and natural sciences departments are situated in the south-east of the city. Berlin-Adlershof is home to one of the largest science and technology centres in Europe, offering excellent working conditions for interdisciplinary research and learning.

**CAMPUS NORD**
In the Mitte district lies a green oasis, relatively hidden and only accessible through inconspicuous entrances: Campus Nord. This is where mainly the life sciences departments of HU, along with other renowned scientific institutions in Berlin focusing on life sciences, conduct their research.

**CAMPUS DAHLEM**
Campus Dahlem is dedicated to experimental agricultural and horticultural sciences, providing teaching and research stations for plant, horticultural and livestock sciences. It includes outdoor test areas, animal facilities and greenhouse test facilities.

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**FACULTIES**

Faculty of Mathematics and Natural Sciences
- Department of Chemistry
- Department of Geography
- Department of Computer Science
- Department of Mathematics
- Department of Physics

Faculty of Life Sciences
- Albrecht Daniel Thaer Institute of Agricultural and Horticultural Sciences
- Department of Biology
- Department of Psychology

Faculty of Humanities and Social Sciences
- Department of Archaeology
- Department of Asian and African Studies
- Department of Education Studies
- Department of Cultural History & Theory
- Department of Art and Visual History
- Department of Musicology and Media Studies

Faculty of Arts and Humanities
- Department of German Literature
- Department of German Studies and Linguistics
- Department of Northern European Studies
- Department of Romance Studies
- Department of English and American Studies
- Department of Slavic and Hungarian Studies
- Department of Classical Philology

Department of Rehabilitation Sciences
Department of Social Sciences
Department of Sport Science
Center for Transdisciplinary Gender Studies

**MONO-FACULTIES & CENTRAL INSTITUTES**

Faculty of Economics and Business Administration
Faculty of Law
Faculty of Theology
Central Institute for Catholic Theology
Central Institute Berlin Institute for Islamic Theology
Central Institute Professional School of Education
Central Institute Centre for British Studies
Central Institute Hermann von Helmholtz-Zentrum für Kulturtechnik
## Third-party funding expenditure by faculties and departments in 2022 in EURO

<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Expenditure</th>
<th>Percentage difference from previous year</th>
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<tbody>
<tr>
<td>Faculty of Math. and Nat. Sciences</td>
<td>40 951 489.54</td>
<td>+30 %</td>
</tr>
<tr>
<td>Faculty of Life Sciences</td>
<td>30 108 598.72</td>
<td>+8 %</td>
</tr>
<tr>
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<td>19 076 230.08</td>
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<td>Faculty of Arts and Humanities</td>
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<tr>
<td>Faculty of Language, Literature and Humanities</td>
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<td>+4 %</td>
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<td>Faculty of Law</td>
<td>3 960 723.01</td>
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<tr>
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<tr>
<td>Faculty of Theology</td>
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<tr>
<td>Central Institute Hermann von Helmholtz-Zentrum für Kulturtechnik</td>
<td>1 193 469.68</td>
<td>-7 %</td>
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<td>Central Institute Berlin Institute for Islamic Theology</td>
<td>1 131 275.31</td>
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<td>Central Institute Professional School of Education</td>
<td>483 112.66</td>
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<tr>
<td>Central Institute for Catholic Theology</td>
<td>342 242.18</td>
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</tr>
<tr>
<td>Central Institute Centre for British Studies</td>
<td>190 642.34</td>
<td>-22 %</td>
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### Distribution: Faculty of Mathematics and Natural Sciences

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<th>Department</th>
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<tr>
<td>Department of Chemistry</td>
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<tr>
<td>Department of Geography</td>
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<tr>
<td>Department of Computer Science</td>
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<tr>
<td>Department of Mathematics</td>
<td>7.90%</td>
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<tr>
<td>Department of Physics</td>
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<tr>
<td>IRIS Adlershof</td>
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</tr>
<tr>
<td>IRI on Transformations of Human-Environment Systems</td>
<td>4.68%</td>
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### Distribution: Faculty of Life Sciences

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<th>Institute</th>
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<tbody>
<tr>
<td>Albrecht Daniel Thaer Institute</td>
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<tr>
<td>Department of Biology</td>
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<tr>
<td>Department of Psychology</td>
<td>14.98%</td>
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<tr>
<td>IRI for the Life Sciences</td>
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### Distribution: Faculty of Humanities and Social Sciences

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<th>Department</th>
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<tr>
<td>Department of Archaeology</td>
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<tr>
<td>Department of Asian and African Studies</td>
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<tr>
<td>Department of Education Studies</td>
<td>12.91%</td>
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<tr>
<td>Department of Cultural History and Theory</td>
<td>6.92%</td>
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<tr>
<td>Department of Art and Visual History</td>
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<tr>
<td>Department of Musicology and Media Studies</td>
<td>5.22%</td>
</tr>
<tr>
<td>Department of Rehabilitation Sciences</td>
<td>6.65%</td>
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<tr>
<td>Department of Social Sciences</td>
<td>27.61%</td>
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<tr>
<td>Department of Sport Science</td>
<td>3.36%</td>
</tr>
<tr>
<td>Center for Transdisciplinary Gender Studies</td>
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<tr>
<td>Zentrum für Inklusionsforschung Berlin</td>
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<tr>
<td>Berlin Institute for Empirical Integration and Migration Research</td>
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<tr>
<td></td>
<td>9.10%</td>
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</table>

### Distribution: Faculty of Arts and Humanities

<table>
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<th>Department</th>
<th>Share</th>
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<tbody>
<tr>
<td>Department of Philosophy</td>
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<tr>
<td>Department of History</td>
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<tr>
<td>Department of European Ethnology</td>
<td>26.07%</td>
</tr>
<tr>
<td>Department of Library and Information Science</td>
<td>8.61%</td>
</tr>
<tr>
<td>Robert K. Merton Center for Science Studies</td>
<td>4.32%</td>
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</table>

### Distribution: Faculty of Language, Literature and Humanities

<table>
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<th>Department</th>
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<tbody>
<tr>
<td>Department of German Literature</td>
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<tr>
<td>Department of German Studies and Linguistics</td>
<td>26.56%</td>
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<td>Department of Northern European Studies</td>
<td>5.61%</td>
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<tr>
<td>Department of Romance Studies</td>
<td>4.15%</td>
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<tr>
<td>Department of English and American Studies</td>
<td>17.07%</td>
</tr>
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<td>Department of Slavic and Hungarian Studies</td>
<td>9.21%</td>
</tr>
<tr>
<td>Department of Classical Philology</td>
<td>4.81%</td>
</tr>
</tbody>
</table>
RESEARCH ACTIVITIES

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58 RESEARCH REPORT 2021–2022
The Berlin University Alliance (BUA) has been funded as a group in the Universities of Excellence funding line of the German governments’ Excellence Strategy since 2019 and consists of four institutions: Freie Universität Berlin, Humboldt-Universität zu Berlin, Technische Universität Berlin and Charité – Universitätsmedizin Berlin.

The partner institutions share the common vision of turning Berlin into an integrated research environment and one of Europe’s leading science hubs. In order to reach this goal, the Alliance has defined five Objectives: 1.) developing Berlin-wide joint research agendas focusing on societal issues of global importance, 2.) fostering a Berlin-centered network of research and knowledge exchange, 3.) bundling Berlin expertise for assessing and developing general standards for research quality and value, 4.) establishing a Berlin-wide integrated space for careers and recruitment, and 5.) creating a Berlin-wide network of research services and infrastructures. Three additional Cross-Cutting Themes shape the joint agenda: supporting diversity and gender equality, promoting research-based teaching and learning, and advancing strategic internationalization.
Since the initiation of funding for the Berlin University Alliance, various competitive procedures in the field of research have been announced in which HU researchers have been successful. In the early years of the BUA, the focus was particularly on the Grand Challenge Initiatives “Social Cohesion” and “Global Health”. These initiatives aim to address the major questions of the 21st century and thus to confront its global challenges – the Grand Challenges. In the years 2021–2022, more calls for proposals were published for the other objectives and cross-cutting themes of the BUA. Also, the topic for a third Grand Challenge Initiative was identified through a collaborative process of participants from academia and society: “Responsible Innovation in Times of Transformation”.

### Focusing on Grand Challenges

#### Global Health

The second Grand Challenge Initiative of the Berlin university consortium of excellence focuses on global health. During the preceding reporting period, the emphasis was on making a tangible and swift contribution to pandemic research. By the end of 2021, five innovative exploration projects and a sixth strategic project were selected for funding under the main call “Determinants of Global Health: Exploring Biological, Human-made & Environmental Factors.” These projects address a diverse range of topics, including urban mental health, planetary health, healthcare and migration, and antimicrobial resistance. The alliance projects are funded for a duration of three years and are intended to pave the way for larger research endeavors in the long term.

<table>
<thead>
<tr>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-Scaling Global Health. Human Health and Multispecies Cohabitation on an Urban Planet</td>
</tr>
<tr>
<td><strong>HU PROJECT HEADS:</strong></td>
</tr>
<tr>
<td>Prof. Dr. Sandra Jasper (Department of Geography), Prof. Dr. Ignacio Farías Hurtado, Prof. Dr. Jörg Niewöhner (both Department of European Ethnology)</td>
</tr>
<tr>
<td><strong>FUNDING PERIOD:</strong> October 2022 to December 2025</td>
</tr>
<tr>
<td>Exploring urban human-animal-environment relationships and how they affect human health in urban spaces forms the basis of this project. The project thus investigates the multiple links between health, biodiversity, and environmental pollution. Conceptually, the aim is to advance a theory and practice of multispecies urbanism that views the environment not as a passive backdrop but as an active agent co-producing urban space and affecting human health.</td>
</tr>
</tbody>
</table>

### Fostering Knowledge Exchange

#### Experimental Science Communication Laboratories

- **AnthropoScenes. Making Sustainable Futures Public**
  - **SPOKESPERSON:** Prof. Dr. Jörg Niewöhner (Department of European Ethnology)
  - **FUNDING PERIOD:** July 2021 to June 2024
  - AnthropoScenes connects theatre and science – with water in the spotlight. On stages in Berlin and markets in Brandenburg, artists and researchers experiment with different audiences to debate and develop sustainable water futures. The aim is open dialogues across all corners of the region and integrate these conversations, stories and ideas into further artistic and scientific works. The project is embedded in the Einstein Research Unit Climate and Water Under Change (CliWac), an interdisciplinary research consortium studying the effects of climate change on water in Berlin-Brandenburg.
  - [https://www.anthroposcenes.de/](https://www.anthroposcenes.de/)

The excellence alliance has set the goal of promoting the participation of and exchange with societal partners in the research process, increasing the credibility of research and facilitating free access to research results. Since April 2021, a total of six interdisciplinary collaborative projects have been funded as experimental laboratories for science communication.
Funded HU projects from 2021 to 2022

Towards Critical Migrations Studies: How To Decolonize Research on Migration?

GROUP LEADERS: Ali Niroumand, Firoozeh Farvardin, Rosella Merullo

INSTITUTIONAL AFFILIATION OF THE GROUP: Department of Social Sciences

FUNDING PERIOD: October 2021 to March 2022

This X-Student Research Project, presented as a block seminar, explores and analyzes emerging theories and approaches that stress the necessity of decolonization, transnationalism, and intersectionality in studying migration and migratory issues. The research question of the seminar is indeed both an ethical and critical one: how we can conduct research (in the field of migration studies) without (re-)producing certain norms and power relations that not only negatively impact our outcomes but also contribute to further oppression and exploitation of objects/subjects of the research.

#UniToo? Sexualized Harassment, Discrimination and Violence at Berlin Universities

GROUP LEADERS: Lina Knorr, Dr. Tanja Wälty

INSTITUTIONAL AFFILIATION OF THE GROUP: Department of Asian and African Studies

FUNDING PERIOD: April 2022 to July 2022

Sexualized harassment, discrimination and violence (SBDG) are parts of a phenomenon that occurs in its various forms in all areas of society. German universities as places where SBDG happens, however, generally remain unnoticed. This is exactly where the X-Student Research Group comes in. We will be investigating the phenomenon of SBDG at Berlin universities on the level of the actors and on the organizational level of the universities. Through the participatory research approach, the project focuses on the perspective of the students; the research will not simply be about students, but with students.
The University Library (UB), with its ten locations, provides researchers, teachers and students with literature, information, learning spaces and research information infrastructure. In order to expand its services and meet current requirements, such as open access publishing, the UB itself is also conducting third-party funded projects, which are funded by the German Research Foundation (DFG) and the Federal Ministry of Education and Research (BMBF), among others. These projects foster productive collaborations within the HU and beyond. To develop comprehensive expertise, the various projects carried out at the University Library are interconnected, in the field of digitization, for example, between the BUA projects on the digitization of collections and the digitization project of the Social and Cultural Anthropology Information Service. The cross-departmental and location-spanning e-Research working group facilitates discussions on ongoing research projects and third-party initiatives, involving the Computer and Media Service as well.
Future e-Research Support in the Humanities II (FuReSH II): Digital Humanities Competence Center

**PROJECT HEADS:** Martin Lee, Sophie Eckenstaler (University Library)

**FUNDING PERIOD:** February 2022 to February 2025

**FUNDING BY:** German Research Foundation (DFG)

The University Library operates the Digital Humanities Competence Center at the “Grimm-Zentrum” as part of the “Future e-Research Support in the Humanities II” project funded by the German Research Foundation (DFG) for an initial three years (2022-2025). The project addresses the central promises of digitality and the Digital Humanities: Participation as well as critical reflection on a new epistemic paradigm and genuinely new insights for the humanities and cultural studies. The goal is to support researchers at Humboldt-Universität zu Berlin in their digital transformation and to teach digital tool literacy. To this end, the DH Competence Center offers various formats such as individual consultations, workshops, or lecture series. In addition, the team supports smaller research projects and contributes its expertise in digital methods, computational processes, and research software engineering.

https://sammlungen-digitale.hu-berlin.de
https://sammlungenonline.humboldtforum.org

Open Access Publication Funding

**PROJECT HEADS:** Katja Braschoß, Christian Winterhalter (University Library)

**FUNDING PERIOD:** January 2022 to December 2024

**FUNDING BY:** German Research Foundation (DFG)

The University Library has been successfully raising funds from the DFG since 2018 to finance open access publishing by members of the HU. In 2022, a total of 129 articles and 21 monographs could be published in open access through third-party funding from the University Library. In the funding period 2022 to 2024, a reliable and efficient concept for financing publication costs for open access articles in reviewed academic journals and for open access books will be continued and expanded by means of corresponding publication funds, transformation agreements and other models. Comprehensive measures in terms of publication data collection, cost data determination, workflow development and cross-university coordination are undertaken. Thereby, Humboldt-Universität zu Berlin is actively participating in structural adaptation and development to foster a sustainably designed and transparent transformation towards open access.


Book Acquisitions During the Nazi Era: Provenance Research at the University Library

**PROJECT HEAD:** Dr. Yong-Mi Rauch (University Library)

**FUNDING PERIOD:** June 2022 to June 2024

**FUNDING BY:** German Lost Art Foundation

During the Nazi era and beyond, academic libraries in Germany received large quantities of confiscated and looted books. Since June 2022, the University Library has been conducting a systematic review for book acquisitions between 1933 and 1945 in order to investigate unlawful backgrounds of acquisitions. In the process, around 63,000 items are being examined based on the originals and the preserved archive holdings. The aim is to restitute these books to their rightful owners and institutions in accordance with the Washington Principles of 1998. In addition, the injustices committed will be publicly and visibly documented. The project is funded by the German Lost Art Foundation.

https://link.ub.hu-berlin.de/buecherwege

Digitization of University Collections: Measures for the Digitization and Visualization of Object-Related Collections (MDVOS)

**PROJECT HEAD:** Dr. Yong-Mi Rauch (University Library)

**FUNDING PERIOD:** May 2021 to February 2023

**FUNDING BY:** Federal Government Commissioner for Culture and the Media (BKM); Humboldt Forum Foundation

Academic work with collections is an established cross-disciplinary activity at Humboldt-Universität zu Berlin. Through a collaborative project with the Humboldt Forum Foundation, the digitization of collection holdings has significantly advanced. Since 2021, a total of approximately 79,000 object units (271,000 image units) have been created and annotated with metadata, coordinated by the University Library. These holdings belong to eight HU collections, which are also on display in the Humboldt Forum exhibition, and include models, objects, photo collections, maps and archival materials. The project directly supports research efforts, both through the structured provision of data in sustainable standards and through digital research environments. Due to their poor state of preservation and their unique materiality, some of the resources can only now be effectively made accessible to researchers, for example large stocks of negative image sources.

https://sammlungen-digitale.hu-berlin.de
https://sammlungenonline.humboldtforum.org

Specialized Information Service for Social and Cultural Anthropology (FID SKA)

**PROJECT HEAD:** Matthias Harbeck (University Library)

**FUNDING PERIOD:** January 2022 to December 2024

**FUNDING BY:** German Research Foundation (DFG)

Since 2016, the Specialized Information Service for Social and Cultural Anthropology (FID SKA) has received funding from the DFG and has been jointly operated with the Qualservice research data service centre at the University of Bremen since 2019. In its third funding phase, in addition to providing literature and a research portal (www.evifa.de/en), the organisation of the Colonial Contexts network, the management of norm data, and the handling of sensitive qualitative research data from ethnological fields are the main focuses of its work. FID SKA positions itself as the interface between research and infrastructure, striving to support ethnological research through its services, establish national and international collaborations, and simultaneously bring ethnological perspectives on infrastructure-related issues into the library landscape.

https://www.evifa.de/en
COORDINATED PROGRAMMES OF THE GERMAN RESEARCH FOUNDATION (DFG)
The German Research Foundation (DFG), the largest national research funding institution financed by the federal and state governments, provides interdisciplinary funding for both individuals and coordinated programmes involving several researchers.

Collaborative Research Centres (CRC) are research networks established for a duration of up to twelve years in which researchers collaborate in subprojects on a common topic across the boundaries of their respective disciplines. The programme variant CRC-Transregio (CRC-TRR) allows close supraregional cooperation between different academic institutions.

Research Training Groups (RTG) and International Research Training Groups (IRTG) serve to promote and qualify early-career researchers within the framework of a focused research programme.

Research Units (FOR) and Centres for Advanced Studies in the Humanities and Social Sciences (KFOR), which are specially tailored to research in the humanities and social sciences, support the close interdisciplinary cooperation of several outstanding academics.
CRC-TRR 190/2: Rationality and Competition: The Economic Performance of Individuals and Firms

**SPOKESPERSON:**
Prof. Dr. Georg Weizsäcker (Faculty of Economics and Business Administration)

**HU SUBPROJECT HEADS:**
Prof. Dr. Dirk Engelmann, Prof. Dr. Georg Weizsäcker, Prof. Dr. Daniel Klapper, Prof. Dr. Alexandra Spitz-Oener, Prof. Dr. Roland Strausz, Prof. Dr. Anastasia Danilov, Prof. Dr. Anja Schöttner, Prof. Dr. Nikolaus Wolf, Prof. Dr. Sonja Greven (all Faculty of Economics and Business Administration), Prof. Dr. Ulrich Horst (Department of Mathematics)

**FUNDING PERIOD:**
1st funding period: January 2017 to December 2020
2nd funding period: January 2021 to December 2024

The CRC-Transregio 190 combines the research programmes of behavioural and neoclassical economists to study applied economic questions that are of high policy relevance. The CRC’s focus is on the economic behaviour and performance of individuals and firms. The CRC will analyse the allocative consequences and the economic policy implications of different aspects of rationality and deviations from rationality in competitive environments. An important empirical question is in what environments behavioural biases have a quantitatively large effect and under what circumstances the standard, neoclassical model is sufficient to explain observed behaviour.

https://rationality-and-competition.de/

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CRC 1315/2: Mechanisms and Disturbances in Memory Consolidation: From Synapses to Systems

**SPOKESPERSON:**
Prof. Dr. Matthew Larkum (Department of Biology)

**HU SUBPROJECT HEADS:**
Prof. Dr. Richard Kempter, Prof. Dr. Michael Brecht, Prof. Dr. Marina Mikhailova, Prof. Dr. Matthew Larkum, Prof. Dr. Susanne Schreiber, Prof. Dr. York Winter, Prof. Dr. Peter Hegemann (all Department of Biology), Prof. Dr. Benjamin Lindner (Department of Physics)

**FUNDING PERIOD:**
1st funding period: July 2018 to June 2022
2nd funding period: July 2022 to June 2026

The Collaborative Research Centre 1315 focuses on systems memory consolidation. That is, it investigates not only how memory-related structures in the brain retain long-term information but how the brain transforms this information into facts, knowledge, and skills that correspond to specific memories. This topic can be seen as one of the central issues in brain research, and it is also an ideal topic for a CRC because it is challenging to tackle by individual laboratories working alone. During the first funding period, a series of highly relevant new topics were identified, which are to be systematically addressed in the second funding period. These include 1.) the nature of memory-related activity generated in the hippocampus, 2.) the transfer of information from the medial temporal lobe to neocortex, 3.) the refinement of ensembles of cells for encoding memories (engrams), 4.) the role of sleep, 5.) memory loops, and 6.) how brain stimulation influences memory.

https://www.sfb1315.de/
CRC 1078/3: Protonation Dynamics in Protein Function

**SPOKESPERSON:**
Prof. Dr. Joachim Heberle (Freie Universität Berlin)

**HU SUBPROJECT HEADS:**
Prof. Dr. Holger Dobbek, Prof. Dr. Athina Zouni, Prof. Dr. Peter Hegemann, Prof. Dr. Franz Bartl (all Department of Biology)

**FUNDING PERIOD:**
1st funding period: January 2013 to December 2016
2nd funding period: January 2017 to December 2020
3rd funding period: January 2021 to December 2024

Central mechanistic principles of protein function, such as the lock-and-key principle in substrate binding, have been identified over the past decades. CRC 1078 has proposed to put a further key principle into place, namely the control and coordination of complex protein functions by protonation dynamics. Spatio-temporal fluctuations of the functionally relevant hydrogen-bonded networks result from protonation dynamics, that is, the movement of protons on various time and length scales – from femtoseconds to seconds and from less than 0.1 to more than 10 nm. The experimental works are actively linked to theory and simulations to achieve a profound understanding of protonation-dependent mechanisms in the selected proteins. Different facets of protonation dynamics have been and will be studied in two central proteins involved in biological energy conversion: Oxygen reduction coupled to proton pumping in cytochrome c oxidase and water oxidation in photosystem II. The latter will be amended by a new project on protonation dynamics in photosystem I.

[https://www.sfb1078.de/](https://www.sfb1078.de/)

CRC-TRR 154/3: Mathematical Modelling, Simulation and Optimization Using the Example of Gas Networks

**SPOKESPERSON:**
Prof. Dr. Alexander Martin (University of Erlangen-Nuremberg)

**HU SUBPROJECT HEADS:**
Prof. Dr. Falk Hante, Prof. Dr. Andrea Walther, Prof. Dr. Caren Tischendorf (all Department of Mathematics)

**FUNDING PERIOD:**
1st funding period: July 2014 to June 2018
2nd funding period: July 2018 to June 2022
3rd funding period: July 2022 to June 2026

The “turnaround in energy policy” is currently in the main focus of public opinion. It concerns social, political and scientific aspects as the dependence on a reliable, efficient and affordable energy supply becomes increasingly dominant. On the other side, the desire for a clean, environmentally consistent and climate-friendly energy production is stronger than ever.

It is the goal of the CRC-Transregio 154 to provide answers to the questions and challenges of an efficient gas supply by means of mathematical modelling, simulation and optimization and thus to offer solutions on a new quality standard. In order to achieve this goal, new paradigms in the integration of these disciplines and in particular in the interplay between integer and nonlinear programming in the context of stochastic data have to be established and brought to bear.

CRC 1265/2: Re-Figuration of Spaces

**SPOKESPERSON:** Prof. Dr. Martina Löw (Technische Universität Berlin)

**HU SUBPROJECT HEADS:**
Prof. Dr. Ilse Helbrecht, Prof. Dr. Elmar Kulke (both Department of Geography), Prof. Dr. Ignacio Farias Hurtado (Department of European Ethnology), Prof. Dr. Steffen Mau, Prof. Dr. Talja Blokland (both Department of Social Sciences)

**FUNDING PERIOD:**
1st funding period: January 2018 to December 2021
2nd funding period: January 2022 to December 2025

The CRC 1265 investigates current processes of the spatial reordering of society as a “re-figuration of spaces”. Conceiving of sociality as an essentially spatial phenomenon, it seeks to develop an empirically-based theory of contemporary social change that views social change as a form of processual, spatial-communicative refiguration.

In the first funding phase, the CRC’s work focused on elaborating basic concepts of social theory related to the spatiality of society, and on empirically identifying the qualitative features of refiguration. For the second funding phase, three key priorities have been outlined: Research will 1.) highlight the role of conflicts in processes of spatial construction, particularly in and between different spatial figures. This inherently conflict-theoretical focus is 2.) linked to an in-depth exploration of the phenomenon of polycontexturalization and the way it is subjectively managed. Focusing on these similarities and differences, as well as the multiple interconnections between the spaces studied in widely different societies around the globe, the CRC will continue to systematically pursue its comparative perspective concerning 3.) multiple spatialities.

[https://sfb1265.de/en/](https://sfb1265.de/en/)

CRC 1294/2: Data Assimilation – The Seamless Integration of Data and Models

**SPOKESPERSON:** Prof. Dr. Sebastian Reich (Universität Potsdam)

**HU SUBPROJECT HEAD:** Prof. Dr. Markus Reiß (Department of Mathematics)

**FUNDING PERIOD:**
1st funding period: July 2017 to June 2021
2nd funding period: July 2021 to June 2025

The seamless integration of large data sets into sophisticated computational models provides one of the central research challenges for the mathematical sciences in the 21st century.

When the computational model is based on evolutionary equations and the data set is time-ordered, the process of combining models and data is called “data assimilation”. The assimilation of data into computational models serves a wide spectrum of purposes ranging from model calibration and model comparison all the way to the validation of novel model design principles. The field of data assimilation has been largely driven by practitioners from meteorology, hydrology and oil reservoir exploration. However, a theoretical foundation of the field is largely missing. Furthermore, many new applications are emerging from biology, medicine, and cognitive neuroscience, for example. These fields need novel data assimilation techniques. The goal of the CRC is therefore twofold: 1.) to develop principled methodologies for data assimilation, and 2.) to demonstrate the computational effectiveness and robustness of these methodologies, by implementing them in established and novel application areas.

[https://www.sfb1294.de/](https://www.sfb1294.de/)
CRC 1449/1: Dynamic Hydrogels at Biointerfaces

SPOKESPERSON:
Prof. Dr. Rainer Haag (Freie Universität Berlin)

HU SUBPROJECT HEAD:
Prof. Dr. Oliver Seitz (Department of Chemistry)

FUNDING PERIOD:
January 2021 to December 2024

The overarching goal of the CRC 1449 is to define the key physicochemical parameters that determine protective hydrogel function at biological interfaces in health, and abnormalities in disease for prospective development of novel therapeutic strategies. To achieve this goal, a detailed analysis of the physical, chemical and biological properties of synthetic and native hydrogels (i.e. mucus and glycocalyx) will be conducted. The focus lies on the individual and combined contributions of hydrogel components and their functional impact on airway and intestinal surfaces constituting the largest bio-interfaces covered by hydrogels in the human body. In this context, studies of exemplary pulmonary and gastrointestinal diseases will be included, where abnormal hydrogels have been implicated as important determinants of pathogenesis.

https://www.sfb1449.de/

CRC 1512/1: Intervening Arts

SPOKESPERSON:
Professor Dr. Jürgen Brokoff (Freie Universität Berlin)

HU SUBPROJECT HEAD:
Prof. Dr. Silvy Chakkalakal (Department of European Ethnology)

FUNDING PERIOD:
January 2022 to December 2025

Today, perhaps more than ever, the arts claim to have an impact on society. Globally, they aim to alter social processes, to interfere in political conflicts, and to create public spheres. Artistic movements such as Participatory Art, Artivism, Climate-Change Art, and Nature Writing bear witness to the presence of global crises and social conflicts: The arts involve themselves in struggles for democracy, human rights, and fair global power structures; they address various crises, from climate change to the COVID-19 pandemic; they outline new ways of living and working. In order to describe this political involvement of artistic poiesis, the Collaborative Research Centre 1512 proposes the term intervening arts. This guiding concept supports the exploration of new forms of artistic sociality and artistic creation of society. In this context, the historicality of contemporary arts as reflected in references to forms and procedures of the avant-garde movements and their variations in the 20th and 21st century is of particular importance.

RTG 2190/2: The Literary and Epistemic History of Small Forms

SPOKESPERSON:
Prof. Dr. Ethel Matala de Mazza (Department of German Literature)

PARTICIPATING HU RESEARCHERS:
Prof. Dr. Ruth Conrad (Faculty of Theology), Prof. Dr. Jörg Dünne (Department of Romance Studies), Prof. Dr. Philipp Felsch (Department of Cultural History and Theory), Prof. Dr. Susanne K. Frank (Department of Slavic and Hungarian Studies), Prof. Dr. Anke te Heesen (Department of History), Prof. Dr. Stefan Kipf, Prof. Dr. Ulrich Schmitzer (both Department of Classical Philology), Prof. Dr. Steffen Martus, Prof. Dr. Hans Jürgen Scheuer, Prof. Dr. Joseph Vogl (all Department of German Literature), Prof. Dr. Helga Schwalm (Department of English and American Studies)

FUNDING PERIOD:
1st funding period: April 2017 to September 2021
2nd funding period: October 2021 to March 2026

Outlines, abstracts, notes, protocols, previews, essays, articles, etc. have become indispensable in the practice of research and education as well as in media and the arts. The Research Training Group 2190 will advance the analysis of small forms by exploring their literary and epistemic history in the long historical arc extending from antiquity to the present day. With its systematic focus on literature, science, and popular culture, the programme seeks, firstly, to determine which small forms emerge within each of these domains with their specific writerly and representational procedures. The chief goal is to examine how these forms control, reflect, criticise, and (mediaspecifically) channel processes of communication. Secondly, the programme will analyse the development and circulation of small forms in exchanges between different domains.

https://www.kleine-formen.de/

IRTG 2706/1: Transformative Religion: Religion as Situated Knowledge in Processes of Social Transformation

SPOKESPERSON:
Prof. Dr. Torsten Meireis (Faculty of Theology)

PARTICIPATING HU RESEARCHERS:
Prof. Dr. Andreas Feldtkeller, Prof. Dr. Henrik Simojoki (both Faculty of Theology), Prof. Dr. Naika Foroutan (Berlin Institute for Empirical Integration and Migration Research), Prof. Dr. Baz Lecocq (Department of Asian and African Studies), Prof. Dr. Regina Römhild (Department of European Ethnology)

FUNDING PERIOD:
January 2022 to June 2026

The German–South African International Research Training Group 2706 investigates the impact of religion on processes of social transformation and the impact of these transformations on religion in contemporary global societies. It aims at a critical epistemology through which the situatedness of religious knowledge production and reception in processes of social transformation can be made the subject of research. In case studies from contexts in the Global South and North, the IRTG seeks to investigate religion as specifically situated knowledge functioning as a resource and as a site of social transformation. It engages scholars from two continents and a variety of disciplines to go beyond conventional research approaches. The IRTG’s studies are conducted within four thematic fields in which the relationship of religion and social transformation is approached empirically: national identity, development, migration and healing.

https://www.transformative-religion.de/
RTG 2130/2: Minor Cosmopolitanisms

**SPOKESPERSONS:**
Prof. Dr. Lars Eckstein, Prof. Dr. Anja Schwarz  
(both Universität Potsdam)

**PARTICIPATING HU RESEARCHER:**
Prof. Dr. Regina Römhild (Department of European Ethnology)

**FUNDING PERIOD:**
1st funding period: October 2016 to March 2021  
2nd funding period: April 2021 to September 2025

The RTG 2130 works to establish new ways of studying and understanding the cosmopolitan project beyond its Euro-centric legacies. It attempts to overcome a divide between “major” sociological and philosophical readings of cosmopolitanism that characterise cosmopolitan thought as either “actually existing” or normative ideal. The RTG straddles both perspectives by investigating cosmopolitanisms as emerging in a plurality of locally embedded representational and performative practices. Such practices combine visions of transcultural justice, peace and conviviality with an ethical commitment to cultural difference. They engender/generate cosmopolitanisms in a “minor” mode, by eking out new subject positions within the dominant discourses. In this context, the adjective “minor” in the Research Training Group denotes a programmatically postcolonial perspective. However, unlike in the initial phase of the programme, it is intended that minority positions are played against established cosmopolitan discourses less, and instead, broader alliances are actively sought.

[https://www.uni-potsdam.de/en/minorcosmopolitanisms/](https://www.uni-potsdam.de/en/minorcosmopolitanisms/)

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RTG 2248/2: Global Intellectual History – Transfers, Circulation of Ideas, Historical Actors (18th–20th Century)

**SPOKESPERSON:**
Prof. Dr. Sebastian Conrad (Freie Universität Berlin)

**PARTICIPATING HU RESEARCHERS:**
Prof. Dr. Andreas Eckert, Prof. Dr. Manja Stephan-Emmrich (both Department of Asian and African Studies), Prof. Dr. Hannes Grandits, Prof. Dr. Alexander Nützenadel (both Department of History)

**FUNDING PERIOD:**
1st funding period: April 2017 to September 2021  
2nd funding period: October 2021 to March 2026

When writing the global history of the modern world (18th–20th century), one crucial aim is to explain processes of intellectual entanglement, and the transregional and cross-cultural transfer of concepts and ideas. While in the realms of the international state system, the global economy, and infrastructure and communications policies, the establishment of global standards has been well documented, the emergence of shared ideas, concepts, norms, and ideologies was a multifaceted and highly complex process. What factors brought it about? Who contributed to their development? Which ideas were able to cross borders and under which conditions? A global historical approach should allow for a more complete understanding of a global history of ideas and concepts, as well as their respective roles in processes of global integration. To this end, the Research Training Group 2248 aims to explore the field of global intellectual history.

[https://www.gih.global-history.de/](https://www.gih.global-history.de/)
RTG 2638/1: Normativity, Critique, Change

SPOKESPERSON:
Prof. Dr. Georg W. Bertram (Freie Universität Berlin)

PARTICIPATING HU RESEARCHERS:
Prof. Dr. Rahel Jaeggi, Prof. Dr. Thomas Schmidt (both Department of Philosophy), Prof. Dr. Christoph Möllers (Faculty of Law)

FUNDING PERIOD:
October 2021 to March 2026

The Research Training Group 2638 seeks to study a specific structure of normative practices common to art, law, religion, language and morality. These practices are characterized by the way in which they are always bound to standards; but at the same time, they are also defined by the fact that when actors engage in these forms of practice, they critically reflect upon and distance themselves from these very same standards. The group will take an interdisciplinary approach to this essential aspect aiming to grasp the ways in which critical reflection might be understood as a constitutive component of these practices’ dynamics. The realization of standards can lead to transformation, but transformation can itself become a standard of, for example, artistic practices.

FOR 2265/2: Law – Gender – Collectivity: The Contested General and the New Common

SPOKESPERSON:
Prof. Dr. Beate Binder (Department of European Ethnology)

HU SUBPROJECT HEAD:
Prof. Dr. Susanne Baer (Faculty of Law)

FUNDING PERIOD:
1st funding period: January 2018 to June 2021
2nd funding period: July 2021 to June 2024

Among the most contentious issues of western democracies are questions about belonging and participation. Law plays a central role here – either as a reference point for the formulation of claims, or as a goal for the shifting of existing borders. Out of this dynamic, new social conflicts, such as about antidiscrimination laws and the rights of workers, illustrate to whom the state belongs, about the rights of fleeing persons, and broadly about the possibility of equal participation for all in the practice of civic autonomy (Jürgen Habermas). Against this backdrop, the interdisciplinary Research Unit 2265 focuses on the relationship between law, sex/gender and collectivity. The goals of the research group are thus, firstly, added theoretical value for the fields of both legal studies and gender studies, and, with this specific focus, secondly, achieving a unique contribution to understandings of the meaning of collectivity in late modern societies from a transnational perspective.

https://www.recht-geschlecht-kollektivitaet.de/en/

FOR 2537/2: Emerging Grammars in Language Contact Situations: A Comparative Approach

SPOKESPERSON:
Prof. Dr. Heike Wiese (Department of German Studies and Linguistics)

HU SUBPROJECT HEADS:
Prof. Dr. Anke Lüdeling, Prof. Dr. Heike Wiese, Dr. Oliver Bunk, Prof. Dr. Dr. h.c. Artemis Alexiadou, Dr. Anna Shadrova (all Department of German Studies and Linguistics), Prof. Dr. Luka Szucsich (Department of Slavic and Hungarian Studies)

FUNDING PERIOD:
1st funding period: April 2018 to March 2021
2nd funding period: April 2021 to August 2024

The Research Unit 2537 investigates the linguistic systems and linguistic resources of bilingual speakers from families with an immigrant history, "heritage speakers", in both of their languages (heritage and majority language) across formal and informal, written and spoken communicative situations. Taking a distinctly competence-oriented perspective on linguistic repertoires, an exploration will be conducted into noncanonical phenomena as indicators of new grammatical options, and their grammatical structure will be analyzed. Investigation will encompass speakers of Russian, Turkish, and Greek as heritage languages in Germany and the U.S., in addition to German as a heritage language in the US, as well as monolingual controls for majority and heritage languages.

FOR 5187/1: Towards Precision Psychotherapy for Non-Responder Patients: From Signatures to Predictions to Clinical Utility

SPOKESPERSON: Prof. Dr. Ulrike Lüken (Department of Psychology)
HU SUBPROJECT HEADS: Prof. Dr. Lydia Fehm, Dr. Kevin Hilbert, Prof. Dr. Norbert Kathmann (all Department of Psychology)
FUNDING PERIOD: August 2020 to July 2023

Although cognitive-behavioural therapy (CBT) is a first-line treatment for internalising disorders, a substantial proportion of patients fails to benefit – with severe consequences for patients and costs for societies. Precision mental health can help to identify patients at risk for non-response (NR) already prior to treatment initialisation. The work programme of this Research Unit 5187 will foster the development of precision psychotherapy by 1.) investigating clinical and bio-behavioural signatures of NR to improve our understanding of this phenomenon, 2.) applying state-of-the-art machine learning technology for single-case predictions, and 3.) validating these for clinical utility in an ecologically valid treatment setting, bringing together four major academic outpatient clinics in Berlin.

https://forschungsgruppe5187.de/en

FOR 2898/1: Military Cultures of Violence – Illegitimate Military Violence from the Early Modern Period to the Second World War

SPOKESPERSON: Prof. Dr. Sönke Neitzel (Universität Potsdam)
HU SUBPROJECT HEAD: Prof. Dr. Birgit Aschmann (Department of History)
FUNDING PERIOD: January 2022 to December 2024

The Research Unit 2898 aims to fill an important gap in both scholarship on military history and research on violence: the introduction of the concept of “military cultures of violence” is designed to allow for the systematic description and explanation of sometimes very divergent acts of violence on the part of regular European armed forces that were viewed in contemporary assessments as illegitimate. Such acts are already documented in numerous individual studies, though as yet neither on this chronological and geographical scale nor as part of a wider collaborative and comparative project. “Military cultures of violence” are defined as the violent practices proceeding from members of a collective military agent of violence belonging to a state or a state-like entity, and the associated interpretative ascriptions and discourses. Within the framework of various subprojects, the research group investigates in which ways and to what extent specific military cultures of violence developed in the regular armies of the European great powers from the early modern period to the end of the Second World War.

https://www.uni-potsdam.de/de/military-cultures-of-violence/
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The history of psychiatry is a history of the difference between normality and madness. However, this difference is progressively eroding. On the one hand, with the opening of psychiatric institutions and the social integration of inmates, madness is becoming everyday normality; on the other hand, reaction patterns and behaviours such as intoxication, stress or attention deficit are pathologised. The collapse of this basic dichotomy calls the interpretative power of extant historical narratives of psychiatry back into question. This is the starting point and basic assumption of the Research Unit 3031: It does not attempt to track changes in concepts of insanity, but focuses on the erosion of the difference between normal and pathological in dealing with psychic alterity. The overarching goal of the projects participating in the FOR is to mobilize hitherto underexplored tendencies in psychiatry as a resource for contemporary history.

https://www.normalverrueckt.hhu.de/|

The Research Unit 5022 investigates ethical questions of the time structure of the good life with regard to new medical possibilities. Concepts of the good life are relevant for many research fields in medicine, ethics, social and cultural studies. The research group addresses these often little reflected background assumptions in a systematic and interdisciplinary way. It investigates 1.) the relationships between medical concepts, technologies and practices on one hand and practical approaches and normative ideas about the temporal structures of human life on the other, 2.) how the connection between medicine and life-time is presented and negotiated in scientific and (popular) cultural narratives, and 3.) how the involved temporal aspects of the good life are to be understood and evaluated ethically.

https://for5022.de/en/start/
FOR 5177/1: The Dynamics of the Spine: Mechanics, Morphology and Motion Towards a Comprehensive Diagnosis of Low Back Pain

SPokesperson:
Prof. Dr. Hendrik Schmidt (Charité – Universitätsmedizin Berlin)

HU Subproject Head:
Prof. Dr. Adamantios Arampatzis (Department of Sport Science)

Funding Period:
January 2022 to December 2026

Low back pain (LBP) represents an overwhelming social and economic burden to society with a constantly increasing number of patients suffering and requiring surgical or non-surgical treatment. The success rates of current clinical treatments for LBP vary considerably, indicating a lack of basic understanding of the underlying mechanisms of disease onset, progression and therapeutic modulation.

The Research Unit 5177 brings together orthopaedic surgeons, imaging specialists, biomechanics experts, computer modellers, pain experts, health psychologists, and material and training scientists to reveal how spinal shape and geometry (MORPHOLOGY), physical activity and spino-pelvic kinematics (MOTION) and lumbar spinal loading (MECHANICS) are interlinked and associated with LBP. The hypothesis is that understanding the interrelations between these 3Ms will enable new avenues to develop strategies for functionalised patient stratification as basis to a personalised treatment.

https://spine.charite.de/en/

FOR 5208/1: Model-Based Determination of Nonlinear Properties of Piezoceramics for High-Power Ultrasound Applications (NEPTUN)

SPOkESPERSON:
Prof. Dr. Bernd Henning (Paderborn University)

HU Subproject Heads:
Prof. Dr. Andrea Walther, Dr. Benjamin Jurgelucks (both Department of Mathematics)

Funding Period:
June 2022 to May 2026

Ultrasonic sensors and actuators are used in a wide range of applications in science and technology. In the design and optimization of these components, computer technology is increasingly used. One of the problems in this procedure is the insufficient knowledge of the acoustic or electromechanical material properties of the piezoelectric materials or the manufactured piezoelectric components. According to the current state of the art, these material properties are determined using several differently processed material samples, with the result that the material parameter set is inconsistent. This applies in particular to the characterization of piezoceramic materials applied in the higher power range, for example in high-power ultrasonic applications where the nonlinear properties of the materials must be taken into account. The dissipative properties of piezoelectric materials due to damping must also be considered. The Research Unit 5208 will seek to develop measurement and measurement systems to be able to analyse the material behaviour.

https://www.uni-paderborn.de/en/research-projects/neptun
FOR 5215/1: Bioinspired Oxidation Catalysis with Iron Complexes

**SPOKESPERSON:**
Prof. Dr. Thorsten Glaser (Bielefeld University)

**HU SUBPROJECT HEAD:**
Prof. Dr. Christian Limberg (Department of Chemistry)

**FUNDING PERIOD:**
July 2022 to June 2026

The decarbonization of the production of energy and an efficient and sustainable usage of non-renewable hydrocarbon resources from natural oil, gas, and coal is essential to achieve the global climate goals. In this respect, the selective functionalization of organic molecules by catalytic oxidation and oxygenation reactions is a key technology for the preparation of basic and fine chemicals from natural oil and gas resources, as well as for the synthesis of complex active ingredients, e.g. for pharmaceutical products. This defines an urgent need to establish new sustainable concepts for utilizing environmentally benign and abundant oxidants, such as O₂ and H₂O₂ under mild conditions for the synthesis of value-added products.

The development of bioinspired homogenous catalysts for the oxidation and oxygenation of hydrocarbons and more complex organic substrates with better catalytic performance has a high potential for academic and industrial applications. Thus, it is the ultimate goal of the Research Unit 5215 to provide improved bioinspired homogenous catalysts for oxidation reactions using environmentally benign oxidants such as O₂ and H₂O₂ that results in oxygen-atom transfer, hydrogen atom abstraction, and C-H bond activation.

https://www.uni-bielefeld.de/fakultaeten/chemie/projects/for5215/

FOR 5228/1: Syntophagy: Membrane Trafficking Processes Underlying Presynaptic Proteostasis

**SPOKESPERSON:**
Dr. Michael R. Kreutz (Leibniz Institute for Neurobiology)

**HU SUBPROJECT HEAD:**
Prof. Dr. Marina Mikhaylova (Department of Biology)

**FUNDING PERIOD:**
October 2021 to September 2025

Neurons are highly polarised cells with a complex cytoarchitecture. A single neuron can house several thousand synapses, which are usually located at enormous distances from the soma. The molecular composition of the synapses is the subject of numerous studies and it is considered certain that several hundred different proteins contribute to their structure and function.

The Research Unit 5228 Syntophagy (“Membrane Trafficking Processes Underlying Presynaptic Proteostasis”) will address the specific contributions of autophagy, proteasome-mediated and endolysosomal degradation to presynaptic proteostasis. The research projects deal with questions like how are presynaptic function and, importantly, plasticity regulated by autophagy? How is autophagy regulated locally? How do non-canonical functions of autophagosomes (e.g. signalling, exocytosis) impact on presynaptic development, maintenance and function? The participating labs cover a broad range of techniques and are at the technological forefront in molecular neuroscience research.

https://syntophagy.de/
FOR 5234/1: Multiple Competition in the Higher Education System: Constitution of Protagonists, Coordination of Action and Consequences

SPOKESPERSON:
Prof. Dr. Georg Krücken (University of Kassel)

HU SUBPROJECT HEAD:
Prof. Dr. Julian Hamann (Department of Education Studies)

FUNDING PERIOD:
July 2021 to June 2024

The overall objective of the Research Unit 5234 is to develop a comprehensive understanding of multiple competition in the field of higher education, based on contributions from sociology, economics and business administration. Multiple competition in higher education means that individual and collective actors are simultaneously embedded in and nested within several interconnected competitions.

The subproject “Academic Socialization at the Postdoc Stage” analyses the socializing effects of academic competitions on postdocs. The study is designed to capture intra-personal development in time through a qualitative panel study. Proceeding from a combination of socialization theory and sociology of (e)valuation, it is argued that postdocs learn two things when participating in academic competitions: On the one hand, they realize that academic competitions are constitutive for the allocation of reputation, employment and resources. On the other hand, postdocs learn to deal with the demands of multiple competition and to position themselves in different types of competitions.


FOR 5381/1: Mathematical Statistics in the Information Age – Statistical Efficiency and Computational Tractability

SPOKESPERSON:
Prof. Dr. Angelika Rohde (University of Freiburg)

HU SUBPROJECT HEAD:
Prof. Dr. Markus Reiß (Department of Mathematics)

FUNDING PERIOD:
January 2022 to December 2025

In the information age, the importance of data together with reliable and meaningful statistical evaluation is greater than ever. In face of massive amounts of data, however, new challenges enter statistical methodology. Storage or privacy constraints require even clean raw data to be preprocessed, and its massiveness typically leads to computational intractability of subsequently applied classical efficient statistical methodology. Usually, preprocessed data do not share the distributional properties of the raw data any longer.

The Research Unit 5381, jointly funded with the Austrian Fund for the Promotion of Scientific Research, aims to address this challenge with regard to pre-processed data and the statistical models underlying the analyses. For this purpose, underlying mathematical principles and their algorithmic formulation have to be entirely newly developed in many cases.

https://for5381.uni-freiburg.de/en/research-unit-5381/
The decline in 2020 is primarily due to the end of project funding under the Excellence Initiative (phase-out funding) and the more difficult situation in spending in 2020.
FEDERAL GOVERNMENT, FEDERAL STATES, AND FOUNDATIONS
The Federal Ministry of Education and Research (BMBF) and other federal and state ministries play a crucial role in supporting primarily application-oriented research projects that are tailored to address current and future societal needs and challenges.

In addition, numerous foundations supplement the offerings of the major funding bodies DFG, ministries, and the EU with a diverse range of funding instruments by strategically investing in distinct research areas. In doing so, they make substantial contributions to fostering innovation and excellence.
Local Perspectives on Transregional (Dis-)Entanglements (De:link//Re:link)

**PROJECT HEADS:**
Prof. Dr. Claudia Derichs, Prof. Dr. Andreas Eckert (both Department of Asian and African Studies)

**FUNDING PERIOD:** April 2021 to March 2024

**FUNDED BY**
Federal Ministry of Education and Research (BMBF)

The network project De:link//Re:link investigates new spatial configurations and local perspectives on transregional infrastructure projects such as the Belt and Road Initiative initiated by China in 2013. “link” indicates the network’s focus on local insights and new knowledges. In this context, the consortium examines the dynamics of entanglements and disentanglements as well as processes of social / political / cultural / economic / lingual de- and re-concentration in Asia, Africa and Europe. These dynamics are studied in greater depth from different disciplinary perspectives that rest on multi-scalar and multi-sited fieldwork. Analytical and conceptual approaches of New Area Studies and Southern Theory form the connecting theoretical and methodological framework. The overarching goal of cooperation among the four partners in the consortium is to strengthen a pluridirectional exchange of knowledge and shared knowledge production between scholars and other academic actors in Germany and the core regions of research.

https://www.delink-relink.de/

Quantum Photonic-Integrated Scalable Memory (QPIS)

**PROJECT HEAD:**
Prof. Dr. Tim Schröder (Department of Physics)

**FUNDING PERIOD:** November 2021 to October 2024

**FUNDED BY**
Federal Ministry of Education and Research (BMBF)

In the future, quantum communication will be a crucial component for ensuring the security of digital infrastructures in our society. This is because in quantum communication, the exchange of cryptographic keys is based on fundamental physical laws, ensuring security even in the face of attacks by quantum computers. In addition to secure data transmission, quantum communication also offers new possibilities for securely authenticating users of digital systems and storing private data in a network. So-called quantum tokens could potentially guarantee all of these functions in the future. Analogous to current security tokens such as bank cards, transponders, or transaction numbers, quantum tokens are envisioned as an authentication solution that leverages quantum physical properties.

Within the collaborative project QPIS, researchers are developing a highly efficient and scalable quantum storage architecture for such quantum tokens. The concept combines photonic integrated circuits (PICs) with color centers in diamonds. These optically active color centers are embedded in the tiniest resonators, each capable of encoding a quantum mechanical state, known as a quantum bit (qubit). The PICs, equipped with superconducting single-photon detectors, enable targeted storage and retrieval of these qubits.

https://www.forschung-it-sicherheit-kommunikationssysteme.de/projekte/qpis
Quantenrepeater.Link (QR.X)

**PROJECT COORDINATOR:**
Prof. Dr. Christoph Becher (Saarland University)

**HU-PROJECT HEADS:**
Prof. Dr. Oliver Benson, Dr. Sven Ramelow, Prof. Dr. Tim Schröder (all Department of Physics)

**FUNDING PERIOD:** August 2021 to July 2024

**Funded by:**
Federal Ministry of Education and Research (BMBF)

In the research consortium “Quantenrepeater.Link”, abbreviated as QR.X, more than 40 partners from academic research institutions, institutes, and companies have come together to develop a fundamental component of future quantum communication networks: the quantum repeater.

The core research goals of the QR.X collaboration are to develop optimized hardware components for quantum network nodes, to establish fiber test tracks, and to demonstrate an elementary quantum repeater link. Spin-photon entanglement is one of the essential requirements in quantum communication protocols using quantum repeaters (QR). Color centers in diamond have the advantages of long quantum memory coherence times of electron and nuclear spins. In combination with efficient optical transitions as an interface to photons and a subsequent conversion of photons to telecom wavelengths, quantum information can then be transmitted over long distances.

[https://quantenrepeater.link/](https://quantenrepeater.link/)

Quantum Photonic-Integrated Computer (QPIC-1)

**PROJECT COORDINATOR:**
Prof. Dr. Kai Müller (Technical University of Munich [TUM])

**HU-PROJECT HEAD:**
Prof. Dr. Oliver Benson (Department of Physics)

**FUNDING PERIOD:** September 2021 to August 2025

**Funded by:**
Federal Ministry of Education and Research (BMBF)

The goal of this collaborative project is to develop a novel platform for photonic quantum computation. The HU sub-project “Photon Pair Generation and Their Fusion to Cluster States” addresses the generation of photonic cluster states by fusion gates as a resource for photonic quantum computing. The approach, which can be implemented with commercial subcomponents, is to be implemented in cooperation with the project partners using modular photon pair sources. In this way, the functional principle of the fusion gates can be demonstrated promptly, also as a preliminary stage for fully integrated photonic chips. On the other hand, the sources can be connected to modulators, interferometers and detectors via optical fibers and thus already represent the architecture of a demonstrator for photonic quantum computing. The novelty is above all to combine different components in a modular way and thus to show the functionality of a scalable photonic quantum computer.

Photonic Quantum Computer (PhoQuant)

**PROJECT COORDINATOR:**
Dr. Michael Förtsch (Q.ANT GmbH, Stuttgart)

**HU-PROJECT HEAD:**
Prof. Dr. Oliver Benson (Department of Physics)

**FUNDING PERIOD:** January 2022 to December 2026

**FUNDED BY**
Federal Ministry of Education and Research (BMBF)

The PhoQuant collaborative project focuses on building a photonic quantum computer, made in Germany, which can be accessed worldwide through cloud services.

The aim of the HU subproject “Generation of Non-Gaussian Quantum States for Photonic Quantum Computing” is to bring together the existing expertise in the field of single photon sources, quantum state tomography and photon detection in order to provide non-Gaussian states, so-called Gottesman-Kitaev-Preskill (GKP) states, as a resource for universal photonic quantum computing through photon catalysis. The subproject fits into the overall PhoQuant project, which aims to set up and provide scalable photonic quantum computing. A new proposal from 2019 is being pursued to establish GKP states. As a starting point, single photon states, coherent states (local oscillator) and photon count-resolved detection are used to generate squeezed Schrödinger-Cat states, which can then be merged into GKP states. In principle, GKP states enable universal quantum computing and scalability through quantum error correction. Demonstrating these concepts is the focus of this subproject.

https://www.quantentechnologien.de/forschung/foerderung/quantencomputer-demonstrationsaufbauten/phoquant.html

The Weizenbaum Institute for the Networked Society – The German Internet Institute (Initial Establishment Phase)

**HU-PROJECT HEAD:**
Prof. Dr. Jan Mendling (Department of Computer Science)

**FUNDING PERIOD:** September 2022 to September 2025

**FUNDED BY**
Federal Ministry of Education and Research (BMBF)

The Weizenbaum Institute for the Networked Society conducts research on the interactions between digitalisation and society from an interdisciplinary perspective. The institute’s mission is to examine current societal changes emerging in the context of digitalisation and to outline future political and economic action options. At the Weizenbaum Institute, fundamental research, interdisciplinarity, and societal relevance come together in a unique collaboration among its partners: Freie Universität Berlin (FU Berlin), Humboldt-Universität zu Berlin (HU Berlin), Technische Universität Berlin (TU Berlin), Universität der Künste Berlin (UdK Berlin), Universität Potsdam, Fraunhofer Institut für Offene Kommunikationssysteme (FOKUS), Wissenschaftszentrum Berlin für Sozialforschung (WZB), and Weizenbaum-Institut e.V. During the establishment phase of the institute, the focus is on advancing the creation of a research institution that collaborates nationally and internationally with network partners from academia, business, politics, and media. The research group “Security and Transparency of Digital Processes” at HU Berlin is affiliated with the institute’s focus area IV, “Digital Infrastructures in Democracy: Between Security and Freedom.”

https://www.weizenbaum-institut.de/en
**Implementing AI-based Feedback and Assessment with Trusted Learning Analytics in Higher Education (IMPACT)**

**PROJECT COORDINATOR:**
Prof. Dr. Hendrik Drachsler (Goethe University Frankfurt)

**HU-PROJECT HEADS:**
Prof. Dr. Niels Pinkwart (Vice President for Academic Affairs; Department of Computer Science), Dr. Clara Schumacher (Department of Computer Science)

**FUNDING PERIOD:** December 2021 to November 2025

Within the nationally-operating third-party project IMPACT, a consortium comprising Goethe-Universität Frankfurt, Humboldt-Universität zu Berlin, FernUniversität in Hagen, Freie Universität Berlin, and the Universität Bremen, the objective is to promote the enhancement of higher education through the scalable utilization of Artificial Intelligence techniques for (partial) automated text analysis.

Throughout the Student Life Cycle, prospective students, newcomers, and enrolled students receive text-based, highly informative, and personalized feedback during the orientation and entry phases, throughout their academic journey (formative assessment), as well as upon the completion of their academic achievements (summative assessment).

HU Berlin’s involvement in the collaborative project primarily focuses on areas such as data privacy and ethics (e.g., algorithmic bias), data management (e.g., data provision for future use), and textual analyses (processing, understanding, generating) for use in feedback and evaluation processes. Particular emphasis is placed on the application of hybrid AI methods, intended to be expanded through reciprocal learning between humans and AI.

**https://www.projekte.hu-berlin.de/de/impact**

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**Application-oriented Infrastructure for AI-Communities in Settings for Teaching and Learning (AI-SKILLS)**

**PROJECT HEADS:**
Prof. Dr. Niels Pinkwart (Vice President for Academic Affairs; Department of Computer Science), Prof. Dr. Robert Jäschke (Department of Library and Information Science)

**FUNDING PERIOD:** December 2021 to November 2025

Oriented towards the Humbolditian educational ideal of “unity of research and teaching”, the project will establish AI content in particular in research-oriented teaching-learning settings so that students can experience “learning AI by doing AI”. It is through a structured and methodologically reflected application that the potentials of these new technologies are grasped and can be independently related to subject-specific issues. In the course of their university education, students should above all be enabled to use the technologies and methods central to their respective subject in a reflected manner. At the same time, concrete applications provide an opportunity to discuss legal and ethical issues of AI technologies beyond the learning of methodological, technical and informational basics.

The aim of the project is to develop a coordinated framework concept for the application-related use of AI technologies and AI methods in teaching. With the help of the established higher education didactic and technical support structures of the bologna.lab and the CMS, teachers interested in AI and the initiatives and expertise already existing at HU will be brought together.

**https://ai-skills.hu-berlin.de/**
Development of Strontium-Based Optical Lattice Clocks for Space Applications (SOLIS 1G)

**PROJECT HEAD:**
Dr. Markus Krutzik (Department of Physics)

**FUNDING PERIOD:** May 2021 to October 2024

In the SOLIS 1G joint project, a highly integrated, compact strontium lattice clock will be developed, including frequency comb and autonomous control. The goal is the overall integration of the system in the form factor of a 19 inch rack at a performance better than E-16. The project thus goes beyond the goals of the predecessor OPUS and lays the foundation for a follow-up project to enable the operation of a cold atom-based clock in space. To this end, all partners in SOLIS 1G are developing key technologies with low SWaP as well as partially qualifying components for space application. The compact clock demonstrator at the end of SOLIS 1G will allow the applicants to identify potential system technology conflicts and to determine the limits of the performance of such an integrated clock.

Development of a Laser System for Experiments With Bose-Einstein Condensates on the International Space Station Within the BECCAL Payload (BECCAL-II)

**PROJECT HEAD:**
Prof. Dr. Achim Peters (Department of Physics)

**FUNDING PERIOD:** December 2021 to December 2025

Within this collaborative project, the laser systems for an experiment with Bose-Einstein condensates and cold atoms on the International Space Station (ISS) will be realized. This includes procurement, assembly, qualification, characterization, and integration into the payload. It will be carried out in accordance with the requirements and objectives defined within the research project BECCAL-I.

These efforts constitute a part of the German contribution to a bilateral cooperation between the National Aeronautics and Space Administration (NASA) and the German Aerospace Center (DLR). The cooperation aims to establish an experiment platform on the ISS that can be utilized by a multitude of German and American scientists for various aspects of ultra-cold atoms, Bose-Einstein condensates, and atom interferometry.

Research Network on Discrimination and Racism (FoDiRa)

**PROJECT HEADS:**
Prof. Dr. Andreas Blätte (Interdisciplinary Centre for Integration and Migration Research in Duisburg-Essen [InZentIM]), Prof. Dr. Naika Foroutan, Dr. Christian Hunkler (both Berlin Institute for Empirical Integration and Migration Research [BIM])

**FUNDING PERIOD:** January 2022 to October 2024

**FUNDED BY** Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (BMFSFJ)

The collaborative project FoDiRa systematically investigates central areas in which racist prejudices can arise, reproduce or intensify in everyday life. In particular, research is being conducted on the most relevant areas of life: education, work and housing, and health. In addition, the fields of (social) media, sports and the Internet will be examined. The focus is on the further development and use of innovative quantitative research methods to investigate discrimination and racism. These will be incorporated into the National Discrimination and Racism Monitor (NaDiRa). Six projects are using innovative data, such as process-generated or web-scraped data. Three projects are developing semi-automated text analysis procedures for use in racism research. Four projects use experimental methods, and three projects use geospatial data or regional/local variation for causal research.


The Impact of COVID-19 on Public Support for the European Union (COVIDEU)

**PROJECT HEAD:**
Prof. Dr. Heike Klüver (Department of Social Sciences)

**FUNDING PERIOD:** January 2022 to December 2025

**FUNDED BY** Volkswagen Foundation

This project studies how the COVID-19 pandemic has influenced EU support. An innovative theoretical framework is developed, combining insights from political behavior, social psychology, and political communication. The core idea is that people compare national and EU responses and take cues from domestic governments, political parties and the media when forming opinions about the EU.

The impact of the pandemic is studied through six work packages that are clustered into three pillars. In the first pillar, the investigation focuses on how the policy measures adopted by national governments and EU institutions have affected Eurosceptic attitudes, European solidarity, and the performance of Eurosceptic parties. In the second pillar, an examination is conducted on how political actors, namely governments, political parties, and social movements, have influenced EU support. Finally, in pillar three, the study assesses how media framing and fake news have influenced public support.

[https://portal.volkswagenstiftung.de/search/projectDetails.do?siteLanguage=en&ref=9B051](https://portal.volkswagenstiftung.de/search/projectDetails.do?siteLanguage=en&ref=9B051)
Whether it be controlling vacuum cleaners or predicting the concentration of pollutants in the environment – artificial intelligence has been part of everyday life for some time now. Current debates surrounding AI focus primarily on its risks, says Prof. Dr. Christoph Schneider, Vice President for Research at Humboldt-Universität. “But AI also offers the opportunity to drive forward socially and economically significant, sustainable developments that are geared towards the common good. That’s why it’s essential we research AI as a key technology on a broad professional basis through research at HU – that we understand, help shape and critically assess the diversity of AI and IT applications.” Ultimately, the university has a social mandate to contribute to the preservation and improvement of human living conditions and environmental conditions through its research and to reflect on the preconditions and consequences of research findings.

It is also about being comparatively competitive as a Berlin university on the international stage. “Taking a look at the coalition agreement of the current Berlin government, it would seem that Berlin looks set to become established as a leading national location for AI over the next few years,” says Schneider. As part of the Berlin University Alliance (BUA) and in the course of numerous collaborations with research institutions, Humboldt-Universität is very well networked in the field of AI research. For example, HU researchers are involved as Principal Investigators at the Weizenbaum Institute for the Networked Society, the Einstein Center Digital Future (ECDF), the graduate school known as the “Helmholtz-Einstein International Berlin Research School in Data Science” (HEIBRiDS), the Humboldt Institute for Internet and Society and the Berlin Institute for the Foundations of Learning and Data (BIFOLD). In addition, HU Berlin is part of the Artificial Intelligence Entrepreneurship Center (“Künstliche Intelligenz Entrepreneurship Zentrum”, or K.I.E.Z.), which explores start-up potential in AI research.

TEXT: INGA DREYER

AI RESEARCH AT HU: PROJECTS, OPPORTUNITIES, CHALLENGES

Humboldt-Universität zu Berlin (HU) conducts research on a wide range of issues in order to address the many opportunities and challenges presented by the development of artificial intelligence. Engagement with AI also plays an increasingly important role in teaching – not just with regards to the natural sciences.
“Humboldt-Universität distinguishes itself in the field of AI research through the wide range of topics covered,” says Schneider. Given the complex technological, ethical and socio-political challenges, such a diversity of approaches is important. In computer science, for example, AI research is being driven forward in particular by Prof. Dr. Thomas Kosch, Prof. Dr. Alan Akbik and Einstein-Professor Jan Mendling. In the field of law, Prof. Dr. Herbert Zech – Professor of Civil Law, Technology- and IT Law and Director of the Weizenbaum Institute for the Networked Society – and his team research the legal issues associated with the digital transformation in the fields of big data and artificial intelligence. “In the humanities and social sciences, you have, for instance, social scientist Prof. Dr. Philipp Staab, who is working on a project dedicated to the political economy of artificial intelligence, and the Critical Data Lab, which is based at the Department of Musicology and Media Studies under Prof. Dr. Shintaro Miyazaki and headed by Anna-Verena Nosthoff and Felix Maschewski,” says Schneider.

There’s also a tradition of digital humanities in relation to AI at the Faculty of Arts and Humanities. Since 2017, Prof. Dr. Robert Jäschke has been conducting research within the field of information processing and analytics at the Department of Library and Information Science. In 2020, one of the first professorships in Germany dedicated to digital history was established at the Department of History, with the position being held by historian Prof. Dr. Torsten Hiltmann. “We’re currently researching how the diverse methods and possibilities of AI can also be utilised as part of historical studies in a meaningful and methodologically reflective way,” says Hiltmann. One of the aims is to use machine learning methods to automatically find and annotate depictions of coats of arms in medieval manuscripts and other sources. Research into the AI-based indexing of medieval documents and books of hours is also being carried out. “In addition, we work with various AI-based methods such as authorship analysis, but also on the reuse of texts within texts – using the example of the Bible in late medieval treatises.”

Research with and on AI therefore plays a role not only in the natural sciences. The Interdisciplinary Center for Digitality and Digital Methods began its work in July 2023 and will bundle and strengthen research activities in the field of digitality and digital methods in the

“Part of modern tuition involves looking at what IT options we have and how these can be utilised for the respective specialist areas in a meaningful way.”

Prof. Dr. Niels Pinkwart, Vice President for Academic Affairs
“The tremendous capabilities of such processes bring great advantages, including for science, but you also have to deal with – for example – ethical problems.”

Jan Krämer, qualified computer scientist and community catalyst at AI-SKILLS

humanities and social sciences of various faculties over the next few years, says Christoph Schneider.

Engagement with AI is also becoming increasingly important in teaching, says Prof. Dr. Niels Pinkwart, Vice President for Academic Affairs. “Part of modern tuition involves looking at what IT options we have and how these can be utilised for the respective specialist areas in a meaningful way.”

The AI-SKILLS project, funded by the Federal Ministry of Education and Research (BMBF), has been dedicated to this goal since the end of 2021, creating opportunities for teachers to learn about and exchange information on AI topics and teaching concepts – via a Moodle group and workshops, for example. In addition, a range of courses on AI topics is being put together so that students and teachers can obtain a certificate to prove that they have dealt with these topics in depth, says Dr. Lilian Löwenau, AI-SKILLS Team Lead. “In this way, the university will be confirming to the teachers and students concerned that they have dealt with the basics of AI and machine learning and have developed an informed attitude,” says Dr. Löwenau. In order to be able to assess AI processes as an informed citizen, knowledge is required. That’s why it’s important to deal with artificial intelligence as part of university teaching. “The tremendous capabilities of such processes bring great advantages, including for science, but you also have to deal with – for example – ethical problems,” says qualified computer scientist Jan Krämer, who, as a so-called “community catalyst,” is the contact person for computer science and natural sciences. Teachers from all areas of study can contact AI-SKILLS with any questions they may have in relation to AI topics and teaching. The project team collates and conceptualises appropriate teaching and learning materials. “So that teachers can benefit and build upon the experience of others,” says Dr. Löwenau.
In addition, a JupyterHub will be provided as a platform for interactive scientific data analysis and programming exercises for courses, which teachers and students will in future be able to access via a web browser.

Learning materials are also provided by KI-Campus, a publicly accessible learning platform with free online courses, videos and podcasts. Humboldt-Universität is also participating in the second funding period of the project that is being funded by the Federal Ministry of Education and Research, with this participation including the further development of certain AI campus learning formats for higher education teaching. One example is a course on the topic of AI and leadership, which Niels Pinkwart, Scientific Director of the project, offers together with a colleague. What’s new with this course is that it combines elements of online and face-to-face teaching. “The interactive seminar scenario is intended to enable cooperation and go beyond the scope of the purely online course,” says Pinkwart.

AI has become an important topic in the world of teaching. But how can teaching itself benefit from AI technologies? This is the focus of the joint project IMPACT – funded by the Federal Ministry of Education and Research – in which the Goethe University Frankfurt, the FernUniversität in Hagen, the Freie Universität Berlin and the University of Bremen are also participating. A sub-project at Humboldt-Universität focuses on formative feedback – feedback that is given during the learning process. “It’s essential that learners don’t just receive feedback at the end of the semester. However, teachers often don’t have time to give feedback now and again throughout the semester,” says Leo S. Rüdian from IMPACT. The aim, therefore, is to use AI to generate feedback on the homework that students complete during the semester. It’s important here that the AI works according to transparent criteria that are derived from the teachers’ feedback, says Rüdian. “We cannot and do not want to replace teachers. Our work is about giving them a tool to speed up the feedback process,” says Rüdian.

Generally speaking, awareness of AI issues among teachers and students has grown in tandem with the hype surrounding ChatGPT, says Jan Krämer from AI-SKILLS. “This is both a blessing and a curse. On the one hand, we’re delighted with the interest people are showing in AI. On the other, we also want to draw attention to other areas, such as the skills needed to successfully navigate the conflicting priorities of automated statistical procedures and good scientific practice. Because there’s more to AI than ChatGPT.”

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Humboldt-Universität zu Berlin
The Einstein Foundation Berlin was founded in 2009 by the State of Berlin. The Foundation aims to promote science and research of top international calibre in Berlin and to establish the city as a centre of scientific excellence.

Funding is made available through a diverse array of programmes. For instance, within the Personal Funding Line, support is allocated to the Einstein Strategic Professorships: strategic high-level appointments of exceptional international scholars that are pivotal to bolstering Berlin’s status as a centre for academic research. Additionally, resources are allocated to the Einstein Professorships, which play a crucial role in aiding Berlin’s universities during faculty recruitment and retention negotiations.

Under the Academic Freedom special initiative, the Foundation allows researchers whose academic freedom is constrained, or whose lives and security are at risk to engage in temporary academic work in Berlin.

The Einstein Research Units, falling under the Structural Funding Line, provide additional financial support to the Berlin University Alliance (BUA), which itself benefits from federal and state government funding through the Excellence Strategy. This support fosters the establishment of interdisciplinary and transdisciplinary research clusters in fields of particular strategic significance.
Einstein Strategic Professorship for the Comparative Study of Democracy and Authoritarianism

PROFESSOR:
Prof. Dr. Gwendolyn Sasse (Department of Social Sciences)

FUNDING PERIOD:
April 2021 to March 2026

Gwendolyn Sasse researches democracy and authoritarianism, the transformation processes in Eastern Europe, and the dynamics of war, migration, and protest movements. She studied history, Slavic studies and political science and received her PhD from the London School of Economics. She subsequently taught at the Central European University, the London School of Economics, and the University of Oxford, where she was appointed Professor in Comparative Politics in the Department of Politics and International Relations and in the School of Interdisciplinary Area Studies in 2013. She is also a Non-Resident Senior Fellow at the Carnegie Europe think tank.

Since 2016, Gwendolyn Sasse has been the Academic Director of the Center for Eastern European and International Studies in Berlin. From April 2021, she will combine this activity with her Einstein Professorship in Comparative Democracy and Authoritarianism Studies at Humboldt-Universität zu Berlin. Among her most recent publications are “Der Krieg gegen die Ukraine” (C.H. Beck 2022) and the expanded English-language publication “Russia’s War Against Ukraine” (Polity Press 2023).

Einstein Strategic Professorship for Process Science

PROFESSOR:
Prof. Dr. Jan Mendling (Department of Computer Science)

FUNDING PERIOD:
April 2021 to March 2026

The business informatics specialist Jan Mendling, in his professorship in the field of Process Science, focuses on the question of how processes in administration, logistics and other industries can be improved. To this end, he analyzes event data and, together with his team, develops algorithms and visualization techniques that can present this event data in a user-friendly way. To manage business processes more efficiently, he also researches the use of technologies such as Robotic Process Automation, Blockchains and Business Process Management systems.

Jan Mendling is moving from the Vienna University of Economics and Business Administration to Humboldt-Universität zu Berlin. His textbooks “Business Information Systems” and “Fundamentals of Business Process Management” are used in teaching in over 70 countries. His doctoral thesis was awarded the Heinz Zemanek Prize of the Austrian Computer Society and the German Targion Prize in the field of strategic information management.
Einstein Professorship for Theoretical Neurophysiology

**PROFESSOR:**
Prof. Dr. Susanne Schreiber (Department of Biology)

**FUNDING PERIOD:**
October 2021 to September 2023

Susanne Schreiber has been head of the Computational Neurophysiology research group at the Humboldt-Universität Department of Biology since 2009, and was appointed Professor of Theoretical Neurophysiology there in 2015. The biophysics graduate specialized in neurosciences during her final-year diploma thesis, which she completed at the University of Cambridge. After finishing her doctorate, which involved spending time at the Salk Institute for Biological Studies in the USA as a Sloan-Swartz Fellow, she won the Bernstein Award for Computational Neuroscience in 2008. This enabled her to set up her own computational neurophysiology lab at Humboldt-Universität. Schreiber has chaired the Bernstein Network for Computational Neuroscience in Germany since 2019. As Vice-Chair of the German Ethics Council she also explores and comments on the social issues and ethical challenges of modern biological research.

Einstein Professorship for Organic Chemistry and Functional Materials

**PROFESSOR:**
Prof. Stefan Hecht, PhD (Department of Chemistry)

**FUNDING PERIOD:**
October 2022 to December 2023

Global challenges, such as the future energy supply or the sustainable use of resources, require new energy, information and communication technologies. In order to minimize energy consumption and close material cycles, for example, it is necessary to research new materials with improved properties and develop them to technological maturity. As an Einstein Professor, Stefan Hecht will be devoting himself to precisely this challenge in the future, working with his team on the development of light-controlled molecular materials and volumetric 3D printing processes (xolography).

Stefan Hecht has been a professor at the Department of Chemistry at Humboldt-Universität from 2006 to 2019. From 2019 until the end of 2022, he was the Scientific Director at DWI – Leibniz Institute for Interactive Materials in Aachen, and until recently, he was also associated with the Chair of Macromolecular Chemistry at RWTH Aachen University. Since October 2022, Hecht has returned as an Einstein Professor at Humboldt-Universität.
Einstein Junior Scholar to Foster Academic Freedom

**FELLOW:**
Dr. Yaprak Melike Uyar
(Department of Musicology and Media Studies)

**FUNDING PERIOD:**
November 2021 to January 2024

**HOST:**
Prof. Dr. Sebastian Klotz
(Department of Musicology and Media Studies)

The ongoing political turmoil in Turkey is reflected in many areas of cultural production, including the processes of music-making. With its immensely rich musical and cultural legacy that combines a rural and urban heritage, Istanbul became home to many subcultures revolving around a variety of ethnicities and political acts. While the AKP government’s neoliberal urban control and gentrification agenda are reshaping the means of cultural life in the city, a do-it-yourself attitude in the music scene removed the barriers of the hierarchy of production while creating unique performance spaces and a sense of belonging and solidarity among its participants. The project “DIY Under Authoritarian Politics: Indie Music Scene in Istanbul” utilizes a mixed methodology of ethnography and critical analysis to study this scene.

Einstein Guest Researcher to Foster Academic Freedom

**FELLOW:**
Dr. İmren Borsuk Eroğlu (Department of Social Sciences)

**FUNDING PERIOD:**
September 2021 to March 2024

**HOST:**
Dr. Ertuğ Tombuş (Department of Social Sciences)

Authoritarian states and diaspora organizations engage in diaspora mobilization not only as a mechanism of “soft power” to enhance their foreign influence but also as a mechanism of “hard power” to control migrant populations. This illustrates the complex relationship between diaspora politics and authoritarianism as discussed by transnational authoritarianism literature. Diaspora mobilization is not always against authoritarian governments. There is also diasporic mobilization for authoritarian governments as in the case of pro-Erdogan protests in Europe.

The project “Mobilization for Authoritarian Regimes beyond the Borders: Diaspora Mobilization and Transnational Authoritarianism” will explore how diaspora communities mobilize for authoritarian regimes and diffuse pro-government mobilization across countries based on an examination of diasporic pro-government mobilization pertaining to Turkey in Europe.
The research project “Productive Femininity? Female Industrial Work in Post-WWII Industrialisation” starts from the premise that the globally accepted qualities of female labour as being cheap, docile and dextrous do not derive from original instances of a natural femininity; they are produced in production relations managed by local labour control regimes configuring productivity and femininity in specific ways across time and space.

Through an extensive literature review on the global history of gendered labour regimes, Görkem Akgöz proposes a comparative framework to analyse how categories of productivity and femininity were constructed in relation to each other in developmentalist-cum-modernising projects of industrialisation.
Einstein Research Unit Perspectives of a Quantum Digital Transformation: Near-Term Quantum Computational Devices and Quantum Processors

**SPOKESPERSON:**
Prof. Dr. Jens Eisert (Freie Universität Berlin)

**CO-SPOKESPERSON:**
Prof. Dr. Çiğdem İşsever (Department of Physics, Humboldt-Universität zu Berlin)

**FUNDING PERIOD:** October 2021 to September 2024

How can quantum computers revolutionize the computational power of computers? What new insights do quantum computers offer for high energy physics or quantum chemistry? These are the questions that the first Einstein Research Unit (ERU) of the Berlin University Alliance (BUA) will address. The interdisciplinary research team of the partner institutions Freie Universität Berlin, Humboldt-Universität zu Berlin, Technische Universität Berlin, and Charité – Universitätsmedizin Berlin has set itself the task of clarifying the potential of the quantum digital transformation. This uniquely brings together expertise in theoretical and experimental physics, applied mathematics, computer science, and machine learning.

https://blogs.tu-berlin.de/nlo_einsteinresearchunitquantum/

Einstein Research Unit Climate and Water under Change (CliWaC)

**SPOKESPERSON:**
Prof. Dr. Britta Tietjen (Freie Universität Berlin)

**CO-SPOKESPERSON:**
Prof. Dr. Jörg Niewöhner (Department of European Ethnology; IRI THESys, Humboldt-Universität zu Berlin)

**FUNDING PERIOD:** January 2022 to December 2024

The Einstein Research Unit CliWaC is a transdisciplinary research initiative of the Berlin University Alliance (BUA) to address water-related risks under climate change. CliWaC will bring together social and natural science as well as practical expertise from stakeholders to support the governance of mitigation and adaptation measures in response to climate change.

The consortium consists of 28 project heads affiliated to the BUA members Freie Universität Berlin, Humboldt-Universität zu Berlin, Technische Universität Berlin, and Charité – Universitätsmedizin Berlin, and Charité – Universitätsmedizin Berlin, including two professorships to be appointed at FU (Environmental Policy) and TU (Environmental Governance). External institutions are incorporated by joint appointments with BUA members (Leibniz Centre for Agricultural Landscape Research ZALF) or as external partners (Institute for Eco- logical Economy Research IÖW).

# Research in numbers

## Ongoing research projects in 2021–2022

### Clusters of Excellence

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### DFG collaborative projects

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<th>Research Units (FOR)</th>
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### Early-career researcher projects

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<th>BMBF junior research groups</th>
<th>Freigeist Fellowships of the Volkswagen Foundation</th>
<th>MSCA postdoctoral fellowships</th>
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### ERC projects

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### BMBF projects

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### Foundation-founded projects

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### EU collaborative projects

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**Integrative Research Institutes**
- IRIS Adlershof
- IRI for the Life Sciences
- IRI on Transformations of Human-Environment Systems
- IRI Law & Society

**Interdisciplinary Centres**
- Interdisciplinary Centre for Educational Research
- Interdisciplinary Center for Research in Mathematical Physics
- Border Crossings – Crossing Borders. Berlin Center for Transnational Border Studies
- Interdisciplinary Center for Computational Neuroscience
- Zentrum für Inklusionsforschung Berlin
- Berlin Institute for Empirical Integration and Migration Research
- Robert K. Merton Center for Science Studies
- Georg Simmel Center for Metropolitan Studies
- Interdisziplinäres Zentrum für Arbeitsforschung
For Olena Kononenko, returning to Ukraine is currently a matter of uncertainty. The economic and social geographer taught as a professor at the University of Kyiv. Now that the damage caused by a Russian attack has been repaired, it ought to be possible for on-campus operations to resume for the winter semester. The university’s students, however, are now spread across the country or have fled abroad. Amongst those to have fled is Kononenko. Since March 2022, the 48-year-old has been researching a highly topical subject at HU: the reconstruction of destroyed cities and the population’s perception of them. This research has been made possible thanks to a fellowship from the Einstein Foundation for researchers whose academic freedom is under threat. Together with Ukrainian, Russian and Turkish colleagues, she works in the “Urban Futures at Risk” research unit, for which the university, in this case the Urban and Regional Sociology unit at the Department of Social Sciences, applied to the Einstein Foundation. In addition to a steady income, this means a respite from war and political persecution.

There are currently more than 50 at-risk researchers working at HU – more than at any other university in Berlin. Silvia von Steinsdorff emphasises that the commitment to academic freedom only developed gradually – triggered by Germany’s “Grenzöffnung” (“opening of the borders”) in 2015. “Young Syrian students were also coming to Germany at that time. It was essential for them not to be stuck in refugee accommodation, and instead be able to continue their studies.”

It was for this reason that the Professor of Comparative Politics and Political Systems of Eastern Europe at the Department of Social Sciences opened the German-Turkish Master’s programme GeT MA, which she initiated, to suitably qualified refugees. “Back then, it was anything but a given that these people who had lost all future prospects due to the war in their homeland should immediately be admitted to our university and only later adapt the study regulations accordingly.”

When many academics were expelled from universities and accused of terrorism following the failed coup attempt in Turkey in 2016, the Vice Dean of Research and International Affairs at the Faculty of Humanities and Social Sciences hosted around 15 Turkish academics at her department for several years through the Einstein fellowship programme. “Some of our academics are well connected to Turkish universities and have brought people here specifically,” explains the professor.

Those people can find help and support at the International Office. Since March 2020, shortly before the start of the coronavirus pandemic, the Welcome Centre has been home to the “contact for at-risk scholars” – a position that is unique among Berlin universities. In this role, Neda Soltani, who herself fled to Germany from Iran many years ago as a junior professor, centrally coordinates support for at-risk and refugee students and researchers.

If this is the case, then Soltani will search for suitable mentors at HU in order for a joint application to be made for either a fellowship or scholarship from the Einstein Foundation, which is funded by the state of Berlin, or from the Alexander von Humboldt Foundation’s Philipp Schwartz Initiative, with the latter providing a finan-
cially secured two-year stay at a university. HU has also launched an appeal for donations to provide bridging scholarships specifically to refugees from Ukraine.

In Soltani’s experience, the professional backgrounds of the new colleagues vary greatly when war is involved. “But when it comes to political persecution, it’s mainly legal, cultural and social scientists who are affected.” Some of the people contact her directly and ask about research opportunities at HU. Some are sent to the university by political foundations, while others are suggested as potential candidates by HU teachers themselves. “The majority of enquiries from the past two years have come from Afghanistan and Ukraine. But we also have a renowned sociologist from Brazil and applications from India, Turkey, Syria, Yemen and Iran.”

HU’s commitment has intensified yet further in 2023, emphasises Silvia von Steinsdorff. As of this year, the university has been coordinating the new regional network “Scholars at Risk Berlin-Brandenburg” and has joined the US initiative “New University in Exile”. In addition, a “Freedom of Research Week” was held in April, with a joint workshop on the topic planned at the partner university in Princeton in the autumn. The “Berlin University Alliance” has also agreed on a joint initiative regarding freedom of research and organises regular meetings.

“I’m very satisfied with how things have developed since 2015,” emphasises the professor. “HU no longer just reacts to crises; now we have a strategy for how we can provide specific help and cooperate with researchers at risk.” Neda Soltani is also upbeat on how things are progressing: more and more teaching staff are standing up for researchers at risk, and awareness of her own position is now much more widespread.

Nevertheless, the two committed women believe there is still scope to do more: the university could network better, increase the number of scholarship holders further, “and we also want to take more care of students at risk,” says von Steinsdorff.

The biggest challenge now is that the aid provided is limited to a maximum of two years. “However, many of our highly qualified fellows will have to stay here and build up an existence for the long term – possibly outside of academia,” observes Neda Soltani. She therefore offers coaching sessions and workshops and is even planning a job fair next year for activities and positions both within and beyond HU.

Ultimately, it’s not just about helping colleagues at risk, says von Steinsdorff: “We also benefit from their knowledge.” After all, those affected are researching topics such as corruption or the rights of minorities in their home countries as well as issues in the fields of biology and chemistry. “In addition, new international networks and personal relationships are being created.” Some of the very first Einstein fellows are now working as part of her team at the Department of Social Sciences.

Olena Kononenko looks forward to returning to Ukraine one day. “I have a responsibility to pass on the experience I gather in Germany to my Ukrainian colleagues and to utilise my knowledge and new networks in my country.”

“HU no longer just reacts to crises; now we have a strategy for how we can provide specific help and cooperate with researchers at risk.”

Prof. Dr. Silvia von Steinsdorff, Department of Social Sciences at HU
EU COLLABORATIVE PROJECTS
Within the framework of Horizon Europe, the 9th EU research and innovation funding programme, succeeding Horizon 2020 in 2021, the European Commission supports both outstanding basic research and innovative international collaborative projects aimed at enhancing the competitiveness of European industry. The range of funding initiatives includes the promotion of research excellence through the European Research Council (ERC), various mobility formats under the Marie Skłodowska-Curie Actions (MSCA), as well as collaborative research within international and cross-sectoral consortia addressing specific thematic areas. The overarching objective is to foster the development of new knowledge, technologies, methodologies, products, and services.
Paris Agreement Overshooting – Reversibility, Climate Impacts and Adaptation Needs (PROVIDE)

**PROJECT HEADS:**
Dr. Carl-Friedrich Schleußner, Prof. Dr. Sabine Fuss (both Department of Geography)

**FUNDING PERIOD:** September 2021 to August 2024

Overshooting temperature threshold targets included in the Paris Agreement is a hot issue. The impacts of such overshoot scenarios would be particularly consequential for vulnerable regions and systems where thresholds of abrupt and possibly irreversible shifts or adaptation limits may be exceeded. The EU-funded PROVIDE project will develop innovative, integrative climate services that incorporate information on impacts of overshoot pathways from the global to the regional and urban level, directly feeding into adaptation action. Bringing together a consortium of leading climate scientists, as well as climate services purveyors, urban planners and adaptation experts, the project will identify overshoot adaptation needs and develop a generalisation methodology for adaptation strategies to respond to overshoot risks.

[https://www.provide-h2020.eu/](https://www.provide-h2020.eu/)

Building Excellence in Research of Human-Environmental Systems With Geospatial and Earth Observation Technologies (HES-GEO)

**PROJECT COORDINATOR:**
Prof. Dr. Agnieszka Wypych (Jagiellonian University in Krakow [UJ])

**HU-PROJECT HEAD:**
Prof. Dr. Dagmar Haase (Department of Geography)

**FUNDING PERIOD:** January 2021 to December 2023

The Institute of Geography and Spatial Management (IGSM) at Poland’s Jagiellonian University is studying, among other things, human–environmental systems (HES) of the Anthropocene. The work is conducted along a variety of urban–rural–marginal gradients with the use of tools and data available through Earth observation (EO) and geospatial technologies. The EU-funded HES-GEO project will enhance the Institute’s existing research capacity. It will also aim to stimulate scientific excellence by building on the Institute’s existing strengths and opportunities provided by new regulations of science and higher education in Poland, combining them with the vast expertise in studying HES and in capacity building of three excellent partner institutions: Paris Lodron University of Salzburg, Humboldt-Universität zu Berlin and Katholieke Universiteit Leuven.

[https://hes.geo.uj.edu.pl/](https://hes.geo.uj.edu.pl/)
Computational Literary Studies Infrastructure (CLS INFRA)

**PROJECT COORDINATOR:**
Prof. Dr. Maciej Eder (Institute of Polish Language of the Polish Academy of Sciences [IJP PAN])

**HU-PROJECT HEAD:**
PD Dr. Michal Mrugalski (Department of German Studies and Linguistics)

**FUNDING PERIOD:** March 2021 to February 2025

The digital age offers challenges and opportunities for completing research on Europe’s multilingual and interconnected literary heritage. Even though many resources are currently available in digital libraries, a lack of standardisation hinders their access and reuse.

The EU-funded CLS INFRA project will help build the shared and sustainable infrastructure needed to undertake literary studies in the digital age. The project will align these diverse resources with each other, with the tools needed to interrogate them, and with a widened base of users. The resulting improvements will benefit researchers by bridging gaps between greater and lesser-resourced communities in computational literary studies and beyond, ultimately offering opportunities to create new research and insight into our shared and varied European cultural heritage.

[https://clsinfra.io/](https://clsinfra.io/)

Designing a Resilient and Coherent Trans-European Network for Nature and People (NaturaConnect)

**PROJECT COORDINATOR:**
Dr. Piero Visconti (International Institute of Applied System Analysis in Vienna [IIASA])

**HU-PROJECT HEAD:**
Prof. Dr. Dagmar Haase (Department of Geography)

**FUNDING PERIOD:** July 2022 to June 2026

The EU Member States have committed to legally protect a minimum of 30% of the EU’s land and sea area and to strictly protect at least a third of protected areas under the EU 2030 Biodiversity Strategy as a major contribution to the European Green Deal. In this context, the EU-funded NaturaConnect project will bring together a consortium of the top European scientists, policy experts and NGOs to produce and mobilise relevant data and knowledge. The aim will be to co-develop knowledge, tools and capacity-building programmes to support Member States in implementing an ecologically representative, resilient and well-connected trans-European nature network (TEN-N).

[https://naturaconnect.eu/](https://naturaconnect.eu/)
Encouraging Farmers Towards Sustainable Farming Systems Through Policy and Business Strategies (ENFASYS)

**PROJECT COORDINATOR:**
Prof. Dr. Fleur Marchand (Flanders Research Institute for Agriculture, Fisheries and Food [ILVO])

**HU-PROJECT HEAD:**
Prof. Dr. Peter H. Feindt (Albrecht Daniel Thaer Institute of Agricultural and Horticultural Sciences)

**FUNDING PERIOD:** September 2022 to August 2026

ENFASYS aims to stimulate a just and robust transition to sustainable, productive, climate-neutral, biodiversity friendly and resilient farming systems (SFS) by improved policies and business strategies that encourage farmers to change their production systems.

In current food systems, farmers are challenged by multiple lock-ins that prevent them to move to SFS. To overcome this and thus to support the Green Deal and in particular the Farm to Fork ambitions, strengthening public strategies (policies) should go hand in hand with strengthening private strategies (business models, social innovations).

To reach this aim, ENFASYS goals are

1.) an improved understanding of lock-ins and levers in farming and food systems;
2.) an improved understanding of behavioural factors of farmers, consumers and other food chain actors;
3.) more and better evidence on the potential effectiveness of interventions;
4.) a more structured approach to link knowledge to action.

[https://www.enfasysproject.eu/](https://www.enfasysproject.eu/)

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Integrated Urban Food Policies – Developing Sustainability Co-Benefits, Spatial Linkages, Social Inclusion and Sectoral Connections To Transform Food Systems in City-Regions (FoodCLIC)

**PROJECT COORDINATOR:**
Prof. Dr. Jacqueline Broerse (Vrije Universiteit Amsterdam [VU])

**HU-PROJECT HEAD:**
Prof. Dr. Peter H. Feindt (Albrecht Daniel Thaer Institute of Agricultural and Horticultural Sciences)

**FUNDING PERIOD:** September 2022 to February 2027

Europe’s urban areas face significant challenges to ensure the availability and consumption of healthy, affordable, safe and sustainably produced food. Promising initiatives taken by municipalities to change the architecture of food choice often fail to become embedded in the wider policy context and to reach deprived and vulnerable groups. Key factors responsible for this are:

1.) siloed ways of working and
2.) fragmentation of knowledge on facilitators and barriers related to food system transformation.

FoodCLIC will create strong science-policy-practice interfaces across eight European city-regions (45 towns and cities). The backbone of such interfaces will be provided by Food Policy Networks, which will manage real-world experimental Living Labs to build a policy-relevant evidence-base through learning-in-action. Activities will be informed by an innovative conceptual framework (the CLIC), which emphasizes four desired outcomes of food system integration (sustainability co-benefits, spatial linkages, social inclusion and sectoral connectivities).

[https://foodclic.eu/](https://foodclic.eu/)
## A Metapredictive Model of Synthetic Awareness for Enabling Tool Invention (METATOOL)

**PROJECT COORDINATOR:**
Prof. Dr. Ricardo Sanz (Universidad Politécnica de Madrid [UPM])

**HU-PROJECT HEAD:**
Prof. Dr. Verena Hafner (Department of Computer Science)

**FUNDING PERIOD:** October 2022 to September 2026

Around 3.3 million years ago our ancestors made the first tool. They imagined a new utensil and then knapped a stone until it became an efficient tool for cutting. Tool creation was an outstanding technological milestone for humanity providing us with unprecedented control over our environment. This ability required cognitive capabilities, such as prediction, metacognition, abstraction, and creativity – all of which are associated in humans with awareness. Current artificial intelligence systems and robots largely lack these capabilities and cannot even monitor and evaluate the consequence of their actions let alone develop new tools to address environmental challenges.

METATOOL, funded by the European Innovation Council (EIC), aims to provide a computational model of synthetic awareness to enhance adaptation and achieve tool invention. This will enable a robot to monitor and self-evaluate its performance, ground and reuse this information for adapting to new circumstances, and finally unlock the possibility of creating new tools.

https://www.metatool-project.eu

## Mutual Recognition of Freezing and Confiscation Orders Between Efficiency and the Rule of Law (RECOVER)

**PROJECT COORDINATOR:**
Prof. Dr. Anna Maria Maugeri (University of Catania)

**HU-PROJECT HEAD:**
Prof. Dr. Martin Heger (Faculty of Law)

**FUNDING PERIOD:** December 2022 to November 2024

The project RECOVER will improve the implementation of the Regulation no. 1805/2018 (REG) on the mutual recognition (MR) of freezing and confiscation orders, as fundamental tool of cooperation in the fight against organized and economic crime. The REG has a strong political value for its impact in terms of criminal policy and its effect of dragging mutual recognition on substantive issues.

RECOVER is the first impact assessment of the REG from the substantial criminal law view point. It creates a network of Prosecutors, Judicial and Asset Recovery Offices (ARO) in 10 EU member states not only to detect and overcome the legal issues in the REG interpretation, but also to create the substantial conditions in implementing it in compliance with the rule of law, increasing mutual trust and harmonization.

https://www.unict.it/en/research/projects/recover
The European Research Council (ERC), funded by the EU’s research and innovation programme (Horizon Europe), supports outstanding researchers at different stages of their careers and their teams in five different funding lines, primarily based on the applicants’ level of experience: ERC Starting Grant, ERC Consolidator Grant, ERC Advanced Grant, ERC Synergy Grant, and ERC Proof of Concept.
Socialist Medicine: An Alternative Global Health History (SOCMED)

**PROJECT HEAD:**
Prof. Dr. Dora Vargha (Department of History)

**FUNDING PERIOD:**
September 2021 to August 2026

The history of medicine and its effects on our lives has mostly been told through the eyes of the capitalist West. However, this often omits how healthcare is viewed in socialist nations – regions affected by vastly different socio-political developments – and how it shapes health cultures specific to those nations. The EU-funded SOCMED project seeks to rewrite global health history by incorporating networks, knowledges and technologies from socialist countries and the way they influenced international health and medicine in the 20th century. The goal is to enhance our understanding of historical developments in medicine while revealing the true foundations modern global healthcare is built on.

https://socialistmedicine.com/

The Structure of Normativity (REASONS F1RST)

**PROJECT HEAD:**
Dr. Benjamin Kiesewetter (Department of Philosophy)

**FUNDING PERIOD:**
October 2022 to September 2027

Some of the core fields of philosophy are, at their heart, concerned with normative questions: questions about what is good or bad, right or wrong, justified or unjustified. These questions concern the content of judgements that human beings are constantly making and that structure our way of thinking, feeling, and acting. But while there is wide agreement in contemporary philosophy that normative judgements form an important category of human thought, philosophers still struggle to understand what normativity actually is. One highly attractive hypothesis is that normativity can be analysed in terms of reasons – i.e. in terms of the factors that count in favour of or against actions or attitudes. But the systematic exploration of this Reasons-First Approach is still lacking. REASONS F1RST aims to undertake this much-needed investigation.

PROJECT HEAD:
Prof. Dr. Martin Rolfs (Department of Psychology)

FUNDING PERIOD:
January 2021 to December 2025

Visual actions are essential for your ability to see: You glance quickly at your watch to check the time, or turn around when you hear your name. The EU-funded VIS-A-VIS project investigates the distinct kinematic rules that visual actions obey as they directly govern the input to the visual system. The project forms an interdisciplinary team and applies innovative technology, tools and experimental protocols to study how the active visual system learns and applies the relation between visual actions and their sensory consequences to establish core perceptual processes such as perceptual omission, object continuity and sense of agency. It will uncover how properties of visual actions are tightly weaved into the processes of visual perception.

A New Type of Spike: Homoclinic Spike Generation in Cells and Networks (ANewSpike)

PROJECT HEAD:
Prof. Dr. Susanne Schreiber (Department of Biology)

FUNDING PERIOD:
January 2021 to June 2026

Any model of brain function takes into consideration the variability of neuronal spike generation or firing. Computational research has demonstrated differences between spike generators, showing that they can be classified into a few dynamical types with distinct computational properties. In particular, homoclinic spike generators specifically react with high sensitivity to inputs during the neuronal refractory period. Supported by evidence for homoclinic spiking in the rodent brain, the EU-funded ANewSpike project explores the intriguing hypothesis that such spike generators provide a unifying framework for the induction of epileptic activity by a wide range of physiological triggers, from temperature to energy deprivation. The current study adds a new dimension to the understanding of neural dynamics, including homoclinic spiking as an integral part of brain dynamics.
Urban Vibrations: How Physical Waves Come To Matter in Contemporary Urbanism (WA VEMATTERS)

**PROJECT HEAD:**
Prof. Dr. Ignacio Ariel Farías Hurtado (Department of European Ethnology)

**FUNDING PERIOD:**
January 2022 to December 2026

Physical waves – be it heat radiation, sound waves or radio frequencies – represent significant environmental disturbances. Invisibly crossing the urban environment, they harm bodies, both human and nonhuman in uncertain ways. The EU-funded WA VEMATTERS project investigates how waves affect specific bodies and environments and become issues of public concern and design intervention. The project involves extended ethno-graphic fieldwork in areas where urban projects have been set up to mitigate the urban heat island effect, reduce environmental noise and build fifth generation wireless communication networks. WA VEMATTERS will study the impact of bodily exposure to physical waves, and how these waves cause design interventions. The project will also explore how people physically adapt to such waves.

Shifting to a Land Systems Paradigm in Conservation (SystemShift)

**PROJECT HEAD:**
Prof. Dr. Tobias Kümmerle (Department of Geography)

**FUNDING PERIOD:**
January 2022 to December 2026

Land use is the primary cause of biodiversity loss, which is a global crisis threatening human well-being. The ERC-funded SystemShift project develops and tests new, social-ecological approaches to better understand how land use threatens biodiversity. Specifically, SystemShift derives novel concepts to identify key combinations of land-use actors and threats, to understand interactions among different land-use-related threats, and to carry out effective conservation planning. The project applies and empirically validates these concepts in the world’s understudied and threatened tropical dry forests, globally and with two focus regions in South America, the Gran Chaco and Chiquitano forests. This will provide insights into conservation challenges and opportunities to better safeguard these endangered forests.
Tales of the Diasporic Ordinary. Aesthetics, Affects, Archives (TODO)

**PROJECT HEAD:**
Prof. Dr. Elahe Haschemi Yekani  
(Department of English and American Studies)

**FUNDING PERIOD:**
October 2022 to September 2027

Migration to the Global North is perpetually framed as “new” or extraordinary. Works by non-white artists are overwhelmingly described in ways that set them apart from society at large. The EU-funded TODO project asks what happens if, instead, we apply a normalising perspective to contemporary literature and art in the diaspora with a special focus on Germany, the UK and the USA. In light of the decline of empire, neo-imperialism, and the more recent rise of the New Right, TODO considers how queer aesthetics can help acknowledge negative emotions and affects resulting from racism and how art can contribute to a new notion of community and to counter-archives that go beyond national and heteronormative constraints.

Tame Geometry and Transcendence in Hodge Theory (TameHodge)

**PROJECT HEAD:**
Prof. Dr. Bruno Klingler (Department of Mathematics)

**FUNDING PERIOD:**
October 2021 to September 2026

When it comes to the language of high-level mathematics, familiar words take on new meanings, and the lines between algebra and geometry become blurred. Algebraic geometry deals with curves or surfaces that can be represented both as geometric objects and as solutions of algebraic (polynomial) equations, and it has had important impact on physics and quantum theoretical descriptions. Hodge theory is the main tool for analysing the solution sets of algebraic equations over the complex numbers, yet it is not algebraic. Tame geometry may provide insight. EU funding of the TameHodge project will support the investigation of this exciting connection between tame geometry and Hodge theory.
From Texts to Literature: Demotic Egyptian Papyri and the Formation of the Hebrew Bible (DEMBIB)

PROJECT HEAD:
Prof. Dr. Dr. Bernd U. Schipper (Faculty of Theology)

FUNDING PERIOD:
January 2022 to December 2026

ERC ADVANCED GRANT

Over the last twenty years, the discovery of numerous papyri in Demotic Egyptian script has made available a text corpus that developed in immediate historical and geographic proximity to the Old Testament, also known as the Hebrew Bible. This research project, financed by the European Research Council, taps into these newly discovered papyri for the first time in order to illuminate the origins of the literature of ancient Israel. The guiding principle for this is the observation that Egypt and Israel were exposed to comparable socio-historical processes throughout the fifth to third centuries BCE. Cultural changes precipitated by foreign hegemony and international influences directly impacted the respective scribal elite and led to comparable works of sophisticated literature being created in both Egypt and Israel.

Realizing Leibniz’s Dream: Child Languages as a Mirror of the Mind (LeibnizDream)

PROJECT HEAD:
Prof. Dr. Dr. h.c. Artemis Alexiadou
(Department of German Studies and Linguistics)

FUNDING PERIOD:
January 2021 to December 2026

ERC SYNERGY GRANT

Children around the world acquire language and with it the human ability to communicate complex thoughts. Twelve targeted language acquisition studies will be conducted on a global scale in order to determine whether language radically compresses thought structures to sound or sign. While current theories assume a parallel between thought and language or meaning-preserving transformations, the EU-funded LeibnizDream project assumes that thought is mapped to language by only realising some pieces of conceptual representations. The project has recruited collaborators for more than 50 languages from 21 different language families, two sign languages and two creoles to carry out the studies.

https://leibnizdream.eu/
Switchable rhodOpsins in Life Sciences (SOL)

**PROJECT HEAD:**
Prof. Dr. Peter Hegemann (Department of Biology)

**FUNDING PERIOD:**
September 2022 to August 2028

**ERC SYNERGY GRANT**

Bistable rhodopsins are naturally photosensitive G-protein coupled receptors (GPCRs) responsible for photosensitivity and vision in animals. Bistable rhodopsins are also a potential source of strong optogenetic tools allowing bidirectional control of influential intracellular signalling cascades in all light-using body systems. However, knowledge of their biology and their engineering for optogenetic scopes is restricted due to limited understanding of their structure-function relationships. The EU-funded SOL project will investigate how structural characteristics of these influential photoreceptors determine their bistability, bichromicity, kinetics and G-protein selectivity. The project will apply this knowledge for rational engineering towards colour tuning and G-protein selectivity for optogenetic tools and investigate physiological functions. SOL will produce pioneering optogenetic techniques allowing for definition of GPCR signalling activities.
The individual funding of excellent early-career postdocs provides them with the opportunity for independent research and the development and refinement of their academic profile. Funding for research projects can manifest in various forms, such as leading junior research groups or receiving research scholarships to finance a temporary position. These opportunities are made available through a variety of funding bodies, including the German Research Foundation (DFG), diverse government ministries, esteemed foundations, and the European Union.
Adaptive Cortical Organization in the Service of Distributed Working Memory Storage

**PROJECT HEAD:**
Dr. Thomas Christophel (Department of Psychology)

**FUNDING PERIOD:**
January 2021 to December 2026

**FUNDED BY**
Emmy Noether Programme (DFG)

We are capable of retaining almost any form of stimulus in working memory. In day-to-day life, however, we only need to retain some information every given moment while readily ignoring or forgetting irrelevant percepts. The cortical organization of working memory has been debated for decades.

This group’s work is driven by the hypothesis that short-term information storage is a distributed cortical process. We use neuroimaging methods (predominantly fMRI) and multivariate pattern analysis techniques (“machine learning”) to identify brain regions which store contents held in working memory, study the representational architecture of these brain regions, and ask how memory storage is elicited and maintained in these areas.

https://discolab.eu/

Confined Carbyne for Optoelectronics and Optomechanics

**PROJECT HEAD:**
Dr. Sebastian Heeg (Department of Physics)

**FUNDING PERIOD:**
March 2021 to February 2024

**FUNDED BY**
Emmy Noether Programme (DFG)

This project will establish carbyne, a one-dimensional linear chain of carbon atoms inside a carbon nanotube, as a new material system to manipulate the molecular vibrations through optomechanical interaction, and to realize a transistor on the atomic scale.

Initially, the phonon and excitation dynamics of confined carbyne will be explored and how these properties are influenced by the host nanotubes. This will be achieved by combining tip-enhanced, temperature-, and wavelength dependent Raman spectroscopy. Confined carbyne will be brought into a device configuration and interfaced with plasmonic structures by dielectrophoretic deposition, where the nanotube acts as a carrier system. Electrical transport measurements will verify the functionality of the carbyne transistor. The proposed project will allow to explore new phenomena such as the frequency conversion of light on the molecular scale.
Eidetic Representations of Natural Language

**PROJECT HEAD:**
Prof. Dr. Alan Akbik (Department of Computer Science)

**FUNDING PERIOD:**
July 2021 to June 2024

**FUNDED BY**
Emmy Noether Programme (DFG)

The field of natural language processing (NLP) researches computational models of human language, with the goal of enabling machines to perform language tasks that are thought to require human-like intelligence (such as reading and understanding text, or conversing with humans). The recent wave of scientific breakthroughs in NLP is powered by neural language models; in essence, these models “read” very large collections of text and so acquire general world knowledge, which they can then use to perform language tasks.

In this project, we conduct fundamental research in the field of neural language modeling to address three principal limitations of current approaches. Our goal is to create the “next generation” of neural language models and significantly advance the state-of-the-art in NLP. Our research is made publicly available through the Flair framework to enable further research or application to use cases.

[https://github.com/flairNLP/flair](https://github.com/flairNLP/flair)

Morphogenesis of Membrane-Bound Organelles by Phase-Separated Compartments

**PROJECT HEAD:**
Dr. Roland L. Knorr (Department of Biology)

**FUNDING PERIOD:**
July 2021 to June 2024

**FUNDED BY**
Emmy Noether Programme (DFG)

Compartmentalization is essential for eukaryotic cell function, allowing the spatial organization of metabolic and regulatory processes into membrane-bound organelles. While some compartments exist persistently in cells, a large variety of transient compartments also play critical roles in cell function. Non-membrane bound structures that form by processes resembling liquid-liquid phase separation are an important class of transient compartments. A subset of membrane bound organelles fulfills transient functions, such as protein storage vacuoles that develop during plant embryogenesis.

The project aims to provide a detailed quantitative description of how membrane-bound organelles form by wetting droplets.

[https://www.biologie.hu-berlin.de/de/gruppen/interfacial-cell-biology](https://www.biologie.hu-berlin.de/de/gruppen/interfacial-cell-biology)
What’s in a Name? Computational Modeling and Experimental Investigations on the Non-Arbitrariness of Word Label Choices

PROJECT HEAD:
Dr. Fritz Günther (Department of Psychology)

FUNDING PERIOD:
December 2021 to November 2024

FUNDED BY
Emmy Noether Programme (DFG)

Combining computational modelling techniques with an experimental psychological methodology, the present project aims to establish a comprehensive theoretical framework for the choice and implications of word labels – why do speakers choose certain names to describe (new) concepts, and how do these names affect the perception and evaluation of these concepts?

A first set of studies investigates when and which new word labels are coined by speakers, depending on the properties of the concepts to be named. A second set of studies examines direct social influences on label choices, since labels are always a social convention of a speaker community. A final set of studies investigates the implications and connotations generated by labels, including semantic associations, affective evaluation, and sensory perception.

https://www.psychology.hu-berlin.de/en/profship/emmy/kompmod/kompmod

Monoaminergic Neuromodulation of Cortical Circuits Underlying Economic Investment Decisions

PROJECT HEAD:
Dr. Torben Ott (Department of Biology)

FUNDING PERIOD:
January 2022 to December 2024

FUNDED BY
Emmy Noether Programme (DFG)

We attempt to make decisions that best serve our goals. Orbitofrontal cortex (OFC) contributes to these economic investment decisions by computing the value of uncertain outcomes. However, the mechanisms by which OFC dynamically computes value remain largely unknown. Neurons releasing monoaminergic neuromodulators such as dopamine and serotonin broadcast value signals to many brain regions including OFC and could therefore enable economic investment decisions.

The goal of my research project is to determine the mechanisms by which monoaminergic neuromodulators interact with cortical networks to enable economic investment decisions. I will address these questions by combining a model-based behavioral approach in rats with state-of-the-art optogenetic, electrophysiological and computational tools.

https://torbenottlab.org/
Porous Organic Frameworks as Sustainable Electrode Materials (ORGEL)

**PROJECT HEAD:**
Dr. Oliver Dumele (Department of Chemistry)

**FUNDING PERIOD:**
March 2022 to February 2026

**FUNDED BY**
Federal Ministry of Education and Research (BMBF)

The demand for mobile power sources is currently higher than ever and shows a growing trend. Achieving the world’s climate goals is impossible without sustainable battery solutions. In light of emerging technologies in microelectronics, research must focus on high-performance systems for electric vehicles and garden tools, as well as concepts for low-power consumers with emphasis on sustainability, recyclability, and weight reduction. Moreover, the digitization of everyday life is rapidly expanding, with a significant market share being held by microelectronics. Everyday products are being “digitized,” transforming them into intelligent systems for end consumers, such as product labels or packaging.

Project ORGEL aims to develop novel manufacturing processes for metal-free batteries that can be used in the tiniest electronic devices, such as illuminated product labels or remote-readable barcodes. These batteries will be designed for safe and eco-friendly recycling.

http://www.dumelelab.com

The Political Economy of Climate Policy and Finance (PECan)

**PROJECT HEAD:**
Dr. Achim Hagen (Albrecht Daniel Thaer Institute of Agricultural and Horticultural Sciences)

**FUNDING PERIOD:**
October 2022 to September 2027

**FUNDED BY**
Federal Ministry of Education and Research (BMBF)

Determined climate policy measures are imperative to achieve the goals of the Paris Agreement. Climate change as well as climate policy measures harbor a variety of risks, including for the financial system. Politico-economic barriers can hinder a sustainable transformation. The time horizons of physical climate risks (long-term) and transition risks for the financial system caused by climate policy (short-term) differ. Politicians may shy away from climate policy measures due to lobbying or to improve their re-election chances. The junior research group PECan addresses key issues such as the measurement of transition risks for the financial sector, the interaction between climate policy and the financial sector and its regulation, and possible measures to overcome politico-economic barriers.

https://www.pecan-climate.org/

Quantitative Financial Risk Network Analysis with Sentiment and Herd Behaviour Measures (QFRNA_SH)

**FELLOW:**
Dr. Rui Ren (Faculty of Economics and Business Administration)

**FUNDING PERIOD:**
January 2021 to December 2022

**HOST:**
Prof. Dr. Wolfgang K. Härdle (Faculty of Economics and Business Administration)

**FUNDED BY**
Marie Skłodowska-Curie Individual Fellowships: European Fellowship

In recent years, we have observed many examples of how stock or crypto market changes can impact the economy. We have also seen the negative effects of over-optimistic or pessimistic behaviours on both the financial market and the economy, on both a global and a regional scale. As such, there has been an increase in research on this topic. Unfortunately, despite this increase, there has not been enough research on measures that can be taken for the stability of the stock market or crypto market.

The EU-funded QFRNA_SH project studies the distributional effect of investor sentiment, explores cross-exchange crypto risk from a dynamic network perspective, and proposes a systemic risk indicator Financial Risk Meter FRM based on expectiles.

Atomic Vapor-Based Turnstile Device for Single Photons (AVATURN)

**FELLOW:**
Dr. Martin Cordier (Department of Physics)

**FUNDING PERIOD:**
June 2021 to June 2023

**HOST:**
Prof. Dr. Arno Rauschenbeutel (Department of Physics)

**FUNDED BY**
Marie Skłodowska-Curie Individual Fellowships: European Fellowship

This project aims at developing a source of Fourier-transform-limited single-photons which does not require ultra-highvacuum (UHV) or cryogenic environment. Thanks to these characteristics, such a source is ideally suited for practical applications.

It relies on a novel approach based on a collectively enhanced resonant light-atom interaction within an ensemble of weakly coupled rubidium atoms in the vapor phase. The key mechanism is a photon-number dependent quantum interference that can modify the photon-statistics of a weak coherent state, i.e. bunching or antibunching, when travelling through the ensemble. Interestingly, when interacting with a critical number of atoms, the coherent state can be transformed into a stream of antibunched single photons. In such a case the ensemble acts as a single-photon turnstile.
Blackness Imagery in the Construction of European Identity/ies: The Case of the Czech Lands in a Transnational Perspective (BlackCzech)

**FELLOW:**
Dr. Jana Kantofíková
(Department of Slavic and Hungarian Studies)

**FUNDING PERIOD:**
October 2022 to September 2024

**HOST:**
Prof. Dr. Alfrun Kliems
(Department of Slavic and Hungarian Studies)

**FUNDED BY**
Marie Skłodowska-Curie Postdoctoral Fellowships: European Fellowship

The project explores both forms and functions of imagined Black people for the construction of European identity(ies). The focus will be on French-Czech and German-Czech cultural relationships from the 19th century to the interwar period of the 20th century. Anthropological spectacles and their medial interpretation in the early 19th century, for example, were meant to prove the “maturity” of the young Czech nation and to symbolize the affiliation of the Czech lands with the colonial powers. Czech nationalists also instrumentalized African metaphors and colonial narratives in the political struggle against the Germans, sometimes as a rhetorical “self-Africanization.”

Thus, the project addresses a nuanced reflection on the question to what extent the cultural, intellectual, and scholarly production of a “non-colonial” small nation can participate colonially — even when its members are represented as colonized objects themselves.

How Action Preparation Shapes What We Perceive: Spatiotemporal Visual Processing in the Context of Goal-Directed Eye and Hand Movements (PremotorPerception)

**FELLOW:**
Dr. Nina Hanning (Department of Psychology)

**FUNDING PERIOD:**
February 2021 to January 2024

**HOST:**
Prof. Dr. Martin Rolfs (Department of Psychology)

**FUNDED BY**
Marie Skłodowska-Curie Individual Fellowships: Global Fellowship

Humans continuously make saccadic eye movements to see their surroundings with the high precision of the fovea. Each saccade shifts the image on the retinas, such that the visual system needs to integrate blurry peripheral views of objects with their high-resolution equivalents once brought into the fovea. Understanding how this seamless integration is achieved is critical for theories of human perception.

The EU-funded project PremotorPerception combines psychophysical protocols that enable a continuous assessment of visual sensitivity throughout the visual field with transcranial magnetic brain stimulation to investigate the role of specific brain areas underlying these modulations.
Surface for Urban Innovation: The Politics of Designing Poverty in Colombia and Czechia (SURBANIN)

**FELLOW:**
Dr. Petr Vašát (Georg Simmel Center for Metropolitan Studies)

**FUNDING PERIOD:**
September 2021 to August 2024

**HOST:**
Prof. Dr. Talja Blokland
(Georg Simmel Center for Metropolitan Studies)

**FUNDED BY**
Marie Skłodowska-Curie Individual Fellowships: Global Fellowship

The social innovation in architecture, art, and design (AAD) is used by collectives to assist poor communities of the global South and North by innovating their material environment. Social innovations have played an increasingly significant role alongside world and national social policies. However, they are often decontextualised and isolated from the urban and cultural policies causing poverty.

The EU-funded SURBANIN project will establish a new understanding of how innovations emerge and move globally, how they are locally applied and what impact they have. The project will compare slums in Colombia with homelessness in the Czech Republic, focusing on a range of heterogeneous social innovations like cable cars in Colombia and design innovations in homeless encampments in Czech cities.

[https://www.petrvasat.com/surbanin](https://www.petrvasat.com/surbanin)  
[https://www.instagram.com/surbanin](https://www.instagram.com/surbanin)

Doctoral Network: Dynamic Control in Hybrid Plasmonic Nanopores: Road to Next Generation Multiplexed Single Molecule Detection (DYNAMO)

**PROJECT COORDINATORS:**
Prof. Dr. Roman Krahne, Prof. Dr. Denis Garoli  
(both Italian Institute of Technology [IIT])

**HOST:**
Prof. Dr. Janina Kneipp (Department of Chemistry)

**FUNDING PERIOD:**
September 2022 to August 2026

**FUNDED BY**
Marie Skłodowska-Curie Actions: Doctoral Network

Nanopore sequencing is a third-generation approach used in the sequencing of DNA or RNA and other biopolymers. A single molecule of DNA or RNA can be sequenced without polymerase chain reaction amplification or chemical labelling of the sample using this technology.

The project DYNAMO, funded as part of the European Framework Programme for Research and Innovation Horizon Europe within the Marie Skłodowska-Curie Actions (MSCA), will organise a research and training network for developing the next-generation single molecule technologies using hybrid DNA and metallic nanostructures. The network will include academic and high-tech industry partners that are experts in optical spectroscopy, DNA nanostructure, nanopore technology, and single molecule detection. The DYNAMO objective is to prepare the next generation of highly skilled researchers that will advance the science of single molecule detection and characterisation.
INTERVIEW
Humboldt-Universität zu Berlin brings together many academics of various ages who are at different stages on their academic journey. Despite their heterogeneity, what they have in common is that they conduct highly interesting research independently, autonomously and with great commitment, and that they are in no way dependent – except in some cases on their supervisor – let alone needy or subordinate. In short, attributes that are often associated with the general term “junior academics”, although it is finally dying out.

Since 2022, Humboldt-Universität has been using the European Framework for Research Careers (EFRC) developed by the EU Commission. This enables the various academic qualifications in each member state to be categorised into four internationally comparable qualification levels (R1–R4, where “R” stands for “Researcher”) based on the researchers’ and lecturers’ degree of independence:

- **R1 (First Stage Researcher)** covers researchers up to doctoral level.
- **R2 (Recognised Researcher)** includes postdoctoral researchers who have already made their first academic contributions but are not yet fully independent in their research and teaching.
- **R3 (Established Researcher)** refers to experienced researchers who, for example, qualify for a lifetime professorship by leading a junior research group or holding a junior professorship.
- Finally, **R4 (Leading Researcher)** is no longer a qualification level, but rather marks the highest level of academic independence, in which researchers define and advance a subject area themselves.

Here, four researchers selected to exemplify Humboldt-Universität researchers at levels R1–R3 talk about their current research projects, their plans for the future and the social relevance of their work. They also reveal what questions they are rarely asked.
Laura Betancur Alarcón
(IRI THESys)
Laura Betancur Alarcón has been a doctoral student at the Integrative Research Institute on Transformations of Human-Environment Systems (IRI THESys) since 2021, where she is involved in the project "Water Security for Whom? – Social and Material Perspectives on Inequality Around Multipurpose Reservoirs in Colombia", led by Tobias Krüger and funded by the Volkswagen Foundation.

What are you researching right now?
My background is in environmental studies and I conduct ethnographic field research, combining insights from anthropology and geography. My main interest is in understanding how inequality is generated in complex human-environment relationships, especially in relation to rivers and riverbanks. In my work, I try to avoid a binary separation of culture and nature and to understand inequality not just in social terms, but also in material and ecological terms, i.e. in a socio-ecological context. As part of the "Water for Whom?" project, I’m working in Colombia, where large hydropower plants and reservoirs have changed the inhabitants’ way of living life, public administration, infrastructure, labour and nature conservation, among other aspects. I’m researching the socio-ecological relationships in the Magdalena Basin, the most important one in the country, focusing on rivers that were dammed between the 1980s and 2010s. As human interventions in nature, dams cause significant changes to livelihoods.

Our "Water for Whom?" team is made up of seven doctoral students from different disciplines such as hydrology, energy modelling, economics and land-use sciences. I myself am responsible for the ethnographic approach, for investigating the relationships between people and river. We work together as a team and one of the challenges I face involves discussing the detailed descriptions of my ethnographic work with my colleagues in the other disciplines and engaging in productive dialogue with them – it’s really interdisciplinary work.

What are your goals for the next five years?
First of all, I want to complete the project and my doctoral thesis in the next few years. But at the same time, I’m looking forward to writing a book to reach a wider audience and to engage in academic communication in the field of environmental social sciences. I think this is very important because you often see findings in the hard sciences being explained to the public, but it’s also necessary to explain things more broadly in anthropological and social-science terms. I want to research and tell stories about how to better appreciate, understand and live with rivers and their landscapes.

What would you say is the significance of your research for society?
Given the current state of our planet, the importance of studying socio-ecological relationships is probably indisputable. But there are so many complex dynamics that are analysed in such a general and global way that many decision makers are unable to grasp them. If you talk to a government or an international organisation, they’ll nod and say “Yes, yes, we need to work on the sustainability of water and food.” Somehow, it all sounds very abstract. What then? What is it? What is it really? I think the work environmental social sciences can do is precisely to explain and describe how these huge process-

“I think questions about our own emotional connection to our research are sometimes neglected. Why do we do what we do?”
Laura Betancur Alarcón
es can be translated into tangible practices, be it fishing practices, the production of green hydrogen or biodiversity conservation measures.

As a researcher, what’s a question you’re asked far too rarely?
I think questions about our own emotional connection to our research are sometimes neglected. Why do we do what we do? Scientific – and especially anthropological – work has very much to do with myself, with my body, my personal time, the way I immerse myself completely in the subject matter; and so it’s inextricably linked to my own positioning, my own life story and my own emotions. It’s something people don’t like to talk about in science because everything always needs to appear professional, neutral and serious. But I’ve spent ten months doing field research, listening to people’s stories. We see them going about their daily life, we see their struggles and their dreams. Of course it changes you on a personal level.

Dr. Susanne Schmidt (Department of History)

Susanne Schmidt is a research associate at the Chair of the History of Science and is currently visiting Stanford University in California on a research scholarship from the German National Academy of Sciences Leopoldina, where she is researching race and personality in psychology in the context of the history of the marshmallow experiment.

What are you researching right now?
I’m working at Stanford University on the history of the marshmallow experiment. It’s a standard psychological test for measuring self-control that features in every introductory lecture in psychology and is also incredibly well known. The respective studies were developed here at Stanford in the 1960s and 1970s by Walter Mischel and his colleagues and carried out in an experimental room attached to the university kindergarten. That’s why I’m here in California – I’m spending a lot of time working in the archives and going through the old documents. The marshmallow experiment is an exercise that measures the ability to delay gratification. Toddlers are given a marshmallow – or another sweet – and then have to decide whether to eat the treat immediately or wait to get more later. Originally, this was a test series that was supposed to be completed in the mid-1970s. But some years later, the connection between the children’s patience in this experiment and their academic performance was studied and a correlation was established between the ability to exercise self-control in childhood and success at school. This was followed by other follow-up studies that established links to careers, prosperity and health in adult life. These observations caused the marshmallow test to go through the roof, but it was widely criticised as well. I’m particularly interested in the fact that Walter Mischel’s earliest tests were not conducted here at Stanford, but actually more than ten years earlier, in a very different setting and with slightly older children in Trinidad and Grenada. It took me very much by surprise and it was something I hadn’t known before.

“Although the test is very well known, the fact that the same psychologist carried out earlier tests in the Caribbean isn’t so well known.”

Dr. Susanne Schmidt
Although the test is very well known, the fact that the same psychologist carried out earlier tests in the Caribbean isn't so well known. Walter Mischel also asked the children there about their ethnicity and then statistically correlated the children's decisions – a small sweet now or a larger one later – with it. I took a closer look and found out that the reference to race differences isn't an exception in the history of the test, but instead persists throughout its entire history – right up to this day. For example, the marshmallow experiment has been used to assess the impact and effectiveness of government education campaigns and measures to eliminate social inequality in the education system. Overall, you could say that the experiment is very closely related to questions of social inequality. And, as a science historian, that's something that really interests me.

What are your goals for the next five years?
For now, I'll be in the USA until 2024, doing my research in the archives, writing papers and preparing a monograph on the history of the marshmallow experiment. I'll also continue working on the project once I'm back in Germany. Moreover, I'm currently preparing an application for a research group on the subject of self-control. I want to work with a team to study the scientific history of self-control from a historical and interdisciplinary perspective and I want questions about the social and political dimensions of humanities and social-sciences research to take centre stage.

What would you say is the significance of your research for society?
I see questions relating to the history of science as important social questions as well because the history of science is about gaining a deeper understanding of our existing concepts and their complex history. "Self-control", for example, is a term that's also used in everyday life. Such influential concepts don't simply exist in a timeless space. Rather, when we use them, we're always drawing on their history, whether favourably or critically.

As a researcher, what's a question you're asked far too rarely?
I think what we don't talk about particularly often – but which is important – are all the things that haven't worked out. Those thousands of applications you've written, for example, and never had a reply to or that have simply been rejected. They're the things you don't see. After all, my website only features my successes. For example, my last research project, on the history of the midlife crisis, feminism and psychology: I submitted a lot of applications for it and for a long time nobody understood why anyone would want to write a history of the midlife crisis or what feminism has to do with science. But then you suddenly meet the right person or present it slightly differently – and it ended up turning into a research project as well as a book that I'm really happy with and that's generated a lot of interest. That's why I like to tell students what hasn't been successful or what wasn't immediately successful – it's something I find important and encouraging.
“Take when the mobile phone was invented: it would have simply made more sense to call such a portable device ‘mobile phone’ than ‘treetop’ or even something else entirely.”

Dr. Fritz Günther

▶

What are your goals for the next five years?
The first project period is scheduled to run until 30 November 2024, at which point we have an interim evaluation, and I’m simply assuming and hoping that the research project will continue until 2027. My main professional goals during that time are, of course, to do a good job with the project, to help the two doctoral students involved complete their doctorates as well as possible and to further expand the team with more applications for third-party funding. Once these five years are up, I’d rather like to find a permanent position, if possible. And then there’s my private life – I recently became a dad to a baby girl and I definitely want to spend enough time with my family. In fact, I’d consider it a pretty high priority.

What would you say is the significance of your research for society?
Realistically, of course, it’s basic research. I don’t want to exaggerate too much. But I think the part about what implications the choice of labels has is generally very interesting. One place where you can see it is in the media coverage; if you just watch the evening news, you’ll often notice that certain things are consistently labelled in a certain way and we can try to better understand what influence that has, i.e. what associations certain terms evoke and how strong the effects are. Well, and then I’ve been in touch with philosophers a lot recently and I’ve come across the research field of “conceptual engineering”. It’s basically about this: ultimately, the concepts and words we use are tools that help us interact with the world. And it’s a fact that there are rather large numbers of new words at the moment and nobody really controls which ones are created and which ones aren’t. It would be nice if we could better understand which new words people are likely to create to name things and what effects the use of these names will subsequently have. That also changes the concepts or creates new ones, which in turn affects how we can think about the world.

As a researcher, what’s a question you’re asked far too rarely?
One question I’m always happy to hear and would like to be asked more often at academic conferences, for example, is: “Are you sure?” And that’s true both when I’m sure and can then explain why, and when I’m not and need to put more thought into why I’ve actually arrived at a certain assumption and statement.

Jun.-Prof. Dr. Maite Wilke Berenguer
(Department of Mathematics)

Maite Wilke Berenguer has been a tenure-track junior professor of interdisciplinary mathematics since March 2021 and is studying stochastic processes inspired by biological phenomena.

What are you researching right now?
I’m a junior professor of interdisciplinary mathematics, which in my case means that I’m combining probability theory with biology. As a mathematician, my background is in probability theory – so, everything involves “chance”. In this context, many phenomena in the field of biology generate extremely exciting mathematical questions. Right now, I’m developing and analysing models of the genetic evolution of populations, among other things. Here, I don’t want to primarily simulate my conclusions, but rather prove them mathematically. The Wright-Fisher model is a famous, fundamental stochastic model that – to put it very simply – describes the reproduction of individuals in a population. We can then extend it using a variety of biological mechanisms and investigate how it changes the model’s properties and predictions. The mathematical aspects are at the very heart of my work, but processing, for example to compare with data, is also part of it. Let’s take an example to briefly explain what I mean by these biological
mechanisms: Darwin’s natural selection is probably the best known. It has a small effect in each generation and so has a significant effect over a long period of time. And then there’s the rare “sudden selection”, e.g. induced by a natural disaster. Donihue et al. (Nature 560, 88–91, 2018) were lucky enough to study a salamander population in the Caribbean just before and after a hurricane. They found that the population after the hurricane was very different from the one before: the individuals were, for example, significantly smaller and lighter on average and had larger toe pads – characteristics that allowed them to hold on tightly to avoid being blown into the sea. By the way, I recommend the accompanying video to make you smile! Incorporating such extreme events into the model and analysing them is definitely a mathematical challenge that has yielded very cool results independent of biology – and we’re still working on it.

What are your goals for the next five years?
One of my main goals is to expand the interdisciplinary component of my professorship, specifically by establishing contacts here in the region – not just here at Humboldt-Universität, but also with working groups at other research institutions – especially, of course, with biologists, biophysicists and other scientists who are working in this field at the crossroads between mathematics and biology. As a mathematician, I also love discovering and developing new applications for my maths. Another obvious professional goal is, of course, my tenure here at the university. My interim evaluation was due this year, but it’s been postponed because I’ve been on parental leave.

What would you say is the significance of your research for society?
I’m definitely conducting basic research. To a certain extent, it’s a luxury, since its direct significance for society isn’t immediately apparent. But it’s actually a hugely important long-term investment that develops the foundations for new, perhaps as yet unimaginable applications and answers. More specifically: the sharp decline in biodiversity, for example, is a major global concern and it’s important to understand exactly what mechanisms are at work and how. Mathematical models play a particularly important part in areas where it’s difficult to conduct experiments. Of course, I can’t provide a single definitive answer to these complex questions, but I can contribute a tiny piece of the puzzle.

As a researcher, what’s a question you’re asked far too rarely?
Not as a researcher specifically, but as a mathematician, I’d like to hear these questions more often: “Is that something I can learn? Can you teach me that?” I’d always answer: “Yes, of course, I’d love to. Let’s take a seat.” Sadly, maths already has a bad reputation at school as something that’s only accessible to geniuses with a particular talent for it. But that’s not true at all. The maths you learn at school, in particular, is a tool that you can and should be trained to use, just like you’d train to become good at a sport. But – unlike in other subjects at school – in maths, everything builds mercilessly on what you’ve learnt before. When people finish high school, they’re often convinced that they’ve “always been bad at maths” just because their results are wrong even in areas they thought they’d understood. It’s easy to give up, especially given the fact that maths is always passed off as difficult. And then you realise that the problem is neither linear equations nor derivatives, and certainly not a fundamental lack of talent, but, for example, fractions – something you cover in primary school! So, I’m all the more pleased to take every opportunity I can to counter it!

“Sadly, maths already has a bad reputation at school as something that’s only accessible to geniuses with a particular talent for it. But that’s not true at all.”

Jun.-Prof. Dr. Maite Wilke Berenguer
PRIZES
Gottfried Wilhelm Leibniz Prize (DFG)

**RECIPIENT:**
Prof. Dr. Steffen Mau (Department of Social Sciences)

**YEAR:**
2021

Steffen Mau receives the Leibniz Prize 2021 of the German Research Foundation (DFG), endowed with 2.5 million euros award money. In the jury’s statement, Mau is recognized for his innovative sociological analyses of the diverse social transformations that characterize our present era. Mau has devoted himself to studies on the dynamics of social inequalities and social polarisation as well as comparative welfare state analyses and processes of the transnationalisation and Europeanisation of social living environments. Mau always combined macro-sociological structural analyses with a dense description of individual and social life on a micro level. With his widely recognized books “Das metrische Wir. Über die Quantifizierung des Sozialen” (2017) or “Lütten Klein. Leben in der ostdeutschen Transformationsgesellschaft” (2019), he set important thematic highlights in current debates.

Steffen Mau has been a professor of Macrosociology at HU since 2015. Previously, he studied political and social sciences at Freie Universität Berlin, earned his doctorate at the European University Institute in Florence, and was a professor at the University of Bremen. Visiting professorships have taken him to France and the USA.

Albert Lasker Award for Basic Medical Research & Louisa Gross Horwitz Prize

**RECIPIENT:**
Prof. Dr. Peter Hegemann (Department of Biology)

**YEAR:**
2021 & 2022

Peter Hegemann, Dieter Oesterhelt from the Max Planck Institute of Biochemistry and Karl Deisseroth from Stanford University jointly receive the Albert Lasker Award for Basic Medical Research 2021, the most prestigious biomedical research award in the USA. The three scientists are honoured for the discovery of light-sensitive microbial rhodopsins (microbial proteins) and the use of their properties to develop the field of optogenetics: a technology that enables researchers to control individual nerve cells in a targeted manner and thus gain insights into brain function.

Furthermore, biophysicist and neuroscientist Peter Hegemann, together with Karl Deisseroth and Gero Miesenböck, receives the Louisa Gross Horwitz Prize 2022 from Columbia University for their research that laid the foundation for the field of optogenetics. Optogenetics allows the study of brain functions and opens up avenues for a better understanding of neurodegenerative diseases and mental illnesses.
Mira Sievers from the Berlin Institute for Islamic Theology (BIT) has been awarded the Young Talent Award of the Berlin Science Award ("Nachwuchspreis des Berliner Wissenschaftspreises") 2021. With this award, the Governing Mayor of Berlin honours particularly innovative research approaches in a field that holds particular potential for Berlin’s scientific and economic future. The award ceremony for the prize, which is endowed with 10,000 euros and goes to researchers who are 35 or younger, took place on November 5th 2021, as part of the Berlin Science Week at the Urania Berlin.

Since January 2020, Mira Sievers has held the junior professorship for Islamic Foundations of Belief, Philosophy and Ethics at the Berlin Institute for Islamic Theology. Based on a non-denominational understanding of theology, the junior professorship examines various theological and philosophical manifestations of Muslim reflections on fundamental religious questions. These are contextualised in terms of their historical development, and their significance for our present context is critically examined.

In November 2022, the Stiftung Industrieforschung and Humboldt-Innovation GmbH, in collaboration with Humboldt-Universität zu Berlin, Freie Universität Berlin, Technische Universität Berlin, and Charité – Universitätsmedizin Berlin, organized the final event of the ninth Forum Junge Spitzenforschung competition for young researchers’ application ideas. This annual competition is aimed at recognizing outstanding early-career researchers in Berlin. In 2022, the focus was on the future of materials and materials production. Katherine A. Mazzio and Guillermo Alvarez Ferrero secured second place with their project “COIBS – New Batteries Based on Solvent Co-Intercalation”.

As the adoption of renewable energy sources continues to accelerate, rechargeable batteries have become crucial in managing fluctuations in electricity generation. The two early-career researchers have developed an initial proof of concept for a co-intercalation battery, comprising two electrodes. These electrodes follow a co-intercalation reaction that enables a fast and efficient electrochemical process.