EBERHARD KARLS
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ANNUAL REPORT

University of Tübingen

University of Tübingen Annual Report
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Published by the University President, Professor Bernd Engler

Contents

Welcome to Tübingen!

The University of Tübingen welcomed more international researchers and exchange students than ever before in 2019. Our international outlook enriches our research and teaching and makes our student culture more vibrant.

Our outstanding research once again secured our place among Germany's universities of excellence in 2019. This means we have generous backing from the German government to explore complex new academic and scientific fields. In a world where the very notion of truth is under siege, we place our trust in facts and intelligent analysis.

I hope you enjoy reading our 2019 Annual Report.

Professor Bernd Engler, President

Research

Excellent strategies

The University of Tübingen defended its status in the German government's Excellence Strategy in 2019 and will receive funding as one of the country's universities of excellence until 2026. Our renewed excellence status reflects the establishment of three new research clusters – in cancer research, infection medicine and machine learning – in 2018. Our support for innovative scientists and academics enabled Tübingen researchers to raise remarkable sums in European Research Council and German Research Foundation funding programs.

Sustainable progress

The University of Tübingen has been one of Germany's universities of excellence since 2012. Under the decision made in July 2019 by an international review panel and Germany's federal and state science ministers, Tübingen will receive funds of more than 73.6 million euros by 2026. Excellence Strategy funding from the federal and state governments ensures that the University can continue to develop individual research areas, structurally and across a wide range of fields. We are recruiting outstanding early-career academics, investing in research infrastructure, and are implementing a range of measures to encourage our students to think globally.

In 2018, new research clusters in the fields of machine learning, microbiology and infection research, and oncology and clinical imaging were approved under the Excellence Strategy's first funding line. The clusters will receive a total of 126 million euros or 18 million euros annually during the initial seven years. They commenced on 1 January 2019.

Image-Guided and Functionally Instructed Tumor Therapies (iFIT) is an excellence cluster joining the new Immune-Image project, which seeks to improve immunotherapies. New immune cell tracers are to be developed in Tübingen and tested in clinical studies. The five-year project is funded with a total of 30 million euros from the European Union's Innovative Medicines Initiative Joint Undertaking (IMI-JU). One million of that will support the research in Tübingen at the Department of Preclinical Imaging and Radiopharmacy and the Department of Nuclear Medicine and Clinical Molecular Imaging, in cooperation with the Department of Dermatology and Internal Medicine VIII (Medical Oncology and Pneumology).

Research news

Top marks in international rankings

In the Times Higher Education (THE) World University Ranking 2020, the University of Tübingen was placed among the top 100 internationally for the fifth time in a row, coming in at no. 7 in Germany. Tübingen improved particularly in the categories of teaching, research, and international reputation.

In the QS Ranking 2019 by subject, Tübingen achieved excellent results for Archaeology and for Theology and Religious Studies. Archaeology was placed eleventh worldwide and first in Germany. Tübingen is the sixth-best place in the world and the best in Germany to study Theology, according to the ranking.

The QS ranking by subject evaluates 48 disciplines on the basis of academic reputation, reputation among employers, the response to publications, and the publication citation frequency of those working in the discipline.

The following fields placed well in the QS ranking by subject:

Anatomy and Physiology
51-100 internationally, no. 3 in Germany

Anthropology
36 internationally, no. 3 in Germany

Biological Sciences
51-100 internationally, no. 3 in Germany

History
51-100 internationally, no. 4 in Germany

Linguistics
51-100 internationally, no. 2 in Germany

Philosophy
51-100 internationally, no. 4 in Germany

The Times Higher Education World University Ranking, QS and Shanghai Rankings are the three major indices in the field of assessing universities' quality.

A new home for informatics for the Life Sciences

The Interfaculty Institute for Biomedical Informatics (IBMI) was established at the University of Tübingen in February 2019 as a bridge for research in the Faculties of Science and Medicine. The new institute brings together existing centers, research groups and central institutions in bioinformatics and medical informatics, and it pools the expertise in these fields that is distributed across various institutions. The analysis of molecular data in bioinformatics, and clinical data in medical informatics, has great potential for basic research as well as translational applications. Cooperation is beneficial in areas such as personalized medicine, where the joint analysis of data can promote the transfer of research findings into practical applications, and can lead to new, tailor-made treatments for patients. The Institute is headed by Professor Oliver Kohlbacher of the Department of Informatics.

Central institutions such as the Quantitative Biology Center (QBiC) and the Medical Data Integration Center (meDIC) are integrated into the work of the IBMI. The institute has links with the Max Planck Institutes in Tübingen, the Cyber Valley artificial intelligence research network, and the Machine Learning excellence cluster. IBMI researchers are also expected to apply their knowledge to teaching, particularly in the further development of the bioinformatics and medical informatics programs.

Bioinformatics and medical informatics in Tübingen have grown considerably in recent years, with many third-party funded projects in these fields, as well as new professorships and research groups. The pooling of Tübingen's expertise in biological and medical informatics in a joint institute will also help to further strengthen our profile in the digital life sciences.

Research ambassadors appointed

Tübingen's Research Alumni Network TRACe promotes the University's outstanding research contacts worldwide. Its members are academics who have worked at the University of Tübingen or have been guests here. In 2019, the President's Office appointed its first University of Tübingen Ambassadors – TRACe researchers who are particularly committed to the University of Tübingen, and who help promote our research in their disciplines.

The ambassadors appointed in 2019 are:

- Professor Selidji Todagbe Agnandji (Tropical Medicine), CERMEL, Gabon
- Professor Francesco Chiabotti (Arabic, Islamic Studies and Medieval History), INALCO Paris, France
- Professor Dahan Fan (Philosophy, focus on Kant), Tsinghua University, China
- Professor Yi Jiang (Education), EAST China Normal University, China
- Professor Pamela Klassen (Study of Religion), University of Toronto, Canada
- Professor Nadine McQuarrie (Geology and Environmental Science), University of Pittsburg, USA
- Professor Petar Milin (Psychology of Language and Language Learning), Birmingham University, UK
- Professor Merav Seifan (Plant Ecology), Ben Gurion University of the Negev, Israel

Two new collaborative research centers

The German Research Foundation approved funding for two more collaborative research centers at the University of Tübingen in 2019. They were launched on 1 July 2019 and will receive funding of eight million euros each for an initial four-year period.

The **Different Aesthetics** collaborative research center (SFB 1391) enables cultural studies and humanities researchers to investigate premodern, "other" aesthetics, using terminology and concepts in art, and the practices related to them, which arose prior to the development of aesthetics in the 18th century. The spokesperson is Professor Annette Gerok-Reiter, a specialist in Germany's medieval culture. The University of Stuttgart is collaborating in two of the collaborative research center's 18 projects.

Aesthetic discussions are often based on concepts of the 18th and 19th centuries; the value of art lies primarily in its self-reference and autonomy, a focus that can obscure the very function of the arts both socially and anthropologically. In contrast, the researchers will focus on aesthetic practices, manifestations and concepts that are not based on the thinking of the early modern era. The new collaborative research center reflects a broader desire to explore the philosophies and values of the pre-modern era.

The transregional collaborative research center **Cellular Mechanisms of Antibiotic Action and Production** (ANTIBIOTIC CellMAP), brings together scientists from the fields of biology, chemistry, pharmacy and medicine to investigate the cellular production and action mechanisms of antibiotics. The spokesperson is Professor Heike Brötz-Oesterhelt of the Interfaculty Institute of Microbiology and Infection Medicine. Tübingen's transregional partner is the University of Bonn.

As more and more pathogens develop multiple resistances to what was once a cure, new antibiotics are urgently needed. Despite great technological advances such as high-throughput screening, few effective new drugs have been found. There is still much we do not know about how antibiotics act and about the biology of antibiotic-producing bacterial cells. In the new transregional collaborative research center, the scientists hope to gain a better understanding of the manifold effects of antibiotics on pathogens and will also investigate the stress to which bacterial cells are subjected while producing antibiotics. The goal is to learn from these molecular mechanisms so as to be able to select and develop better active agents in the future.

In 2019, the German Research Foundation also approved the extension of the **Threatened Orders** collaborative research center (SFB 923) and **The Skin as Sensor and Effector Orchestrating Local and Systemic Immunity** (SFB/TRR 156) for a further four years.

Top left: Frans Floris, Fall of the Rebellious Angels, 1554, oil on wood (detail)
Top right: Bacteria cultures in the laboratory. Effective antibiotics impede their growth.

Collaborative research centers at the University of Tübingen

Title	Spokesperson	Duration
Different Aesthetics (SFB 1391)	Professor Dr. Annette Gerok-Reiter German Language and Literature	1 July 2019 - 30 June 2023
CAMPOS – Catchments as Reactors: Metabolism of Pollutants on the Landscape Scale (SFB 1253)	Professor Dr. Peter Grathwohl Center for Applied Geoscience	1 Jan. 2017 - 31 Dec. 2020
Robust Vision – Inference Principles and Neural Mechanisms (SFB 1233)	Professor Dr. Matthias Bethge Werner Reichardt Center for Integrative Neuroscience/Institute of Theoretical Physics	1 Jan. 2017 - 31 Dec. 2020
Molecular Coding of Specificity in Plant Processes (SFB 1101)	Professor Dr. Klaus Harter Center for Plant Molecular Biology	1 April 2014 - 31 Dec. 2021
ResourceCultures: Socio-cultural Dynamics in the Treatment of Resources (SFB 1070)	Professor Dr. Martin Bartelheim Institute of Prehistory and Medieval Archaeology	1 Oct. 2013 - 30 June 2021
Threatened Orders (SFB 923)	Professor Dr. Mischa Meier Institute of Ancient History	1 July 2011 - 30 June 2023
Construction of Meaning – The Dynamics and Adaptivity of Linguistic Structures (SFB 833)	Professor Dr. Sigrid Beck Institute of English Languages and Literatures	1 July 2009 - 30 June 2021
The Bacterial Cell Envelope: Structure, Function, and Infection Interface (SFB 766)	Professor Dr. Wolfgang Wohlleben Interfaculty Institute of Microbiology and Infection Medicine	1 July 2007 - 30 June 2019

Tübingen participates in these transregional collaborative research centers

Title	Tübingen spokesperson	Duration
ANTIBIOTIC CellMAP – Cellular Mechanisms of Antibiotic Action and Production (SFB/TRR 261)	Professor Dr. Heike Brötz-Oesterhelt Interfaculty Institute of Microbiology and Infection Medicine	1 July 2019 - 30 June 2023
Platelets – Molecular, cellular and systemic functions in health and disease (SFB-Transregio 240)	Professor Dr. Meinrad Gawaz Internal Medicine Department I, Cardiology	1 July 2018 - 30 June 2022
Liver Cancer – New mechanistic and therapeutic concepts in a solid tumor model (SFB-Transregio 209)	Professor Dr. Nisar Malek Internal Medicine Department I	1 July 2017 - 30 June 2021
The Skin as a Sensor and Effector Organ Orchestrating Local and Systemic Immune Responses (SFB-Transregio 156)	Professor Dr. Martin Röcken Department of Dermatology	1 July 2015 - 30 June 2023
Biological Design and Integrative Structures: Analysis, Simulation and Implementation in Architecture (SFB-Transregio 141)	Professor Dr. Klaus G. Nickel Geoscience – Applied Mineralogy	1 Oct. 2014 - 30 June 2019

Research units with a common focus

The German Research Foundation (DFG) sponsors group projects in which researchers can work together on a specific, innovative research task. These research units usually receive funding for two three-year periods. 2019 saw the establishment of two new research units at the University of Tübingen, in the disciplines of Psychology and Economics.

Modal and Amodal Cognition: Functions and Interactions (FOR 2718) aims to help clarify how thought and other higher cognitive processes work. Professor Barbara Kaup of the Department of Psychology is the research unit's spokesperson. The unit was launched in April 2020 and will receive funding of 2.5 million euros for an initial three years.

Psychology distinguishes between modal and amodal representations in the mind. Modal formats are based on the perception of an experience – like the image of a dog you have seen.

Amodal formats, on the other hand, extrapolate information drawn from various sensory channels – resulting in symbolic representations. Researchers often assume that processes in language or visual imagination, for example, operate on one or the other of these two representation formats – modal or amodal. In the new research unit, however, the researchers assume that both formats play an important role in almost all domains of cognition. They seek to investigate the formats and their function within and across domains. They also plan to explore how the formats develop as we grow from infants into adults.

Since October 2019, researchers from Tübingen, the universities of Eichstätt-Ingolstadt, Cologne, Mannheim and Münster have been collaborating in the research unit **Understanding the Behavior of Multinational Corporations in the Context of International Tax Institutions** (FOR 2738). The spokesperson is Tübingen economist Professor Georg Wamser from the Department of Economics.

Increased globalization has placed a focus on international tax law in recent years. Global companies are able to shift profits to low-tax countries and avoid paying taxes in other countries. One recommendation from the Organization for Economic Cooperation and Development (OECD) is that profits should be taxed wherever economic activities are carried out and value is added.

The research unit aims to provide a comprehensive analysis of the direct and indirect effects of international tax rules on the behavior of multinational companies. It will also examine their real economic consequences. In six sub-projects, the research network will provide comprehensive data for policymakers. The DFG will provide approximately 747,000 euros over three years for the three subprojects managed in Tübingen.

Tübingen research units

Institute	Title	Spokesperson
Interfaculty Institute of Microbiology and Infection Medicine	The Autotrophy-Heterotrophy Switch in Cyanobacteria: Coherent Decision-Making at Multiple Regulatory Layers (FOR 2816)	Professor Dr. Karl Forchhammer
School of Business and Economics	Understanding the Behavior of Multinational Corporations in the Context of International Tax Institutions (FOR 2738)	Professor Dr. Georg Wamser
Department of Psychology	Modal and Amodal Cognition: Functions and Interactions (FOR 2718)	Professor Dr. Barbara Kaup
Center of Neurology and Hertie Institute for Clinical Brain Research	Epileptogenesis of genetic epilepsies (FOR 2715)	Professor Dr. Holger Lerche
Institute of Ancient History	Migration and Mobility in Late Antiquity and Early Middle Ages (FOR 2496)	Professor Dr. Mischa Meier
Interfaculty Institute of Biochemistry	VIROCARB: Glycans Controlling Non-Enveloped Virus Infections (FOR 2327)	Professor Dr. Thilo Stehle
Translational Gastrointestinal Oncology	Targeting Therapeutic Windows in Essential Cellular Processes for Tumor Therapy (FOR 2314)	Professor Dr. Lars Zender
Institute of Linguistics and Senckenberg Center for Human Evolution and Palaeoenvironment	Words, Bones, Genes, Tools: Tracking Linguistic, Cultural and Biological Trajectories of the Human Past (FOR 2237)	Professor Dr. Gerhard Jäger Professor Dr. Katerina Harvati
Interfaculty Institute of Biochemistry (IFIB)	cGMP Signaling in Cell Growth and Survival (FOR 2060)	Professor Dr. Robert Feil
Center of Neurology and Hertie Institute for Clinical Brain Research	The Physiology of Distributed Computing Underlying Higher Brain Functions in Non-Human Primates (FOR 1847)	Professor Dr. Hans-Peter Thier

European Research Council funding

European Research Council grants are made to individual researchers at various stages of their careers. ERC grants run for five years and are given on the basis of outstanding research achievement and excellent project ideas.

Two new Advanced Grants

Professor Gerhard Jäger from the Department of Linguistics receives an Advanced Grant for his research project Cross-Lingference – **Cross-linguistic statistical inference using hierarchical Bayesian models**. In this project, Jäger seeks to reconcile historical linguistics with linguistic typology. The grant is worth 2.5 million euros over the next five years. CrossLingference is Jäger's second consecutive Advanced Grant; he received funding in 2013 for a project to investigate language development.

Historical linguistics and linguistic typology both seek to explain the variation of certain linguistic phenomena – such as word order – across individual languages. However, the research approaches diverge widely; historical linguistics works with in-depth analyses, while typology focuses broadly on common features. This contrast is reflected in the statistical and computer-based models currently used.

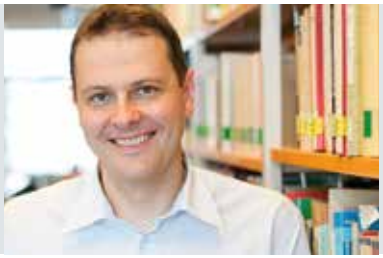
To close the gap between the approaches, Jäger uses a special statistical approach, the Bayesian hierarchical models. This allows analysis of the development of language families to be extended to cross-family models. Data from one language family are then used to draw conclusions about processes in other language families. That could lead to new ways of explaining language variation, as well as to the formulation of laws for how language changes; that in turn could enable an automatic reconstruction of the vocabulary of prehistoric languages.

Professor Klaus Scheffler, head of the Department of High-Field Magnetic Resonance at the Max Planck Institute for Biological Cybernetics and Director of the Department of Biomedical Magnetic Resonance at the University of Tübingen, was awarded an Advanced Grant for his research project SpreadMRI – **Ultra-Fast, Spread-Spectrum Magnetic Resonance Imaging**, with which he hopes to improve MRI to measure rapid changes. The grant comprises funding of 2.8 million euros over the next five years.

MRI is essential to diagnostics and is an important research tool for the imaging of biologically relevant information in biochemistry, pharmacology and clinical sciences. The procedure is non-invasive and can be performed without any health risk. Yet compared to other imaging techniques such as ultrasound and computer tomography, MRI has so far only offered low-speed image sequences.

Scheffler seeks to increase the speed of magnetic resonance imaging in order to be able to detect rapid changes. One of the promising techniques is called SpreadMRI; it yields spatially unique information which can then be used to distinguish different parts of the object, significantly increasing the imaging speed.

Left to right: Gerhard Jäger, Klaus Scheffler, Michael Butter, Markus Siegel, Holger Zellentin



Three additional Consolidator Grants

Professor Michael Butter of the Institute of English Languages and Literatures received an ERC Consolidator Grant for his project **Populism and Conspiracy Theory** (PACT). In the project, he investigates how and why populists formulate conspiracy theories, whether there are differences according to political orientation, and what changes occur when a populist party comes to power. Butter heads a team from the disciplines of political science, media studies, sociology, anthropology and regional studies. Initially, it will examine the history of currently successful populist parties and movements in Austria, Italy, Hungary, Poland, the US and Brazil. The focus will be on speeches, manifestos and the role of social media, for example in election campaigns. The results could be of interest to policymakers dealing with the challenges currently facing democracies worldwide.

Professor Markus Siegel from the Werner Reichardt Center for Integrative Neuroscience and the Hertie Institute for Clinical Brain Research seeks to link up separate fields of brain research in his Consolidator Grant project NINI – **Neuronal Information through Neuronal Interactions**. Human thought and action are created by the activity of neurons in the brain. We know a lot about which neurons and brain regions encode sensory, cognitive and motor information. Comparatively little is known, however, about how this information is generated and to what extent the interactions of brain networks are involved.

Siegel's team combines the latest electrophysiological and analytical techniques, measuring the brain activity of people as they decide between different actions. The researchers can then investigate which areas of the brain communicate during decision-making and which of these interactions form the basis of the decisions made. Siegel believes that this approach and the combination of two largely separate fields will provide important new insights into the neural basis of our thoughts and actions.

Professor Holger Zellentin from the Faculty of Protestant Theology received a Consolidator Grant for the project QaSLA – **The Qur'an as a Source for Late Antiquity**. In this project, he examines the significance of the Muslim holy book for the history of Jews and Christians in Late Antiquity. He assumes that the message of the Qur'an to the people of Mecca and Medina can only be fully understood in the context of the critical early Islamic examination of Jewish and Christian traditions. In the QaSLA project, the researchers will examine the Quran as a primary historical source. This makes it possible to sketch out the religious landscape of the Arabian Peninsula in the seventh century, for which there are no comparable local contemporary writings. Reflecting on the development of Jewish and Christian traditions throughout late antiquity from a new perspective will allow the researchers to draw conclusions about the development of rabbinical Judaism and especially of Arabic, Aramaic and Ethiopian-speaking Christianity.

Starting Grants for three researchers

The physicist Dr. Christina Schwarz from the Research Center for Ophthalmology is developing a method with which to investigate the first steps of light perception in the retina. The long-term goal is to use the method for the early diagnosis of retinal diseases. For this, she received a 1.85 million euro Starting Grant to conduct the project TrackCycle.2P – **Exploring Visual Processes with Two-Photon Ophthalmoscopy**.

Many retinal diseases that lead to blindness, such as age-related macular degeneration and the genetic disease retinitis pigmentosa, can only be diagnosed at a late stage due to the lack of suitable procedures. Pathological changes in the retina are the first to affect the visual cycle. Normally, visual pigment in the retina captures photons of the light rays, which triggers an electrical impulse that reaches the brain via the optic nerve and causes the actual visual impression. The visual pigment then regenerates and is able to absorb photons again.

Schwarz plans to use two-photon ophthalmoscopy, a highly precise, non-invasive method for examining the fundus of the eye, to investigate this visual process. Comparative measurements in volunteers with healthy eyes and with damaged retina will provide a better insight into the first steps of a visual process. In addition, the measurements will show whether attenuations or slowing of the visual cycle reliably indicate pathological changes in the retina.

Professor Andreas Geiger of the Department of Informatics received a Starting Grant of some 1.47 million euros for his project LEGO-3D – **Learning Generative 3D Scene Models for Training and Validating Intelligent Systems**. His aim is to develop models that will improve the perceptual capabilities of autonomous vehicles and other artificial intelligence systems and make it easier to test their behavior and function.

In order for an autonomous vehicle, for example, to learn to reliably recognize objects in its environment, the relevant algorithm is trained using many sample images. Geiger seeks to develop models that can generate image data for the training phase automatically and in real time. In addition to highly automated driving, the results could also be used in personal assistance systems, in production processes and in the entertainment and education sectors.

Left to right: Christina Schwarz, Andreas Geiger, Zeynep Akata, Martin Giese

New Synergy Grant on the processing of body language in the brain

In the project DEXIM – **Deeply Explainable Intelligent Machines**, Professor Zeynep Akata of the Department of Informatics is investigating why a system for automated decision-making associates a certain decision with a certain image or video. Her focus is on the transparency of the decision mechanism and a more comprehensible decision. For this she received a Starting Grant with funding of around 1.5 million euros.

Unlike people, artificial intelligence systems cannot explain how they reached a certain conclusion. As a result, their decision-making mechanisms often appear opaque and do not inspire confidence in users. With her team, Zeynep Akata will develop a deep learning approach to the interpretation of visual scenes that can be learned and with which decisions become transparent. Such AI systems could be used in mobile robotics and autonomous vehicles.

Professor Martin Giese of the Werner Reichardt Center for Integrative Neuroscience (CIN) and the Hertie Institute for Clinical Brain Research (HIH), and his European partners received a Synergy Grant for the project RELEVANCE – **How body relevance drives brain organization**. Along with Professor Rufin Vogels of KU Leuven and Professor Beatrice de Gelder of Maastricht University, he will research how the human brain analyzes body language for non-verbal communication. The ERC is funding the project for a period of five years with a total of eight million euros; some 2.7 million euros of this will be used for the research work in Tübingen.

Non-linguistic communication has often been studied in connection with facial expressions. In this project, the researchers want to focus on postures and movements – how do others recognize social signals, such as when their interlocutor likes them? The researchers are investigating how the brain analyses such signals and how the underlying computational processes work. In the Tübingen team, the researchers will initially develop stimuli for experiments in virtual reality that will enable them to control individual features. On the basis of this newly acquired data, they intend to design neural models to test which mathematical operations underlie the perception of body postures and movements.

Current European Research Council Grants

Advanced Grants

Name	Project	Duration
Professor Dr. Gerhard Jäger Institute of Linguistics	Cross-Linguistic Statistical Inference using Hierarchical Bayesian Models (CrossLingference)	2019 - 2024
Professor Dr. Klaus Scheffler Max Planck Institute for Biological Cybernetics/Radiology	Ultra-Fast, Spread-Spectrum Magnetic Resonance Imaging (SpreadMRI)	2019 - 2024
Professor Dr. Harald Baayen Institute of Linguistics	Wide Incremental learning with Discrimination nEtworks (WIDE)	2017 - 2022
Professor Dr. Hans-Georg Rammensee Interfaculty Institute for Cell Biology	Mutation-driven Immunoediting of Human Cancer? (Mutaediting)	2014 - 2019

Consolidator Grants

Name	Project	Duration
Professor Dr. Michael Butter Institute of English Languages and Literatures	Populism and Conspiracy Theory (PACT)	2020 - 2025
Professor Dr. Markus Siegel Werner Reichardt Center for Integrative Neuroscience/ Hertie Institute for Clinical Brain Research	Neuronal Information through Neuronal Interactions (NINI)	2020 - 2025
Professor Dr. Holger Zellentin Institute for the Study of Religion and Jewish Studies	The Qur'an as a Source for Late Antiquity (QaSLA)	2020 - 2025
Professor Dr. Eric Kemen Center for Plant Molecular Biology and Interfaculty Institute of Microbiology and Infection Medicine	Knowledge based Design of Complex Synthetic Microbial Communities for Plant Protection (DeCoCt)	2019 - 2024
Professor Dr. Katerina Harvati Department of Geoscience – Palaeoanthropology	Human Evolution at the Crossroads (CROSSROADS)	2017 - 2022
Professor Dr. Lars Zender Translational Gastrointestinal Oncology	Functional in vivo Analysis of Cholangiocarcinoma Development, Progression and Metastasis (CholangioConcept)	2015 - 2020
Professor Dr. Thorsten Stafforst Interfaculty Institute of Biochemistry	Site-directed RNA Editing to Manipulate RNA and Protein Function (RNArepair)	2015 - 2020
Professor Dr. Todd Ehlers Geoscience Department – Geodynamics	Extreme Tectonics and Rapid Erosion in Mountain Environments (EXTREME)	2014 - 2019

Starting Grants

Name	Project	Duration
Professor Dr. Zeynep Akata, Department of Informatics	Deeply Explainable Intelligent Machines (DEXIM)	2020 - 2025
Professor Dr. Andreas Geiger, Department of Informatics	Learning Generative 3D Scene Models for Training and Validating Intelligent Systems (LEGO-3D)	2020 - 2025
Dr. Christina Schwarz, Research Center for Ophthalmology	Exploring Visual Processes with Two-Photon Ophthalmoscopy (TrackCycle.2P)	2020 - 2025
Dr. Marcus Scheele, Institute of Physical and Theoretical Chemistry	Coupled Organic Inorganic Nanostructures for Fast, Light-Induced Data Processing (COINFLIP)	2019 - 2024
Professor Dr. Marcello Porta, Department of Mathematics	Macroscopic Behavior of Many-Body Quantum Systems (MaMBoQ)	2019 - 2024
Professor Dr. Philipp Hennig, Department of Informatics	Probabilistic Automated Numerical Analysis in Machine learning and Artificial intelligence (PANAMA)	2018 - 2023
Dr. Chang Liu, Center for Plant Molecular Biology	Chromatin Packing and Architectural Proteins in Plants (CHROMATADS)	2018 - 2022
Dr. Radu Iovita, Early Prehistory and Quaternary Ecology	A Silk Road in the Palaeolithic: Reconstructing Late Pleistocene Hominin Dispersals and Adaptations in Central Asia. (PALAEOSILKROAD)	2017 - 2022
Dr. Claudio Tennie, Institute of Prehistory and Medieval Archaeology	Do Early Stone Tools Indicate a Hominin Ability to Accumulate Culture? (STONECULT)	2017 - 2022
Assistant professor Dr. Cynthianne Debono Spiteri, Institute of Prehistory and Medieval Archaeology, partnering Professor Dr. Philipp W. Stockhammer, LMU München	Transformations of Food in the Eastern Mediterranean Late Bronze Age (FoodTransforms)	2016 - 2021
Dr. Stephan König, Geoscience Department – Isotope Geochemistry	From the Origin of Earth's Volatiles to Atmospheric Oxygenation (O2RIGIN)	2015 - 2021
Professor Dr. Michael Kormann, University Children's Hospital – Department of Paediatrics	Biochemically modified messenger RNA encoding nucleases for in vivo gene correction of severe inherited lung diseases (BREATHE)	2015 - 2020
Professor Dr. Markus Siegel, Werner Reichardt Center for Integrative Neuroscience	Spectral Fingerprints of Neuronal Interactions (SPECFIN)	2015 - 2019
Professor Dr. Ana García-Sáez, Interfaculty Institute of Biochemistry	The Quantitative Bcl2 Interactome in Apoptosis: Decoding How Cancer Cells Escape Death (APOQUANT)	2013 - 2019

Synergy Grants

Tübingen Research Unit	Project	Duration
Professor Dr. Martin Giese Werner Reichardt Center for Integrative Neuroscience/ Hertie Institute for Clinical Brain Research	How Body Relevance Drives Brain Organization (RELEVANCE)	2020 - 2025
Professor Dr. Ulf Ziemann Hertie Institute for Clinical Brain Research/ Neurology	Connecting to the Networks of the Human Brain (ConnectToBrain) Aalto University, Finnland	2019 - 2025

Joint research in centers and networks

Integrating public health care experience with scientific research

The University Hospitals and the Faculty of Medicine opened the Center for Public Health and Health Care Research (ZÖGV) in October 2019. It will build upon many years of health care research and will include projects on public health issues. The center will form a link between research fields and institutions and will provide evidence-based data for health care policy-makers to ensure that medical services meet the needs of the population.

The new center is based on structures in the field of health services research established in Tübingen between 2011 and 2017 thanks to funding provided by the state of Baden-Württemberg. It will also benefit from broad-based cooperation with public health practitioners. It is hoped that integrating scientific research with the diverse practical tasks of the public health sector will also attract more students to the field and raise the profile of health services research. The ZGÖV is supported by the Institute of General Practice and Interprofessional Care and its medical director, Professor Stefanie Joos; and by the Institute of Occupational and Social Medicine and Health Services Research, headed by Professor Monika A. Rieger.

Investing in Personalized Medicine

The state of Baden-Württemberg approved the expansion of the Center for Personalized Medicine at university hospital locations in Tübingen, Heidelberg, Freiburg and Ulm. Tübingen opened its Center for Personalized Medicine (ZPM) in 2015, chiefly with funds from the Excellence Initiative. The center is headed by Professor Nisar Peter Malek.

The centers across the state of Baden-Württemberg will initially focus on developing state-of-the-art diagnostics and treatments for cancer. In its the first four years, the Tübingen ZPM developed and successfully tested methods for the application of personalized medicine; cancer sufferers can benefit from them as these methods are phased into patient care.

Now, partner locations are being established at other key hospitals. The focus will widen to include inflammatory and infectious diseases as well as neurological disorders. Personalized medicine is based primarily on powerful diagnostic procedures, including high-precision imaging and genome analyses to identify weaknesses in tumors. Data from these and other techniques is processed and used to develop a personalized treatment especially for the individual patient. The four Baden-Württemberg centers plan to establish a joint data structure to optimize these processes.

Exploring alternatives to animal experiments

The state of Baden-Württemberg is investing 130,000 euros annually over an initial period of five years to establish a center to seek alternative methods to animal experiments in medical research. The 3R Center for In-vitro Models and Animal Testing Alternatives starts work in 2020 in cooperation with the Faculty of Medicine and the Natural and Medical Sciences Institute. The alternative methods developed there will be made available to biomedical research throughout Baden-Württemberg. ''3R'' stands for ''Replacement, Reduction, Refinement'' – the maxim under which scientists should replace animal experiments with non-animal methods as far as possible. Where this is not yet possible, the aim is to reduce the number of animal experiments or to change experimental procedures so that fewer experimental animals are used.

The 3R Center is intended to provide basic researchers with low-threshold access to novel in-vitro models. The center will also have a role in training scientists and educating the general public.

Quantifying the impact of the digital age

The International Center for Ethics in the Sciences and Humanities (IZEW) at the University of Tübingen is participating in the new research network digilog@bw, backed by the state of Baden-Württemberg. The network aims to critically reflect on the influence of digitization on the individual and society.

Participants include the University of Mannheim, the Karlsruhe Institute of Technology (KIT), the University of Tübingen and the Knowledge Media Research Center (IWM). The speakers are Professor Thomas Fetzer from Mannheim, Professor Michael Decker from the KIT, and Dr. Jessica Heesen from the University of Tübingen. The Science Ministry is sponsoring the network with more than 2.1 million euros for a period of three years.

The network is to develop options for fair and democratic digital change. Input will come from the humanities, social sciences, law, economics, media and communication sciences, ethics and computer science as well as interdisciplinary technology assessment. The Tübingen projects look at issues such as the impact of artificial intelligence on public communication, the conditions of participation in online communication, and the discrimination of women by algorithms and in social media. The network will also seek a dialogue with the general public.

Investing in quality

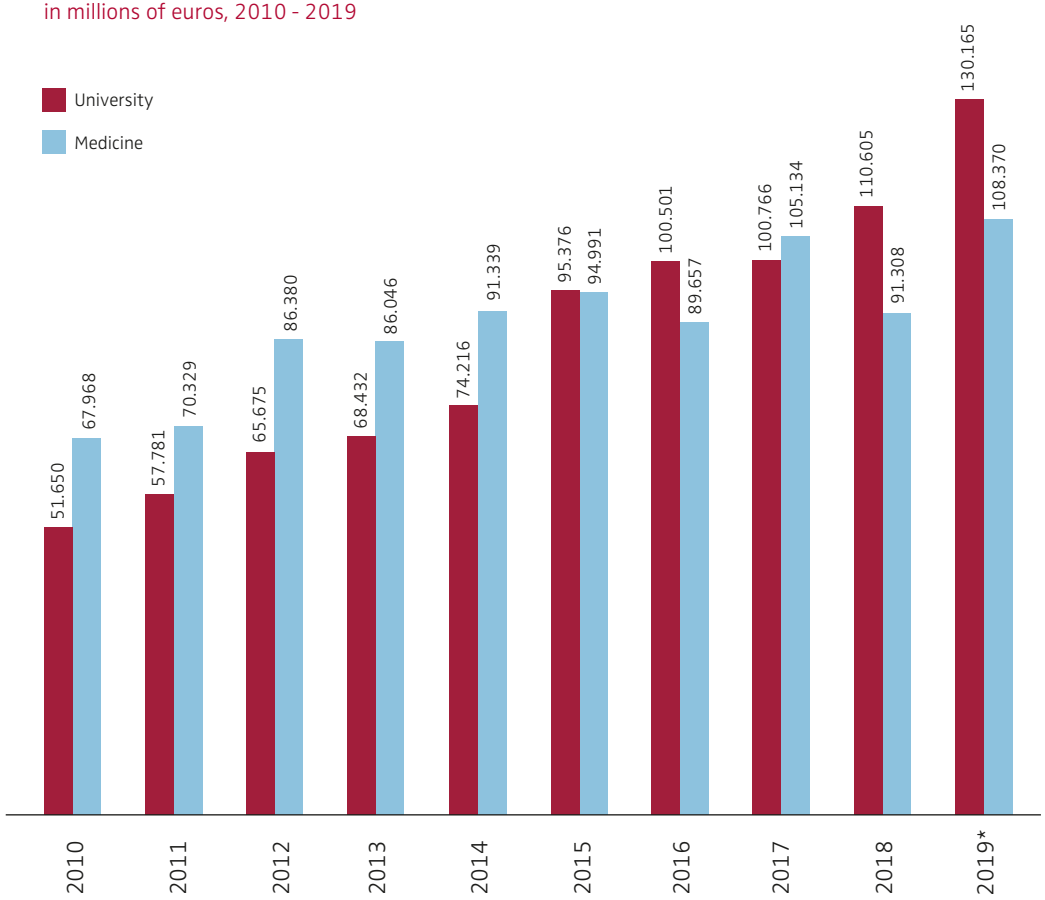
Supporting women in research

The University of Tübingen has implemented a variety of measures to encourage female researchers. The proportion of women professors at the University rose from just 8.5 percent in 2006 to nearly 26 percent in 2019. We promote a number of funding schemes aimed at supporting women in the early stages of their academic careers. One of them is the state of Baden-Württemberg's Brigitte Schlieben-Lange Program, which provides funding to women with children to enable them to continue on the path to leading positions in research.

Four University of Tübingen academics – in the fields of education, geoscience, informatics and genetics – obtained grants under the scheme in 2019. The geneticist Dr. Julia Schulze-Hentrich, who is completing her habilitation thesis with support from the Schlieben-Lange Program, says many women give up at this stage and called the funding "decisive" in the choice to continue. Computer scientist Dr. Lena Schlipf says it helps compensate for some of the disadvantages women scientists face.

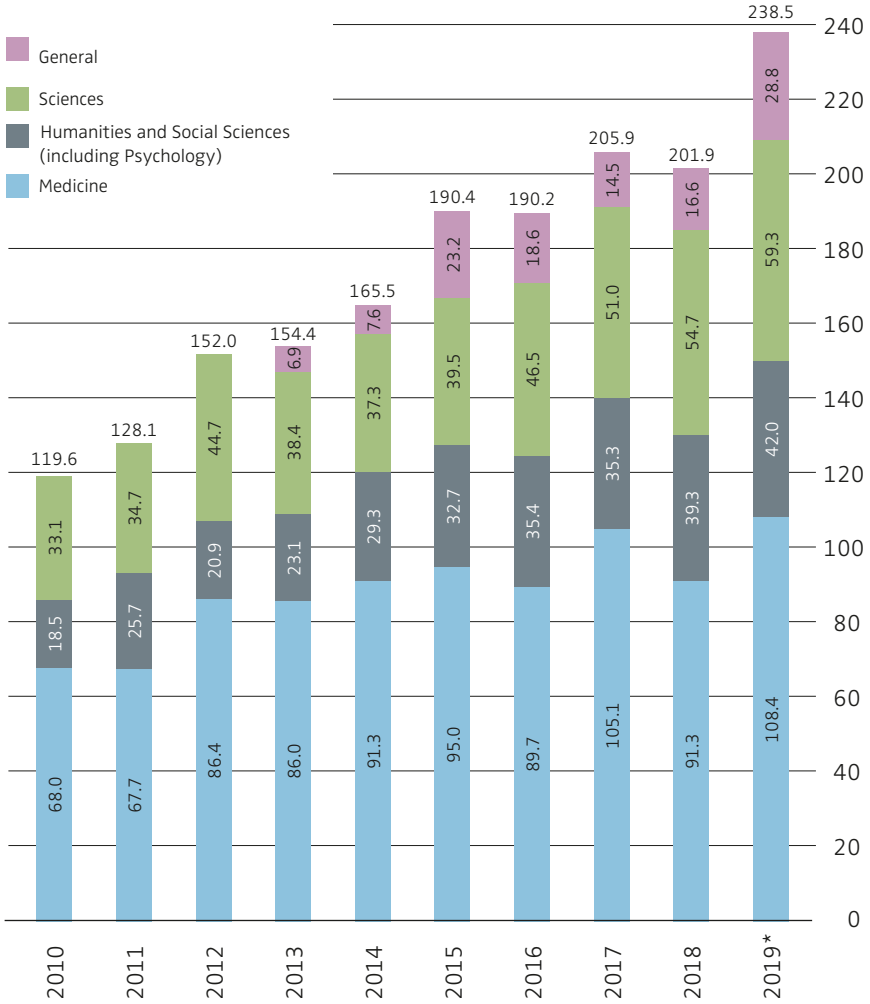
Third-party funding trends

in millions of euros, 2010 - 2019



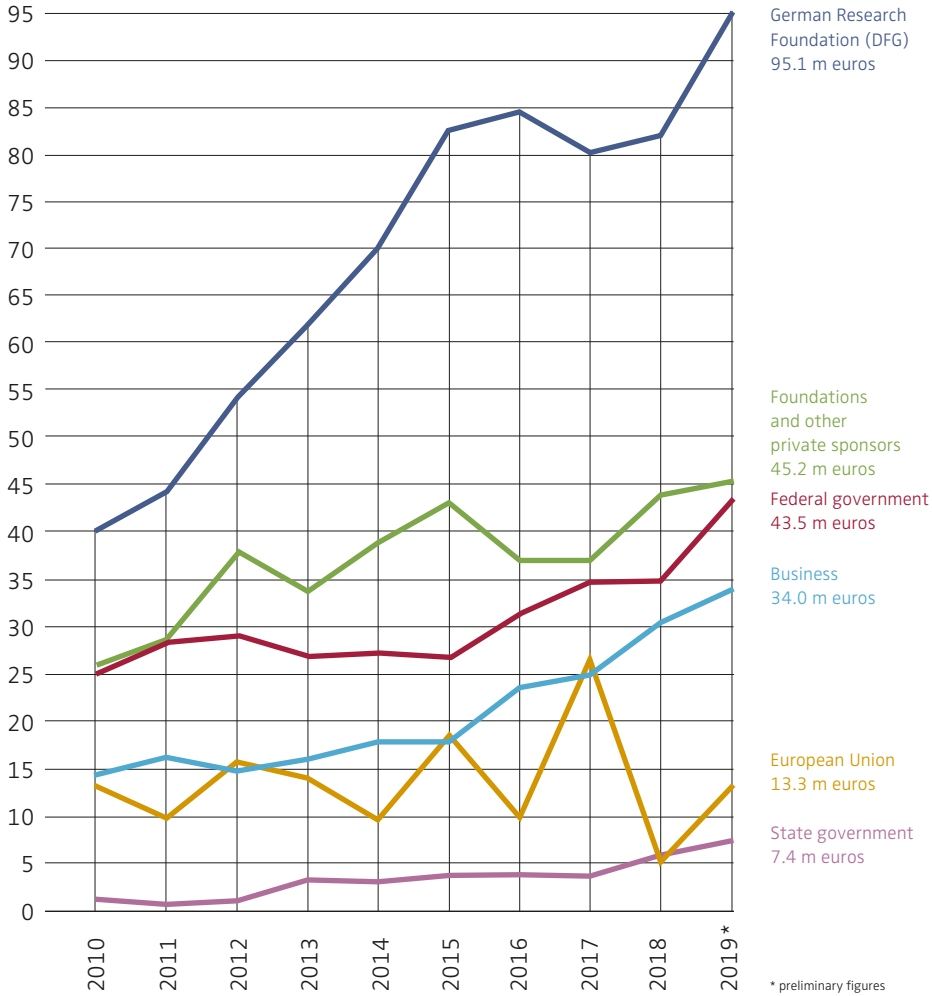
Third-party funding attracted by the Sciences, Humanities, and Medicine

in millions of euros, 2010 - 2019



Sources of third-party funding

in millions of euros, 2010 - 2019



* preliminary figures

Early-career researchers – A passion for science and a knack for organization

Sara Kleindienst, Assistant Professor of Microbial Ecology at the Center for Applied Geosciences, always knew she wanted to spend her life doing research. In the very first semester of her Biology studies, she did an internship at the Institute for Chemistry and Biology of the Marine Environment in the northern German town of Oldenburg. Back then, she became fascinated by bacteria in Black Sea sediments and how they survive under extreme conditions.

While Kleindienst was writing her doctoral thesis at the Max Planck Institute in Bremen, an environmental disaster underlined the importance of research into how microbes break down hydrocarbons from marine gas and oil wells. ''In April 2010, the Deepwater Horizon platform exploded, causing a vast oil spill in the Gulf of Mexico,'' Kleindienst says. It was vital to know which microorganisms could break down oil and gas and which measures, such as the use of chemical dispersants, would be useful. ''The really exciting thing was that there were natural bacteria populations there that could break down the pollutants. They multiplied very fast as a result of the oil spill,'' she says.

Sara Kleindienst went to the USA as a postdoctoral fellow and carried out research there – this time in the microbial degradation of pollutants in groundwater. Tübingen geo-

Sara Kleindienst

microbiologist Professor Andreas Kappler recruited her in 2015 as a scientific assistant for his working group. In 2017, Kleindienst founded a junior research group with funding from the German Research Foundation's Emmy Noether scheme and received additional funding for the Environmental Omics junior research group. This means Kleindienst heads a staff of about ten people, plus students writing their theses. She was appointed as an assistant professor also in 2017.

Dr. **Daniel Häufle**'s passion for his research was sparked during a year in Calgary, Canada, in a laboratory for biomechanics. He was studying physics, but was fascinated by how its methods could be applied to the movement of living bodies. His doctoral thesis at the University of Stuttgart covered many areas he now works in – movement science, physics, simulation technology and biomechanics. He came to the University of Tübingen to lead a junior research group in neurology within the ''Human System'' research alliance funded by the state of Baden-Württemberg, in which both universities are involved.

''It combined all my interests,'' says Häufle, who is now conducting his research at the Hertie Institute for Clinical Brain Research and the Werner Reichardt Center for Integrative Neuroscience. He wants to know how our system of brain and nerves biomechanically generates movement. ''There have long been robots which can jog or do a backward roll. But that works quite differently from the way it does in humans,'' he explains. Human nerves are comparatively slow. ''When your foot hits the ground while running, the information about any unevenness comes much too late to react. Nevertheless, people can run without stumbling.'' Häufle is also working on plans for exoskeletons which, attached to a patient's own limbs, will support the movement of patients with neurodegenerative diseases.

Daniel Häufle

Heading a research group is an important career step. ''It changes the way you work,'' says Daniel Häufle, ''You have to be able to do many things at once.'' He tries to give his employees the independence that inspires his own work. The junior research group runs for another two years – but he wishes he could offer his staff a longer perspective. For himself, he says he is in his ideal research environment – the University of Stuttgart with its strong simulation technology, and the University of Tübingen with its focus on the neurosciences, where there is also access to patients via the hospitals, and the Max Planck Institute for Intelligent Systems, all linked by the Cyber Valley Initiative.

Research training groups – a structured path to qualifications

The German Research Foundation sponsors research training groups to ensure that those in the early stage of an academic career can work towards further qualifications within a thematic program with a clear structure and goals. Research training groups receive DFG funding for a maximum of nine years.

The Intraoperative Multi-sensor Tissue Identification in Oncology research training group (GRK 2543) was launched in November 2019 at the Universities of Stuttgart and Tübingen for an initial four and a half years.

The new research training group is focusing on the development of new sensor systems. The high-resolution sensors will enable surgeons to differentiate malignant from healthy tissue during surgery. This helps surgeons to know which tissue should be removed and which preserved. The spokesperson is Professor Oliver Sawodny of the Institute of Systems Dynamics at the University of Stuttgart; the Tübingen spokesperson is urologist Professor Arnulf Stenzl at the University Hospitals. The research training group launched in April 2020 and with funding of around one million euros for a period of four and a half years.

New surgical procedures must be fast and highly effective, minimize the number of interventions and not lead to complications. In oncology, surgeons need to be able to reliably distinguish malignant tumors from the surrounding tissue. Currently, tissue must be removed and analyzed during the operation, which extends the duration of the procedure. Nor does a tissue sample provide comprehensive data on the heterogeneity and complexity of the tumor.

Doctoral students in the research training group will develop methods towards real-time sensor technology for use during surgery. The aim is to remove tumors precisely while preserving neighboring organs. Improvements in this area can significantly increase in the patient's quality of life.

PhD networks at the University of Tübingen

Title	Spokesperson	Duration
Theory of Balance – Forms and figures of balance in the media, art and literature	Professor Dr. Eckart Goebel Institute of German Language and Literature	1 November 2017 - 28 February 2021
The persistence of gender binaries	Professor Dr. Marion Müller Institute of Sociology	1 December 2017 - 31 March 2021
Entangled Temporalities in the Global South	Professor Dr. Sebastian Thies Institute of Romance Languages and Literatures	1 December 2017 - 30 April 2021
Individual response to physical activity – A transdisciplinary approach	Professor Dr. Ansgar Thiel Institute of Sports Science	1 December 2017 - 30 November 2020
New nanoparticles – From synthesis to application in the life sciences	Professor Dr. Erik Schäffer Center for Plant Molecular Biology	1 December 2017 - 28 February 2021
Integrative Augmented Reality (IAR)	Dr. Siegfried Wahl Research Center for Ophthalmology	1 February 2018 - 30 June 2021

Multidisciplinary supervision for doctoral projects

PhD networks are generally formed by up to five professors from different disciplines whose doctoral students are examining one topic from different perspectives. Up to seven doctoral candidates receive scholarships for three years from state government funds.

Doctorates completed in 2019

Faculty/Institution	Doctorates completed 2018-19	
	female	male
Protestant Theology	3	3
Catholic Theology	1	5
Law	9	12
Medicine	161	125
Humanities	48	33
Economics and Social Sciences	19	18
Science	129	144
Institute of Islamic Theology		1
Total	**369**	**341**
	710	

As of 17 January 2020

Habilitations completed in 2019

Faculty	2019 Habilitations	
	female	male
Protestant Theology	1	3
Law		1
Medicine	16	21
Humanities	2	3
Economics and Social Sciences	3	1
Science	5	0
Total	**27**	**29**
	56	

As of 17 January 2020

DFG-backed research training groups

Title	Spokesperson	Duration
Research training group Stuttgart – Tübingen Intraoperative multi-sensor tissue identification in oncology (GRK 2543)	Professor Dr. Oliver Sawodny University of Stuttgart Professor Dr. Arnulf Stenzl University of Tübingen, Faculty of Medicine	1 April 2019 - 30 September 2024
cGMP: From the bedside to the laboratory bench (GRK 2381)	Professor Dr. Robert Feil Interfaculty Institute of Biochemistry	1 July 2019 - 31 December 2023
MOMbrane: The multifaceted functions and dynamics of the mitochondrial outer membrane (GRK 2364)	Professor Dr. Doron Rapaport Interfaculty Institute of Biochemistry	1 April 2018 - 30 September 2022
Research training group Mannheim – Freiburg – Heidelberg – Koblenz-Landau – Tübingen Statistical Modeling in Psychology (SMiP) (GRK 2277)	Professor Dr. Edgar Erdfelder University of Mannheim Professor Dr. Mandy Hütter Professor Dr. Rolf Ulrich University of Tübingen, Faculty of Science	1 October 2017 - 31 March 2022
Research training group Frankfurt – Tübingen Doing Transitions – The Formation of Transitions over the Life Course (GRK 2105)	Professor Dr. Andreas Walther University of Frankfurt am Main Professor Dr. Barbara Stauber University of Tübingen Faculty of Economics and Social Sciences	1 January 2017 - 30 June 2021
Research training group Stuttgart – Tübingen Integrated Hydrosystem Modelling (GRK 1829)	Professor Dr. Olaf Cirpka Faculty of Science	1 April 2012 - 31 March 2021
Ambiguity – Production and Reception (GRK 1808)	Professor Dr. Matthias Bauer Faculty of Humanities	1 Oct 2013 - 30 September 2022
Molecular Principles of Bacterial Survival Strategies (GRK 1708)	Professor Dr. Karl Forchhammer Interfaculty Institute of Microbiology and Infection Medicine	1 April 2012 - 31 March 2021
Religious Knowledge in Pre-modern Europe (800-1800): Transfers and Transformations – Ways to the Modern Knowledge Society (GRK 1662)	Professor Dr. Annette Gerok-Reiter Faculty of Humanities Professor Dr. Volker Leppin Faculty of Protestant Theology	1 April 2011 - 31 March 2020

Endowments

Funding bold ideas

A large number of foundations, private individuals and companies have been giving their support to the University of Tübingen for many years. These friends and supporters make additional professorships possible, promote research projects, and fund innovative new programs. Students benefit directly via the Deutschlandstipendium scholarships. These many different forms of support underscore enthusiasm for our research and teaching, and demonstrate the courage to invest in bold new ideas. We thank our sponsors for their important contribution to the University's dynamic and successful development.

New paths for research

Udo Keller Foundation funds Carl Friedrich von Weizsäcker Professorship

The University of Tübingen and the Udo Keller Stiftung Forum Humanum sponsored a new endowed professorship for the Theory and History of the Sciences and Humanities in 2019. The new professor is Reinhard Kahle, who studied mathematics, computer science and philosophy. He received his doctorate in 1997 in computer science from the University of Berne and held a professorship of mathematical logic at NOVA University Lisbon. Kahle will investigate philosophical and social issues in a globalized and technologized world. The endowment is named after one of the founders of the Udo Keller Foundation, the German physicist and philosopher Carl Friedrich von Weizsäcker (1912-2007).

This research field is reinforced by the appointment of the philosopher and science theorist Klaus Mainzer as a senior professor at the University of Tübingen. Before his retirement in 2016, Mainzer was Professor of the Philosophy of Science at the Technical University of Munich. Mainzer's research includes a focus on the foundations of artificial intelligence and its social challenges.

left: Reinhard Kahle, right: Klaus Mainzer

Carl Zeiss Foundation sponsors two new Informatics professorships

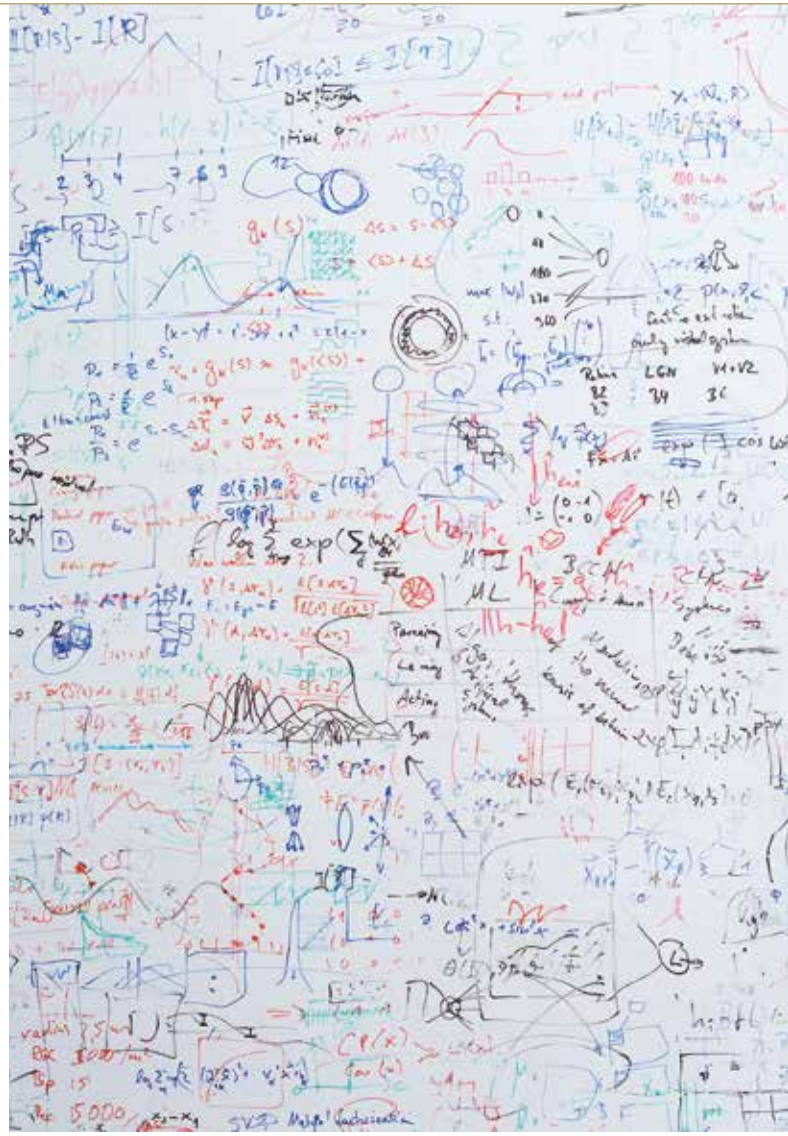
The Carl Zeiss Foundation is providing 1.5 million euros over a period of five years for a professorship of Continuous Learning on Multimodal Data Streams at the University of Tübingen. The move is part of the foundation's "Perspectives – Excellence of Tomorrow" funding line. The new professor joins the Department of Computer Science; the University will fund the position after the initial five years.

The endowed professorship's research profile includes machine learning processes capable of continuously and independently expanding an established knowledge base and adapting it to new situations. This type of machine learning also includes the ability to carry out many different tasks and completely new tasks. These skills are important in a wide range of machine learning applications in which heterogeneous data is collected over a long period of time, as in medical diagnostics and in manufacturing processes.

The Carl Zeiss Foundation is also providing three million euros over ten years for another new endowed professorship as part of its Endowed Professorships for Computer Science and its Didactics initiative. The professorship for the training of computer science teachers will be established at the Department of Informatics and will be financed by the university after the ten-year funding phase ends.

The University of Tübingen already offers a Bachelor of Education and a Master of Education in Informatics. The new professor will work closely with the Tübingen School of Education and a number of institutes focusing on education and knowledge media.

The Carl Zeiss Foundation promotes both basic research and application-oriented research and teaching in STEM subjects – Science, Technology, Engineering and Mathematics. It was founded in 1889 by the physicist and mathematician Ernst Abbe and is the oldest private foundation promoting science in Germany. Its projects are financed from the dividends of the companies Carl Zeiss AG and SCHOTT AG.



Endowed professorships

Field	Name	Sponsor
Faculty of Humanities		
Professor (W1) of Chinese Studies: Financial Ethics	Professor Dr. Matthias Niedenführ	Karl Schlecht Foundation
Professor (W3) of Rhetoric and Science Communication	Professor Dr. Olaf Kramer	Klaus Tschira Foundation
Professor (W1) of Korean Studies	Professor Dr. Jong Chol An	Korea Foundation
Professor (W1) of Music	Professor Dr. Matthew Gardner	Mainz Academy of Sciences and Humanities
Faculty of Economics and Social Sciences		
Professor (W3) of Financial Literacy and Economic Didactics	Professor Dr. Taiga Brahm	Dieter von Holtzbrinck Foundation
Professor (W2) of Educational Effectiveness/Educational Trajectories	Professor Dr. Richard Göllner	Hector Foundation
Professor (W3) of the Ethics of Globalization	Professor Dr. Claus Dierksmeier	Karl Schlecht Foundation
Faculty of Medicine		
Professor (W3) of Transfusion Medicine	Professor Dr. Tamam Bakchoul	DRK-Blutspendedienst and Baden-Württemberg-Hessen GmbH
Professor (W2) of Translational Gynaecology	N. N.	Karl Storz company
Professor (C4) of Neurodegenerative Diseases	Professor Dr. Thomas Gasser	Hertie Foundation
Professor (C4) of Cell Biology: Foundations of Neurological Diseases	Professor Dr. Matthias Jucker	Hertie Foundation
Professor (W3) of Functional Neurogenetics	Professor Dr. Philipp Kahle	Hertie Foundation
Professor (W3) of Neurology/ Epileptology	Professor Dr. Holger Lerche	Hertie Foundation
Professor (C3) of Clinical Neurogenetics	Professor Dr. Ludger Schöls	Hertie Foundation
Professor (W2) Experimental Senology	Professor Dr. Markus Hahn	Novartis Foundation for Sustainable Development
Professor (W3) of Clinical Pharmacology	Professor Dr. Matthias Schwab	Robert Bosch Foundation
Professor (W2) of Molecular Diabetology	Professor Dr. Cora Weigert	Sanofi-Aventis Deutschland GmbH
Professor (W3) of Neuroplasticity of the Developing Brain	Professor Dr. Martin Staudt	Schön Kliniken GmbH, Behandlungszentrum Vogtareuth
Professor (W3) of Molecular Biology of Degenerative Retinal Disorders	Professor Dr. Marius Ueffing	Tistou und Charlotte Kerstan Stiftung Vision 2000 – Sehen – Kunst – Sinnesfunktion
Professor (W3) of Occupational and Social Medicine	Professor Dr. Monika Rieger	Südwestmetall Employers' Federation
Professor (W3) of Preclinical Imaging and Imaging Technology	Professor Dr. Bernd Pichler	Werner Siemens Foundation
Faculty of Science		
Professor (W3) of the Philosophy and History of Science	Professor Dr. Reinhard Kahle	Carl Friedrich von Weizsäcker Endowed Professorship, Udo Keller Foundation Forum Humanum
Professor (W1) of Visual Big Data Analysis in the Life Sciences	Professor Dr. Michael Krone	Carl Zeiss Foundation
Professor (W3) of Continual Learning and Multimodal Datastreams	N. N.	Carl Zeiss Foundation
Professor (W1) of Didactics of Informatics (Tübingen School of Education)	N. N.	Carl Zeiss Foundation
Professor (W3) of Didactics of Biology (Tübingen School of Education)	Professor Dr. Christoph Randler	Gips-Schüle Foundation
Professor (W3) of Didactics of Chemistry (Tübingen School of Education)	N. N.	Gips-Schüle Foundation
Professor (W3) of Machine Learning	Professor Dr. Matthias Hein	Robert Bosch GmbH
Professor (W3) of Didactics of Physics (Tübingen School of Education)	Professor Dr. Jan-Philipp Burde	Vector Foundation

Key sponsorships in 2019

Hertie Foundation supports Tübingen in clinical neuroscience network

In 2019, the Hertie Foundation established the Hertie Network of Excellence in Clinical Neuroscience, which is dedicated to transferring clinical neuroscientific findings into practice. Tübingen is one of six locations in Germany funded by the Hertie Network, further strengthening our clinical neuroscience focus: translational research. The non-profit Hertie Foundation is donating five million euros to fund the network and a junior researcher support program. Some 660,000 euros over three years will support the Tübingen location, which involves scientists from the Hertie Institute for Clinical Brain Research, the University of Tübingen and the German Center for Neurodegenerative Diseases. Tübingen's spokesperson is Professor Thomas Gasser.

The five other Hertie Network sites are Berlin, Bonn, Hamburg, Heidelberg/Mannheim and Munich. Along with research cooperation, the network supports the Hertie Academy of Clinical Neuroscience, which is designed to train talented early-career researchers for leading positions in the future.

The Tübingen members of the Hertie Academy of Clinical Neuroscience are Dr. Stefanie Nicole Hayer, Hertie Institute for Clinical Brain Research, University of Tübingen, Dr. Dr. Randolph Helfrich, Hertie Institute for Clinical Brain Research, University Hospitals of Tübingen, Dr. Marion Inostroza, Werner Reichardt Center for Integrative Neuroscience and the Institute of Medical Psychology and Behavioral Neurobiology at the University of Tübingen, and Dr. Jonas Neher, German Center for Neurodegenerative Diseases, Tübingen.

The six Hertie Network locations were selected from a field of 15, based on their outstanding performance in research and patient care, and on their training programs for early-career researchers.

One of Tübingen's areas of core research – the Neurosciences. It is further strengthened by the new Hertie Network.

Eberle Foundation sponsors renewable energy project and opens the Center for Digital Competence

The Dr. Karl Helmut Eberle Foundation has been supporting projects at the University of Tübingen since 2017. That year, it introduced the annual Eberle Research Award, worth 300,000 euros, which goes to researchers whose projects have a high innovation potential and can contribute to solving urgent problems facing us in the future. Since 2018, the foundation has also been funding the Dr. Eberle Center for Digital Competence. The Dr. K. H. Eberle Foundation was established by the entrepreneur Dr. Karl Helmut Eberle.

The 2019 Eberle Research Award went to Professor Holger Bettinger, Assistant Professor Ivana Fleischer and Dr. Jochen Neumaier from the Institute of Organic Chemistry. They are working to develop a form of storage for sunlight.

Their project, Molecular Solar Thermal Energy (MOST), stores energy by converting molecule A in a pair of molecules into a higher energy form, molecule B, using sunlight. A catalyst can later release the energy stored in molecule B in the form of heat. This requires molecule pairs with a high energy storage density. The prizewinning research group has found a suitable pair of molecules. Now the team is seeking to improve the absorption of sunlight and optimize the catalysts. The researchers want to develop an efficient system which will work in the long term. It would be a carbon dioxide-neutral and resource-saving energy supply. The Dr. K. H. Eberle Foundation acknowledged the project's important contribution to greater use of renewable energies.

The Dr. Eberle Center for Digital Competence opened in 2019 and will receive 200,000 euros annually. Students at the Center for Digital Competence learn how to better use digital tools for research-oriented studies.

Almost every field of research today involves collecting large amounts of data. These very large data sets can only be evaluated using powerful digital methods. The new center will also emphasize the importance of visualizing data and the presentation of research results. The Dr. Eberle Center for Digital Competence cooperates with the University's eScience Center and the Center for Information, Communication and Media, which provide data management support to researchers. The new center will also help develop digital teaching modules for both computer scientists and teachers in general.

Presentation of the Eberle Research Award, left to right: Georg Freiherr von Schönau and Alexandra Zoller of the Eberle Foundation, award laureates Jochen Neumaier and Holger Bettinger with Hansjörg Abt, Thomas Schwind and Peter Unmüssig of the Eberle Foundation.

Carl Zeiss Foundation promotes responsible management

Many business managers in Germany have higher education degrees. Yet a study by the University of Tübingen's Center for Ethics (IZEW) showed that, during their studies, few of them get training in matters involving the ethics of management. The Carl Zeiss Foundation is now sponsoring a joint project, Leadership Ethics as Ethics in the Sciences and Humanities, which seeks to give ethics a permanent place in academic training. To this end, the IZEW, the Wittenberg Center for Global Ethics, the Center for Quality Assurance at the University of Mainz and the University of Jena's working group on the didactics of chemistry are jointly developing a course on leadership ethics in STEM subjects – science, technology, engineering and mathematics. The Carl Zeiss Foundation is giving a total of 1.2 million euros to fund the project over three years.

The Volkswagen emissions scandal and the questionable handling of tax issues by international banks have shown that some executives do not live up to their responsibilities. The new project seeks to train future managers to make use of the options available to act ethically and run their businesses sustainably. Within the network, the researchers are developing courses which can be adapted to the respective professional context. Students learn how a manager can reflect on the values and goals of the working environment. The long-term aim is to integrate the courses into science and technology degree programs on a permanent basis.

The Leadership Ethics team

In brief

The Stuttgart-based **Karl and Anna Buck Foundation** promotes research in Chemistry at the University of Tübingen. For many years, the foundation has provided funding for both equipment and research staff.

Its latest sponsorship is for a biomolecular chemistry project aimed at optimizing existing antibiotics. Disease-causing bacteria can develop resistance to antibiotic treatments by using previously unknown metabolic pathways. Researchers in the current project are seeking new pharmacological agents to improve the effectiveness of antibiotics already in use. The researchers at the Institute of Organic Chemistry have developed new testing systems and new synthetic products. The Karl and Anna Buck Foundation has been promoting scientific research since 2000. It was established by Karl Buck, founder of the Buck Chemie chemicals company.

The University of Tübingen raised 140 **Deutschlandstipendium scholarships** for the 2019-20 academic year. The scholarships go to talented students involved in work that benefits society. The German government matches the sponsor's payment of 150 euros per month, giving each student 300 euros to help with expenses while studying. Key sponsors include the Hugo Rupf Foundation, the Vector Foundation, the Vereinigung der Freunde der Universität Tübingen e. V. and Santander Universitäten Deutschland. Many alumni and regional businesses also gave a helping hand to promising students.

Partnerships

Networking at many levels

The University of Tübingen continued to expand its national and international connections in 2019, from the highest levels of research with other research institutions and industry, to the many individual student and academic exchange programs we maintain with universities around the world. We are working to open up complex new fields combining artificial intelligence and neuroscience by cooperating with the foremost institutions in our region, across Europe and globally; and by recruiting some of the most innovative minds working in those fields.

Longstanding partnerships in Germany

Max Planck director Peter Dayan becomes a Humboldt Professor at the University

Dr. Peter Dayan, a leading expert in theoretical and experimental neuroscience, was appointed director of the Max Planck Institute for Biological Cybernetics in Tübingen in 2018. In 2019, the Alexander von Humboldt Foundation announced that he would also be appointed Humboldt Professor at the University of Tübingen's Department of Informatics. The Humboldt Professorship provides funding of five million euros over five years and is Germany's most valuable research award.

Before his move to Tübingen, Dayan established Computational Neuroscience at University College London. Dayan's research combines neuroscience, medicine and machine learning. He analyzes how the brain makes decisions, using theoretical models to study different forms of learning – including reinforcement learning, in which the brain considers previous positive and negative experiences. He also looks at how neuromodulators such as dopamine, serotonin and acetylcholine influence decision-making processes.
A further focus of Dayan's research is how faulty decision-making processes can lead to depression, addiction, anxiety or personality disorders. Dayan has developed statistical and programming methods with which brain decision-making processes can be simulated, paving the way to the development of artificial neural networks.

Peter Dayan studied mathematics at the University of Cambridge and completed his doctorate in computer science at the University of Edinburgh. He worked at the Salk Institute and the University of Toronto and went to the Massachusetts Institute of Technology (MIT) in 1995 to conduct further research. In 1998, he accepted a professorship at University College London, where he co-founded the Gatsby Computational Neuroscience Unit. From 2002 to 2017 he was director and deputy director of the Max Planck/UCL Center for Computational Psychiatry and Ageing Research.

Dayan is the fourth Humboldt Professor at the University of Tübingen in recent years. The other laureates are the linguist Harald Baayen, the plant geneticist Marja Timmermans and the geoscientist Lars T. Angenent.

Peter Dayan strengthens cooperation between the University and the Max Planck Institute of Biological Cybernetics.

Key research partners in Germany

HEP – Senckenberg Center for Human Evolution and Palaeoenvironment (University of Tübingen associated institute)

Institute for Applied Economic Research (University of Tübingen associated institute)

NMI – Natural and Medical Sciences Institute (Reutlingen, University of Tübingen associated institute)

Global Ethics Institute (University of Tübingen associated institute)

Bernstein Network for Computational Neuroscience (Freiburg)

Dr. Margarete Fischer-Bosch Institute for Clinical Pharmacology (Stuttgart)

German Consortium for Translational Cancer Research (DKTK)

German Center for Diabetes Research (DZD)

German Center for Infection Research (DZIF)

Helmholtz Association: German Center for Neurodegenerative Diseases (DZNE)

Forschungsinstitut für Arbeit, Technik und Kultur e. V. (F.A.T.K., Tübingen)

Forschungszentrum Jülich, member of the Helmholtz Association

Fraunhofer Institute for Interfacial Engineering and Biotechnology (IGB, Stuttgart)

Friedrich Miescher Laboratory, Max Planck Society (Tübingen)

Heidelberger Academy of Sciences and Humanities

Helmholtz Centre for Environmental Research (Leipzig-Halle)

Hertie Institute for Clinical Brain Research (Tübingen)

Institut für donauschwäbische Geschichte und Landeskunde (Tübingen)

Institut für Rehabilitationsforschung, Qualitätsentwicklung und Strukturanalyse in der Behindertenhilfe (REQUEST) e. V.

Leibniz Institute: Knowledge Media Research Center

MFO mathematics research institute (Oberwolfach), member of the Leibniz Association

Max Planck Institute for Biological Cybernetics (Tübingen)

Max Planck Institute for Developmental Biology (Tübingen)

Max Planck Institute for Intelligent Systems (Stuttgart/Tübingen)

Senckenberg Nature Research Society (Frankfurt am Main)

University of Hohenheim – Center for Nutritional Medicine (ZEM) Tübingen – Hohenheim

University of Stuttgart – Inter-university Center for Medical Technology (IZST)

University of Applied Forest Sciences Rottenburg

Werner Siemens Foundation

Bosch steps up involvement in Cyber Valley

Major investment in new research building

Electrical engineering company Bosch GmbH announced plans to invest some 100 million euros in the construction of the Bosch AI Campus in Tübingen as part of the artificial intelligence research network, Cyber Valley. The AI Campus is to be built near the Max Planck Institute for Intelligent Systems and the University of Tübingen's AI Research Building. The new research complex is slated for completion at the end of 2022, providing facilities for around 700 researchers developing applications for artificial intelligence. Bosch is a founding member of the Cyber Valley initiative, which was launched in 2016.

New Industry on Campus Professorship

The University of Tübingen and Robert Bosch GmbH are also stepping up their cooperation in the field of artificial intelligence with another Industry on Campus professorship. Professor Gerhard Neumann, an expert in autonomous systems and machine learning at the Bosch Center for Artificial Intelligence, is setting up a research group at the University. In the Industry on Campus Professorships, the university and an industry partner work closely together to connect basic research with practical applications.

Gerhard Neumann is particularly interested in self-learning systems. He wants to investigate how they can go beyond following a set of instructions – to learn, and apply what they learn to more complex tasks. Gerhard Neumann received his doctorate at Graz University of Technology and subsequently researched learning and autonomous systems at TU Darmstadt. In 2016 he became Professor of Computational Learning at the University of Lincoln, UK, switching to Bosch in early 2019. But he is not Bosch's first Industry on Campus Professor. In 2018, physicist Dr. Björn Andres set up a computer vision working group to research methods for use in traffic.

Gerhard Neumann specializes in autonomous systems and machine learning.

Europeans join forces in machine learning research

In 2018, scientists from Germany, France, the UK, Israel and the Netherlands launched the European Laboratory for Learning and Intelligent Systems initiative. In Tübingen, the ELLIS initiative is led by the Max Planck Institute for Intelligent Systems, the German government-backed Competence Center for Machine Learning and the University of Tübingen. The call for a pan-European joint research institute is aimed at pooling the resources of individual states to be globally competitive in the field of artificial intelligence.

ELLIS scientists are committed to creating optimal conditions for research on artificial intelligence in Europe. They seek to promote economic development and to ensure that findings in the field benefit society. They work at leading research institutions in the field of machine learning, such as Max Planck Institutes in Stuttgart, Tübingen and Saarbrücken, the French Institute for Research in Computer Science and Automation INRIA, the Universities of Amsterdam, Cambridge, Oxford and Tübingen, University College London, the Alan Turing Institute, ETH Zurich, the Hebrew University in

Contacts around the world

Jerusalem, and at leading industrial research laboratories run by European and American companies. As part of a package of measures decided in March 2019, the state of Baden-Württemberg will invest one million euros in a Fellows Program under the ELLIS umbrella.

In December 2019, 17 ELLIS artificial intelligence research projects in ten European countries and Israel were approved, following a review of 28 proposals from 13 countries. Outstanding AI research projects - including the one in Tübingen – were selected; the applicants pledged to invest at least 1.5 million euros annually in their ELLIS projects over five years.

Dōshisha University establishes branch in Tübingen

Dōshisha University opened permanent offices at the University of Tübingen in February 2019. The Dōshisha EU Campus is the only European branch office of the renowned private university in Kyoto, Japan. The branch supports cooperation and exchange projects with the University of Tübingen and will seek future collaboration with partners throughout Europe. At the official opening, the President of Dōshisha University, Professor Takashi Matsuoka, and the President of Tübingen University, Professor Bernd Engler, signed a declaration of intent for the further expansion of cooperation between the two institutions. Joint conferences, language courses and intercultural training, and exchanges are among the planned initiatives. Existing researcher cooperation is to be stepped up and new projects initiated in a wide range of disciplines.

The opening symposium of the EU Campus on 27 and 28 February 2019 addressed various aspects of the topic ''Challenges for ageing societies'' from Japanese, German and European perspectives. In addition to researchers from Kyoto and Tübingen, the symposium was attended by the Vice-President of International Affairs of Dōshisha University, Professor Gregory Poole, and Professor Yoshihiko Wada, Director of the Dōshisha EU Campus.

Dōshisha University and the University of Tübingen have been partners since 1990; Tübingen has maintained a branch office at Dōshisha University in Kyoto, the Tübingen Center for Japanese Studies for 27 years.

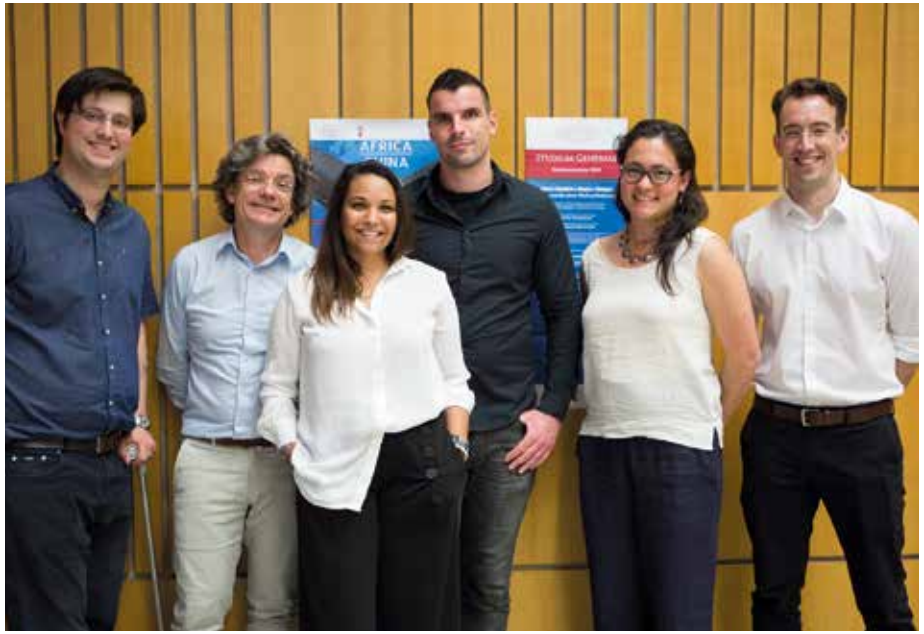
The first semester of the Dōshisha EU Campus: Mari Taneichi, head of the EU Campus (front left), students from Dōhisha University and University of Tübingen employees and students.

ChinaForum Tübingen puts the focus on China

The ChinaForum Tübingen (CFT) seeks to strengthen relations with China at the University of Tübingen and at German universities in general. By working with the universities, the CFT hopes to raise awareness of China as a partner for science and industry. The project, led by Professor Helwig Schmidt-Glintzer, was launched in November 2018 and is funded by the German Federal Ministry of Education and Research to 2021.

The CFT addresses representatives of business, science and civil society with the aim of providing a basis for a better understanding of China. Its lecture series "China: Yesterday – Today – Tomorrow" in the 2019 summer semester highlighted Chinese development from both German and Chinese perspectives.

With workshops for Chinese and German postdocs, doctoral candidates and students, the CFT promotes the exchange of early-career researchers. An annual summer school, Chinese for Beginners, in Beijing offers students of other disciplines the opportunity to acquire language skills in China and seeks to promote interest in studying in China. With the database Science Network China (WiN-China) and the exchange forum China Round Table, the CFT has established two formats that enable networking and raise the profile of China-related projects at the University of Tübingen.



Members of the discussion panel on China and the future of Africa, and representatives of the China Forum Tübingen.

Muslim women theologians debate femininity in Islam

The University of Tübingen's Center of Islamic Theology (ZITh) and Georgetown University in Qatar are jointly researching the concept of femininity in Islam. Women working in Islamic theology at the two institutions are building ties with female scholars worldwide to stimulate a theological debate on the topic. The "Exploring the Feminine within Islam" project was funded by the German Academic Exchange Service (DAAD) in 2019 as part of its University Dialogue with the Islamic World initiative. The project was launched by Professor Lejla Demiri, who researches and teaches Islamic doctrine at ZITh. The researchers want to ensure that Muslim women are not only the subject of ongoing discussions in Islam, but that, as theologians, they themselves conduct research on gender issues.

Baden-Württemberg Foundation supports students at home and abroad

The Baden-Württemberg Foundation has been funding exchange programs between Baden-Württemberg universities and their non-European partner institutions since 2001. With the support of the foundation's scholarships for students, the University of Tübingen was able to support a total of 76 excellent applicants in 2019. Eighty students from selected partner institutions received funding of 166,550 euros for their stay at the University of Tübingen.

A special Regional Development Policy Component program launched in 2017 promotes exchanges with institutions from the world's poorest countries. In 2019, 20 of these scholarships were awarded chiefly to doctoral students from countries such as Benin, Kenya, Senegal, Ghana, Gabon, Burundi, Ivory Coast, Cameroon, Rwanda, Cuba and India. They were from the fields of tropical medicine and Romance languages, management, parasitology, education, psychiatry, zoology and immunology.

The German Academic Exchange Service boosts mobility

In 2018, the German Academic Exchange Service (DAAD) funded international exchanges at the University of Tübingen with a total of around 4.797 million euros. 300 students, doctoral candidates and guest researchers from abroad received scholarships for study or research stays in Tübingen. The number of funded stays abroad for Tübingen students, doctoral candidates and researchers was 165. The university received some 2.667 million euros for the funding of cooperative projects with international partners, including those within the framework of the Strategic Partnerships, Erasmus+, PROMOS, ISAP, and Integra (integration of refugees into university studies) program lines.

Our partners around the world

The University of Tübingen has three branches in Asia and maintains regular exchange programs with some 260 institutions of higher education across many different countries, as well as with our six partners in the Matariki Network of Research Universities.

We are highly active in the European Union's Erasmus Program, involving partnership deals with 381 European institutions. Our seven Faculties also have around 120 cooperation agreements with institutions worldwide. In 2019, more than 800 students took advantage of the many exchange schemes we offer. Numbers on the map indicate how many Tübingen students studied in which continents in 2019. Some 780 students took part in excursions abroad. In total, more than 1,500 Tübingen students traveled abroad for their studies in 2019.

University of Tübingen branches

European Center for Chinese Studies,
Peking University - **BEIJING**
Tübingen Center for Japanese Studies,
Dôshisha University - **KYOTO**
Tübingen Center for Korean Studies,
Korea University - **SEOUL**

North America

Canada

University of Alberta - **EDMONTON, ALBERTA**
McGill University - **MONTRÉAL, QUÉBEC**
McMaster University - **HAMILTON, ONTARIO**
Ontario Colleges and Universities - **ONTARIO***
Université Laval - **QUÉBEC, QUÉBEC**
Mount Allison University - **SACKVILLE, NEW BRUNSWICK**

United States of America

University of Alaska - **FAIRBANKS, AK**
Northern Arizona University - **FLAGSTAFF, AZ**
Arizona State University - **TEMPE, AZ**
University of Arizona - **TUCSON, AZ**
California State Universities - **CA***
University of California San Diego - **SAN DIEGO, CA**
University of Denver - **DENVER, CO**
Connecticut State Universities and Colleges - **CT***
Yale University - **NEW HAVEN, CT**
Georgetown University - **WASHINGTON, D.C.**
University of Hawai'i at Mānoa - **HONOLULU, HI**
Drake University - **DES MOINES, IA**
Roosevelt University - **CHICAGO, IL**
Butler University - **INDIANAPOLIS, IN**
Valparaiso University - **VALPARAISO, IN**
Bellarmine University - **LOUISVILLE, KY**
Louisiana State University - **BATON ROUGE, LA**
University of Massachusetts - **BOSTON, AMHERST, MA***
Tufts University - **MEDFORD, MA**
Washington College - **CHESTERTOWN, MD**
University of Maryland - **COLLEGE PARK, MD**
University of Michigan - **ANN ARBOR, MI**
Western Michigan University - **KALAMAZOO, MI**
University of Missouri - **COLUMBIA, MO**
Washington University - **ST. LOUIS, MO**
Montana State University - **BOZEMAN, MT**
North Carolina State Universities - **NC***
University of North Carolina at Chapel Hill - **CHAPEL HILL, NC**
Princeton Theological Seminary - **PRINCETON, NJ**
Hobart and William Smith Colleges - **GENEVA, NY**
State University of New York - **STONY BROOK, NY**
Oregon University System - **OR***
Reed College - **PORTLAND, OR**
Temple University - **PHILADELPHIA, PA**
College of Charleston - **CHARLESTON, SC**
University of Tennessee - **KNOXVILLE, TN**
Rhodes College - **MEMPHIS, TN**
Texas A & M University - **COLLEGE STATION, TX**
University of North Texas - **DENTON, TX**
University of Washington - **SEATTLE, WA**

* national exchanges

Latin America

Argentina

Pontificia Universidad Católica Argentina - **BUENOS AIRES**
Universidad Nacional de Cordoba - **CORDOBA**

Brazil

Univates em Lajeado - **LAJEADO**
Universidade Federal Fluminense - **NITEROI**
Universidade Federal do Rio Grande do Sul - **PORTO ALEGRE**
P.U.C. do Rio Grande do Sul - **PORTO ALEGRE**
Universidade Federal de Pernambuco - **RECIFE**
USP Campus Universitario Ribeirão Preto - **RIBEIRÃO PRETO**
Universidade de Santa Cruz do Sul - **SANTA CRUZ**
Universidade Federal de Santa Maria - **SANTA MARIA**
Universidade de São Paulo - **SÃO PAULO**

Chile

Pontifícia Universidad Católica de Chile - **SANTIAGO**
Universidad de Chile - **SANTIAGO**

Ecuador

Universidad San Francisco de Quito - **QUITO**

Colombia

Universidad de los Andes - **BOGOTÁ**
Universidad Icesi - **CALI**

Mexico

Universidad Iberoamericana - **CIUDAD DE MEXICO**
El Colegio de México - **CIUDAD DE MEXICO**
Universidad Nacional Autónoma de México - **CIUDAD DE MÉXICO**
Universidad de Guadalajara - **GUADALAJARA**
Universidad de Guanajuato - **GUANAJUATO**
Tecnológico de Monterrey - **MONTERREY***
Universidad de Monterrey - **MONTERREY**
Universidad de las Américas - **PUEBLA**
Benemérita Universidad Autónoma de Puebla - **PUEBLA**

Peru

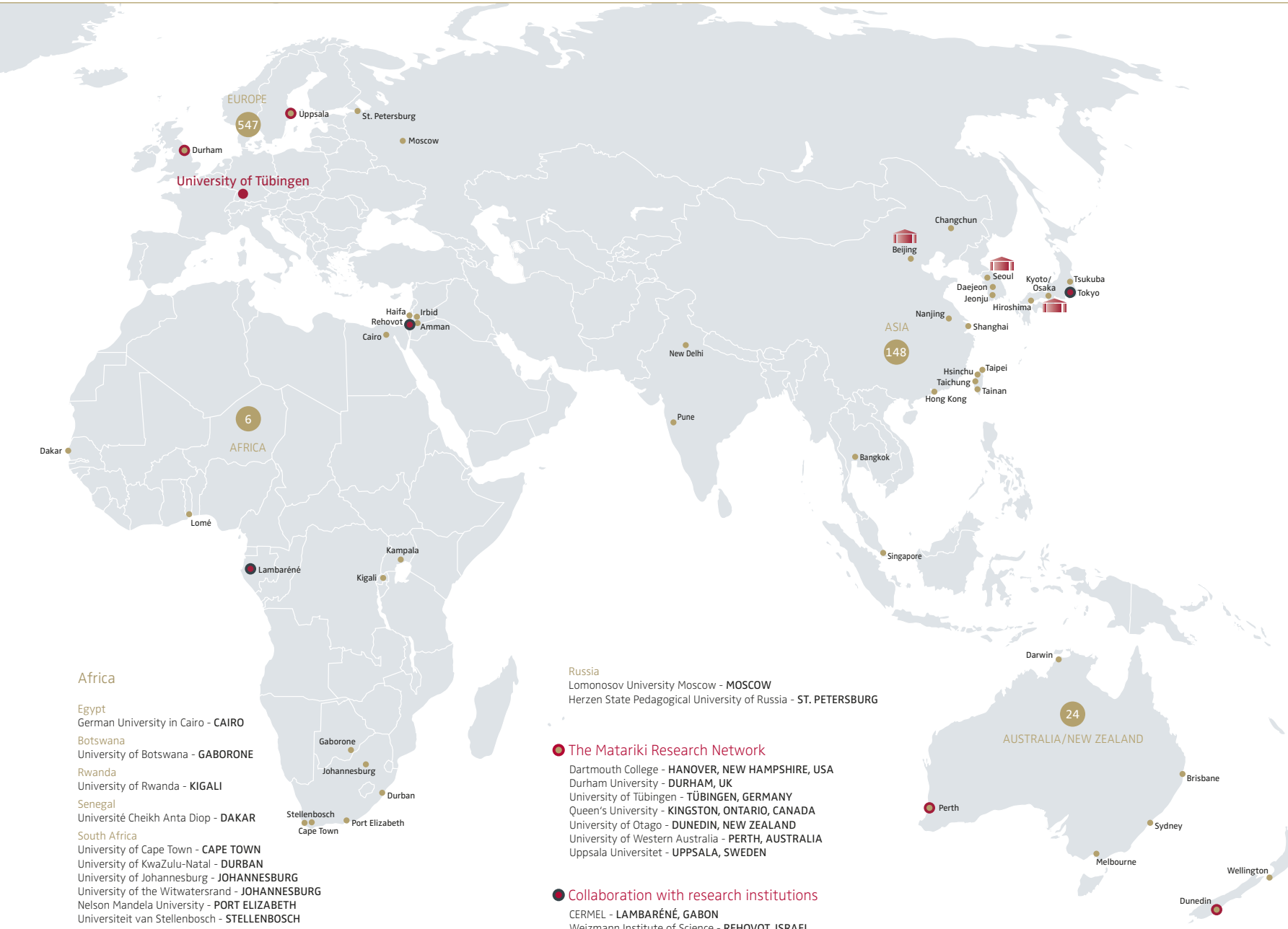
Pontificia Universidad Católica del Perú - **LIMA**

Uruguay

Universidad de Montevideo - **MONTEVIDEO**

Venezuela

Universidad de los Andes - **MÉRIDA**



Africa

Egypt
German University in Cairo - **CAIRO**

Botswana
University of Botswana - **GABORONE**

Rwanda
University of Rwanda - **KIGALI**

Senegal
Université Cheikh Anta Diop - **DAKAR**

South Africa
University of Cape Town - **CAPE TOWN**
University of KwaZulu-Natal - **DURBAN**
University of Johannesburg - **JOHANNESBURG**
University of the Witwatersrand - **JOHANNESBURG**
Nelson Mandela University - **PORT ELIZABETH**
Universiteit van Stellenbosch - **STELLENBOSCH**

Togo
L' Université de Lomé - **LOMÉ**

Uganda
Makerere University - **KAMPALA**

Russia
Lomonosov University Moscow - **MOSCOW**
Herzen State Pedagogical University of Russia - **ST. PETERSBURG**

The Matariki Research Network

Dartmouth College - **HANOVER, NEW HAMPSHIRE, USA**
Durham University - **DURHAM, UK**
University of Tübingen - **TÜBINGEN, GERMANY**
Queen's University - **KINGSTON, ONTARIO, CANADA**
University of Otago - **DUNEDIN, NEW ZEALAND**
University of Western Australia - **PERTH, AUSTRALIA**
Uppsala Universitet - **UPPSALA, SWEDEN**

Collaboration with research institutions

CERMEL - **LAMBARÉNÉ, GABON**
Weizmann Institute of Science - **REHOVOT, ISRAEL**
Riken Institute - **TOKYO, JAPAN**
Pontifícia Universidade Católica do Rio Grande do Sul / Research Station Pró Mata - **SÃO FRANCISCO DE PAULA, BRAZIL**
Universidade Federal do Rio de Janeiro - **RIO DE JANEIRO, BRAZIL**

Asia

China
Renmin University of China - **BEIJING**
Peking University - **BEIJING**
Jilin University - **CHANGCHUN**
Nanjing University - **NANJING**
Fudan University - **SHANGHAI**
Tongji University - **SHANGHAI**
Shanghai Institutes for Biological Sciences - **SHANGHAI**
City University of Hong Kong - **HONG KONG**
University of Hong Kong - **HONG KONG**

India
Jawaharlal Nehru University - **NEW DELHI**
University of Pune - **PUNE**

Israel
University of Haifa - **HAIFA**

Japan
Hiroshima University - **HIROSHIMA**
Dōshisha University - **KYOTO**
Ritsumeikan University - **KYOTO**
Kansai Gaidai University - **OSAKA**
Chuo University - **TOKYO**
Rikkyo University - **TOKYO**
Sophia University - **TOKYO**
Waseda University - **TOKYO**
Tsukuba University - **TSUKUBA**

Jordan
University of Jordan - **AMMAN**
Yarmouk University - **IRBID**

Singapore
National University of Singapore - **SINGAPORE**
Singapore Management University - **SINGAPORE**
Nanyang Technological University - **SINGAPORE**

South Korea
Jeonbuk National University - **DAEJEON**
Chonbuk National University - **JEONJU**
Seoul National University - **SEOUL**
EWHA Womans University - **SEOUL**
Hanyang University - **SEOUL**
Korea University - **SEOUL**
Yonsei University - **SEOUL**
Sookmyung Women's University - **SEOUL**
Sogang University - **SEOUL**
Sungkyunkwan University - **SEOUL**

Taiwan
National Tsing Hua University - **HSINCHU**
National Chung Hsing University - **TAICHUNG**
National Taiwan University - **TAIPEI**
National Chengchi University - **TAIPEI**
National Cheng Kung University - **TAINAN**

Thailand
Chulalongkorn University - **BANGKOK**
Mahidol University - **BANGKOK**

Oceania

Australia
Griffith University - **BRISBANE**
University of Queensland - **BRISBANE**
Queensland University of Technology - **BRISBANE**
Charles Darwin University - **DARWIN**
Monash University - **MELBOURNE**
University of Technology Sydney - **SYDNEY**
University of New South Wales - **SYDNEY**

Fiji
University of the South Pacific - **SUVA**

New Zealand
Victoria University of Wellington - **WELLINGTON**


MARCOS E. BECERRA
MYSTIC

Teaching and Organization

Teaching with new ideas

The University of Tübingen celebrated closer ties with the rest of Europe in a new alliance with seven other universities from Athens to Stockholm. Artificial intelligence and machine learning are the focus not just of research but are being integrated into teaching as well, with a new Master's degree program and a nationwide competition for schools. And new ideas for teaching in many different disciplines received awards from the University and the state of Baden-Württemberg.

Alliances and innovation

University network for European and international cohesion

The University of Tübingen joined forces with seven other European universities in a new alliance, **CIVIS – a European Civic University**, in October 2019. By developing joint study programs, the universities hope to improve the mobility of their students and to strengthen civil society. The European Commission is backing CIVIS with five million Euros over three years.

Along with Tübingen, the CIVIS network includes the University of Aix-Marseille, the National and Kapodistrian University of Athens, the University of Bucharest, the Free University of Brussels, the Autonomous University of Madrid, Rome's Sapienza University and the University of Stockholm. In sum, the alliance comprises almost 400,000 students and 55,000 employees. Thematically, it will concentrate on the areas of health, cities, spaces and transport, climate, environment and energy, digital and technical change, society and cultural heritage. The CIVIS universities will promote European cohesion while expanding cooperation with Africa and the Middle East. The aim is a greater commitment in the fields of teaching, research, and innovation.

Germany-wide competition gets schools involved in AI

The Artificial Intelligence Competition run jointly by the University of Tübingen and the Max Planck Institute for Intelligent Systems in cooperation within the Cyber Valley Initiative culminated in an award ceremony in Tübingen in November 2019. More than 2,500 school students from across Germany took part in this inaugural AI competition. The main sponsor was technology company Robert Bosch GmbH, one of the partners in the Cyber Valley network.

In the first round, the teenaged competitors solved various programming tasks and became familiar with the basics of machine learning – AI's key technology. In the second round, teams came together over a period of five months to implement their own project ideas for product prototypes, websites or apps. The competition was initiated by Professor Matthias Bethge, director of the Tübingen AI Center, Dr. Wieland Brendel, a researcher at the AI Center, and Professor Bernhard Schölkopf, director at the Max Planck Institute for Intelligent Systems.

A total of 50 projects on medical, technical and environmental topics in artificial intelligence were submitted in the second round.

Eleven teams were selected to present their projects to a jury of representatives from research, industry and media, which awarded prizes to three teams of students from Baden-Württemberg and Lower Saxony. A team from Bavaria received the audience award. The Saarpfalz Gymnasium in Homburg was declared AI School of the Year for completing the first round of the competition with the highest number of participants.

Luca Abele of the Ulrichsgymnasium Norden talks to Bernhard Schölkopf of the Max Planck Institute for Intelligent Systems and the state science minister, Theresia Bauer.

CIVIS A European Civic University

New directions

Germany's first Master's Degree program in machine learning

In winter semester 2019-20 Tübingen became the first German university to set up a Master's program in machine learning. Students can acquire the basics of the subject in four semesters and choose from a wide range of specializations in theory and application. Machine learning develops algorithms that recognize patterns and regularities in large data sets. The technology therefore drives current advances in the field of artificial intelligence, in which applications range from autonomous vehicles to personalized medicine.

The machine learning degree program closely integrates research in the field in Tübingen and offers students the opportunity to specialize in areas such as computer vision, bioinformatics, neurosciences, medical informatics, cognitive sciences, linguistics, and robotics. The program has been designed to be flexible to accommodate rapid development in the field. Students can also develop other professional skills through courses in law, philosophy, or ethics.

Bachelor of Education Science and Psychology combination

The University of Tübingen brought together empirical education research and education psychology in a Bachelor's degree program in winter semester 2019-20 – a first in Germany. The two disciplines are essential for understanding learning processes. The new Bachelor's program complements the Master's program in the subjects introduced in Tübingen in 2012.

Education psychology investigates learning processes in children, adolescents and adults. Empirical education research adds an interdisciplinary perspective. The program can be completed in six semesters. Potential occupations include education management and many fields of school psychology and organization.

State teaching prize for multi-location teaching format

Alexander Kobusch, Dr. Thomas Nielebock, Natalie Pawlowski and Dr. Gabi Schlag of the Institute of Political Science in Tübingen, together with Julia Gurol and Ingo Henneberg from the University of Freiburg, received the state of Baden-Württemberg's higher education teaching award for 2019. The accolade was for an innovative multi-location seminar in the field of peace and conflict resolution studies that they have been developing since 2016. The 50,000-euro prize is awarded by the state of Baden-Württemberg every two years. The prize was presented by Minister of Science, Research and the Arts Theresia Bauer in Stuttgart in December.

In the award-winning format, the lecturers combine elements of conventional classroom teaching with computer-based elements. For example, students were required to produce videos or interviews on relevant topics, which became accessible to a broad audience on a public e-learning platform. And the teachers and students began refining videoconferencing techniques long before the Coronavirus pandemic compelled millions of people around the world to adopt them. Up to 150 students at eight university locations take part in the joint seminars.

Top: the team that won the State of Baden-Württemberg's teaching prize.
Left to right: Alexander Kobusch, Gabi Schlag, Julia Gurol, Thomas Nielebock, Natalie Pawlowski and Ingo Henneberg

Award-winning innovations in teaching

Two Innovation Fellowships

Two members of the University of Tübingen were selected for Fellowships for Innovation in University Teaching, a program run by the Stifterverband and the Baden-Württemberg Foundation. The prize is endowed with 25,000 euros.

Professor Olaf Kühne, a specialist in Urban and Regional Development at the Geoscience Department received a Senior Fellowship for his project "InExkurs – Innovative Excursion Formats in Blended Learning Format." In this project, Kühne explores the question of how the potential of excursions can be better used to teach geography. During excursions, students learn from seeing the object of their studies in situ, then processing the experience with abstract knowledge. In Kühne's project, students navigate the urban geography of Stuttgart using an app prepared by students of the Geography Master's program. As part of their assessment, each group makes a video.

Professor Taiga Brahm specializes in economic education and business didactics at the School of Business and Economics. She receives a tandem fellowship of 30,000 euros with her research partner, Professor Tobias Jenert of the University of Paderborn, for the project "How do we teach economics? Which economics do we teach?" In it, Brahm tackles two challenges in economics teacher training. Often, trainee teachers do not gain practical teaching experience until late in their studies, and they do not sufficiently reflect on their own subjective ideas about economics. In order to overcome these difficulties, she records students' teaching simulations and has students rework them using an annotation tool.

This teaching format is to be introduced at the Universities of Paderborn and Tübingen at the Bachelor's and Master's levels.

Left: Olaf Kühne and Taiga Brahm

Ars legendi prize for Sports Science

Dr. Verena Burk of the Institute of Sports Science was awarded the Ars legendi Faculty Prize for Sports Science 2019. It goes to academics who have distinguished themselves with an outstanding, innovative and exemplary performance in teaching, counselling and supervision, and was awarded for just the second time by the Stifterverband and the Fakultätentag Sportwissenschaft together with the Deutsche Vereinigung für Sportwissenschaft. Verena Burk received the 10,000-euro prize in May 2019 in Heidelberg. The jury said that Burk had rendered great service in the design and implementation of the sports science and media communication program taught at the University of Tübingen.

Right: Verena Burk

Prizes awarded by the University

Economists get students coding

Johannes Bleher, Professor Thomas Dimpfl and Professor Joachim Grammig from the School of Business and Economics received the University of Tübingen's Teaching Prize 2019 for their innovative teaching of methodological competence. Their project teaches economics students basic programming at the start of their studies; this introduces them to the latest data analysis methods. The project has been successfully built into the courses on mathematics and statistics. And in winter semester 2018-19, the students achieved better exam results and rated the course more highly than in previous years. The Teaching Prize comes with 2,500 euros and was presented in October 2019.

Prizewinners Thomas Dimpfl and Johannes Bleher

Innovations in synthetic biology

The 2019 University of Tübingen Student Commitment Prize was awarded to the interdisciplinary iGEM team Tübingen-iGEM stands for International Genetically Engineered Machine Competition. For the international iGEM competition, 16 students from Tübingen are researching innovations in the field of synthetic biology. They come from the fields of biochemistry, biotechnology, chemistry, bioinformatics, molecular medicine and nanoscience. The prize was awarded at the Dies Universitatis in October 2019. The competition was originally launched by the Massachusetts Institute of Technology (MIT) in Boston. It encourages students to seek innovations in the field of synthetic biology and solutions to current problems. In the course of the iGEM competition, students develop their own project in the field of synthetic biology and pursue it independently for twelve months.

Tübingen's iGEM-team with Vice-President Karin Amos

Sustainability Prize for six outstanding works

The 2019 Sustainability Prize for theses written at the University of Tübingen was awarded for the ninth time in November 2019. Six graduates received the distinction for outstanding projects dealing with sustainable development. The jury awarded prizes for three Bachelor's and three Master's theses. The Bachelor's degree graduates were Stefan Moderau in economics, Bianca Rau in geoecology and Lynda Wolff in geography. Awards for Master's theses went to Lena Schlegel in the field of peace studies and international politics, Michael Stecher in economics and Thomas Stüber in informatics.

Sustainablility Prize winners, left to right: Lynda Wolff, Stefan Moderau, Bianca Rau, Lena Schlegel, Thomas Stüber and Michael Stecher

University management

The President's Office (from left):
Professor Peter Grathwohl, Professor Monique Scheer, Professor Bernd Engler, Professor Karin Amos, Dr. Andreas Rothfuss

The President's Office

President
Professor Dr. Bernd Engler
English Language and Literatures

Executive Vice-President
Dr. Andreas Rothfuss

Vice-President of Student Affairs and Studies
Professor Dr. Karin Amos
Institute of Education

Vice-President for Research and Innovation
Professor Dr. Peter Grathwohl
Center for Applied Geoscience – Hydrogeochemistry

Vice-President for International Affairs
Professor Dr. Monique Scheer
Ludwig Uhland Institute
of Historical and Cultural Anthropology

University Board of Trustees

The University Board is responsible for the University's development. It proposes measures to increase the University's performance and competitiveness, and supervises its management. The University Board has seven external and four internal members.

In 2019 the former chairman, **Professor Antonio Loprieno**, received the University's Silver Medal in recognition of his long service on the board. Loprieno, an Egyptologist, was a member of the board from 2009 to 2018, achieving the maximum term of office of nine years.

External members

Chairman Bernhard Sibold, Deutsche Bundesbank, Stuttgart

Dr. Dr. Saskia Biskup, CeGaT GmbH, Tübingen

Dr. Michael Bolle, Robert Bosch GmbH, Renningen

Professor Dr. Heinrich Bülthoff, Max Planck Institute for Biological Cybernetics (Tübingen)

Professor Dr. Ernst Hafen, ETH Zürich

Dr. Ingrid Hamm, Ingrid Hamm Consultants GmbH, Stuttgart

Christiane Neumann, Consulting, Berlin

University internal members

Deputy chair Professor Dr. Oliver Kohlbacher, Department of Informatics

Jacob Bühler, Student Representative

Professor Dr. Stefanie Gropper, Scandinavian Studies

Sandra Kauenhowen, Tübingen School of Education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Celebrating Knowledge

Learning from the past

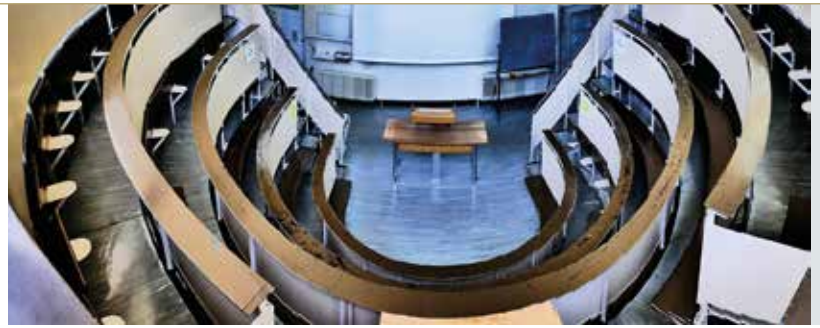
Many of the major cultural events at the University of Tübingen in 2019 involved a careful look back at implications the past still has for us today. This included the Museum's fresh take on Leonardo da Vinci, the return of a valuable document stolen in World War Two, and a review of some institutes' history. Guest speakers reminded us that dialogue and tolerance are essential.

Not even past

Leonardo's machines – technology or art?

The University of Tübingen Museum dedicated its annual exhibition to the greatest genius of the Renaissance, 500 years after his death. The exhibition featured nearly 50 replicas of machines based on drawings by Leonardo da Vinci, as reconstructed by Italian craftsmen. Visitors were able to operate some of the machines. The exhibition sought to recreate the atmosphere of the workshop and laboratory of a knowledge-hungry technical and artistic genius. Da Vinci's work across many fields have made him an icon of interdisciplinarity and universality.

The show attracted more than 50,000 visitors. It ran to 1 December 2019 and included a comprehensive program of workshops for children and a quiz booklet – both designed by students as part of the Museum & Collections Master's program – as well as lectures by academic experts, drawing courses and special tours.



Left:
Seal on a document issued by Czar Peter I

Right:
A lecture theater in the Pathology building

Anniversaries

Peter the Great document returned to Ukraine

The state of Baden-Württemberg and the University of Tübingen returned to Ukraine a historical document issued by Czar Peter I. The 1708 document is an elaborately decorated letter of appointment of the Archbishop of Kiev and is of great significance for Ukrainian ecclesiastical history. It had been in the collection of the Institute for Eastern European History and Area Studies since the late 1950s. A German-Ukrainian research group found that the document had probably been looted from Kiev during the Second World War.

On the basis of the evidence, Baden-Württemberg's Minister of Science, Research and the Arts, Theresia Bauer, worked with the German Foreign Office and the University of Tübingen for the orderly return of the document to Ukraine. It was received by the Ukrainian ambassador, Dr. Andrij Melnyk, in Berlin on 14 March 2019.

150 years of advances in Pathology

The history of pathology at the University of Tübingen began in 1869 when Oskar Schüppel was appointed the first full professor of Pathology. The discipline developed dynamically from the early establishment of autopsy practices to a central clinical subject with a broad spectrum of methods. The discipline's scientific transformation was boosted by the further development of techniques for tissue analysis which underly modern research into diseases and their causes.

Today, the constantly evolving morphological methods in pathology are supported by the use of molecular high-throughput methods, image analysis techniques and artificial intelligence. This was underscored at a symposium held in July 2019 to celebrate the 150th anniversary of Pathology in Tübingen. By 2024 the discipline is to get a new building, which will also be used for the digitalization of microscopy.

Art History celebrates 125 years

The University of Tübingen's first art historian professor, Konrad Lange, was appointed in 1894. But it was not until the 1920s and 30s that the Institute of Art History began to grow, with Gertrud Otto and Luise Böhling becoming its first women research assistants. After the Second World War, the institute established a contemporary focus, appointing Wilhelm Boeck as its first professor of 20th century art.

The institute grew continuously until the 1970s; at times there were up to four full professorships. Student numbers increased, and the study of art history was reformed. More recently, Tübingen's art historians have lent their expertise to interdisciplinary cooperation with the University of Tübingen Museum. The Institute of Art History overlooks the Neckar River from one of the University's oldest historical buildings, the Burse.

Far left: Da Vinci exhibition at the University of Tübingen Museum

Psychiatry and Psychotherapy Clinic turns 125

The clinic for psychiatry and psychotherapy was opened in November 1894 after a long construction period. Yet it was ahead of its time – those suffering mental illnesses were not to be hidden away but accommodated in a spacious, palatial new building. Doctors sought to achieve the best possible diagnosis and treatment of patients with mental illnesses, and to integrate such cases into the research and teaching of the medical studies of the time.

Over the past 125 years, the clinic and its staff have been at the forefront of the diagnosis and treatment of mental illnesses. At a conference here in 1906, Alois Alzheimer first described the changes in the brain observed in the disease we now know as Alzheimer's; the concept of delusional diseases was developed here by Robert Gaupp, leading to the founding of the Tübingen School with its multidimensional diagnostics and treatment of mental disorders. Ernst Kretschmer later worked on constitutional typology and Walter Schulter introduced sleep deprivation as a treatment for depression. Other important developments were the independence of child and adolescent psychiatry and the systematic expansion of psychotherapeutic treatments.

Half a century of the new Botanical Gardens

The current Botanical Gardens were inaugurated in May 1969 on ten hectares of land and 3,000 square meters of greenhouse space. But Tübingen's Botanical Gardens history dates back to the 16th century. Several changes of location in Tübingen and a number of famous directors such as Leonhart Fuchs (1501-1566) and Rudolph Jacob Camerarius (1665-1721), the discoverer of sexuality in plants, paved the way in the first centuries.

Due to lack of space, it was decided in the 1950s to move the garden and the entire science faculty to the current location. The tropical greenhouse, with its hexagonal glass and steel construction, was even inspired by a botanical model – the umbrella-like flowers of cow parsley.

Teaching and research are still the focal tasks of the Botanical Gardens. New tasks, such as species preservation and the digital documentation of plant populations have been added. The Botanical Gardens have also taken on an increasing public education role with year-round events and educational programs for schoolchildren.

The University of Tübingen's Botanical Gardens

Inspiration from distinguished speakers

The search for common ground

Is it worth talking about the notion of global ethics? That was the first question raised by German President Frank-Walter Steinmeier at the 14th Global Ethics Lecture at the University of Tübingen on 15 October 2019. When it comes to common values, hasn't resignation spread, both in a divided world and in German society? Yet Steinmeier had a clear answer to his own query: we must hold on. Global ethics, he said, are now a matter of unprecedented historical urgency.

Despite what nationalists and fundamentalists may say, we cannot cut ourselves off from global connections and interdependencies, Steinmeier said, "we are in the world – and the world is with us." Real encounters change those involved – and that change brings the hope of finding common ground, he said.

The Global Ethics Lectures have been organized jointly by the Global Ethic Foundation and the University of Tübingen since 2000. Outstanding public figures are invited to give their perspectives on global ethics issues. The global ethics discussion was launched in 1990 by Professor Hans Küng and seeks common ethical ground between the values, standards and basic beliefs of world religions and humanist traditions.

Friend and foe in your pocket

The physicist and science journalist Ranga Yogeshwar came to Tübingen on 21 May 2019 for the 16th Media Lecture. His theme was: Man & Machine: Who programs whom? He explored some of the changes that digitalization and artificial intelligence are making in societies and human behavior around the world.

Now that vast computing power fits into a pocket-sized device and computers are linked worldwide, digitalization has reached almost every corner of the earth, from the poorest slum to the richest city. There are vast benefits to this – Yogeshwar pointed out that a mobile phone can provide data which, when analyzed by the right algorithm, could give an early diagnosis of Parkinson's disease. But such data can also be abused.

Surveillance, which many people voluntarily submit to by using digital devices and storing their data, is being further perfected, Yogeshwar warned. He called for a debate on what artificial intelligence should be used for, while saying we should remain open to opportunities and seek to actively shape the future.

The Media Lecture is sponsored by regional broadcaster SWR and is intended to inspire future journalists and to build bridges between theory and practice. The lecture was organized by Dr. Andreas Narr of the SWR Studio Tübingen and Professor Bernhard Pörksen of the Institute for Media Studies.

Left:
German President Frank-Walter Steinmeier

Top:
Ranga Yogeshwar

Left to right:
Karl Ove Knausgård
Judith Schalansky

Faculties of Theology honor outstanding contributions to international tolerance

Remembrance of things past

The Norwegian writer Karl Ove Knausgård and German author Judith Schalansky were guests of the 33rd Tübingen Writers' Lectureship from 1 to 6 December 2019. The event is sponsored by the Würth Foundation and Adolf Würth GmbH & Co. KG. It has been held annually since 1996 and has been directed by Professor Dorothee Kimmich since 2005. Authors are invited to hold public lectures, as well as seminars and workshops for students.

Karl Ove Knausgård started with a quotation from the philosopher Søren Kierkegaard that "life can only be understood backwards; but it must be lived forwards." Although he feels that literature should be written forwards, he said that when he looks back at his own work, he finds traces of his having read Proust's Remembrance of Things Past. Gustave Flaubert (Madame Bovary) and James Joyce (Ulysses) were also strong influences.

Judith Schalansky approaches her creative work via the world of mushrooms. Schalansky takes an approach to literature which is both intuitive and learned, humorous and precise. Through phenomena such as mold and rot, she introduced her audience to the fascinating world of sometimes deadly fungi. The lecture led from these organisms to her own texts, which also result from a network of other influences, and from relationships that arise and shift.

Handwriting the Constitution

New York artist Morgan O'Hara was the invited artist at the University of Tübingen in the summer of 2019. The invited artists scheme seeks to promote creativity, artistic understanding and cultural diversity among students from all faculties.

While in Tübingen, O'Hara recreated an event which she held at the New York Public Library shortly after Donald Trump was elected US president. She calls it "Handwriting the Constitution" – the contemplative and concentrated copying of the US Constitution. In July 2019, nearly a hundred people gathered around a long table set up in the courtyard of Hohentübingen Castle. They wrote out not only the US Constitution, but also the Universal Declaration of Human Rights in many different languages and also – on its 70th anniversary – the German Grundgesetz, or Basic Law.

Reforming the national view of history

The British historian and theologian Sir Diarmaid MacCulloch received the University of Tübingen's Dr Leopold Lucas Prize in May 2019. Sir Diarmaid, an Anglican deacon and Professor of Ecclesiastical History at Oxford University is considered one of the world's leading Reformation researchers. The Faculty of Protestant Theology paid tribute to MacCulloch's work, which has contributed significantly to a comprehensive understanding of religion and European history.

The 50,000-euro award pays tribute to outstanding achievements in the fields of theology, intellectual history, historical research, and philosophy. It goes to individuals who have promoted tolerance and better relations between people and nations. The Leopold Lucas Prize honors the memory of the Jewish rabbi and scholar Dr. Leopold Lucas, murdered at Theresienstadt concentration camp in 1943. The Prize was endowed by his son, Franz D. Lucas, in 1972.

The Reverend Diarmaid MacCulloch, born in 1951, was ordained a Deacon of the Anglican Church after completing his Theology studies. Since 1997, he has been Professor of the History of the Church at the University of Oxford. His works on the Reformation in England have won many prizes. They portray the Reformation as a process which redrew the religious, political and social map in the years 1490 to 1700.

Reconciliation and equality

The Lucas Prize jury said he had forever changed our picture of Europe in the Early Modern Age. Diarmaid MacCulloch shows us a polycentric Europe in the Early Modern Age, with different forces behind the modernization which characterizes European society up to the present day, the jury said, "With great erudition but also a light narrative style, he departs from the conventional patterns of national histories and, as a historian, meets the idea of tolerance to which the Lucas Prize is dedicated."

The Lucas Prize for Junior Researchers went to historical researcher Alexa von Winning of the Institute for Eastern European History and Area Studies for her doctoral thesis, "Leaving Home. The Noble Family, Imperial Russia, and Global Orthodoxy, 1855-1936" in Modern and Contemporary History. In it, she examines the interplay of politics and private lives in the Russian Empire. The prize is endowed with 20,000 euros.

Former Irish president, Professor Mary McAleese, received the 2019 Alfons Auer Ethics Award in October 2019 in recognition of her involvement, both as a Christian and an academic, in the implementation of ethics in politics. The 25,000-euro biennial prize is awarded to public figures who have given special ethical service to religion, academia or society. It is sponsored by the entrepreneur Siegfried Weishaupt and is a tribute to the moral theologian Alfons Auer.

The selection panel said McAleese has been particularly active in combining ethics and politics and has given impetus to moral renewal in the Catholic Church. She works to develop the Gospel in the conflicts of the present day as a message of non-discrimination, reconciliation and peace, according to the panel.

As president of the Republic of Ireland, McAleese saw herself as a bridge-builder – across Ireland, between the winners and losers of the economic boom, and between all parts of society where tensions and rifts arose. During her tenure, the Employment Equality Act (1998) and the Equal Status Act (2000) were introduced, prohibiting discrimination. Today, she is a member of the Council of Women World Leaders, a network of prime ministers and presidents who work for women's rights. She is also involved in the reform-oriented processing of cases of abuse in the Catholic Church.

Mary McAleese was born in 1951 in Belfast, Northern Ireland. Growing up in the civil war, peace-building, democratization and reconciliation became her life's work. She studied law at Queen's University Belfast and embarked on an academic career in Ireland both north and south of the border. From 1997 to 2011 Mary McAleese was the 8th President of the Republic of Ireland. Afterwards she studied Catholic Canon Law in Rome and is now Professor of Children, Law and Religion at the University of Glasgow in Scotland.

Left to right:
Sir Diarmaid MacCulloch
Alexa von Winning
Mary McAleese, the 2019 Alfons Auer Ethics Award Laureate

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