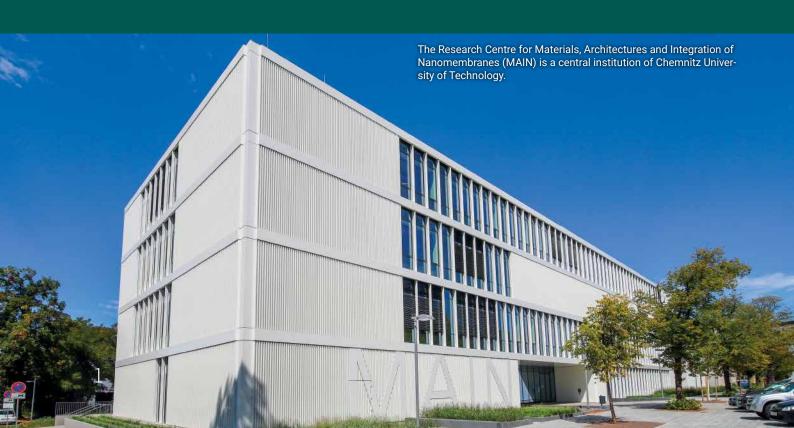


# TUCreport 2022

# CONTENTS

3
7
9
13
17
19
20
21
23
24
25
27
29
31
32
33





Dear members and affiliates of Chemnitz University of Technology, interested parties, and readers,

The year 2022 was in many respects not an easy year; indeed it was a year that brought great suffering, disbelief, and terror with the horrendous breach of international law by Russia's war of aggression against Ukraine and the alarming escalation of violence in Iran. In addition, we were confronted with new challenges, some of which resulted from these events, such as the energy crisis and inflation. Chemnitz University of Technology (Technische Universität Chemnitz, (TUC)) has undoubtedly been able to meet the diverse challenges and, furthermore, make a contribution to addressing various crises. Looking back at 2022 also shows that TUC again achieved great successes in all areas of our university. These include, among others:

- the acquisition of two DFG (German Research Foundation) research groups under the leadership of TUC: FUNDAM³ENT under the chairmanship of Prof. Dr. Thomas Lampke and POPULAR under the chairmanship of Prof. Dr. Carsten Deibel;
- an increase in third-party funding from 78.7 million euros (2021) to 88.0 million euros (2022) despite the Covid-19 pandemic, resulting in an average of around 600,000 euros in third-party funds at TUC per occupied professorship in 2022;
- the development of the world's smallest microelectronic catheter by a research team from TUC, IFW Dresden, and the Max Planck Institute for Molecular Cell Biology and Genetics, led by Prof. Dr. Oliver G. Schmidt;
- the winning of the first ERC Starting Grant, one of the most prestigious EU funding programs for excellent top-level research, by Dr. Minshen Zhu;
- the successful completion of the system accreditation process and the receipt of self-accreditation rights (with only a few conditions imposed by the German Accreditation Council);
- achieving a top position in the Most Popular Universities 2022 ranking (4th place nationwide, 1st place in

- east Germany) as well as in the Digital Readiness Ranking (3rd place nationwide, 1st place in east Germany); last accessed on 20.12.2022 on StudyCheck.de,
- achieving top positions in the CHE ranking with the Bachelor's, Diplom, and Master's degree programs in the fields of Mechanical Engineering, Electrical Engineering and Information Technology, Psychology, and German Studies;
- signing the European Cross-Border University convention, and the expansion of the network to include the University of Udine (Italy) and the University of Nova Gorica (Slovenia) – the university in the Slovenian European Capital of Culture 2025 – under the coordination of TUC;
- the successful evaluation of the two WIR! projects at TUC (Smart Rail Connectivity Campus and Smart composites ERZgebirge), which will now be funded until 2025 as part of the Federal Ministry for Education and Research (BMBF) program WIR! - Change through Innovation in the Region with a further total of 12.8 million euros (total funding: 28.8 million euros);
- the receipt of 5.87 million euros from the Federal Ministry for Economic Affairs and Climate Action (BMWK) for the establishment and expansion of the Carbon Lab-Factory as an external site of TUC in Boxberg/Oberlausitz under the leadership of Prof. Dr. Lothar Kroll;
- the receipt of the Sustainability Award from the German University Sports Association for sustainable commitment in university sports, various contributions to sustainability, and diverse activities in the area of health management.

Last year, it was undoubtedly very gratifying that, after two challenging years due to Corona, we were able to take significant steps back towards normality. This included not only the implementation of numerous in-person events, such as the graduation ceremony, the enrollment and kickoff celebration, the award ceremony for prizes and scholarships, the TUCfeierabend - Science, Sounds and Synthesizer event and the university information day TUCdiscover, but also the return to extensive in-person teaching during the winter semester of 2022/2023. You can find information on further selected activities and developments in 2022 on the following pages.

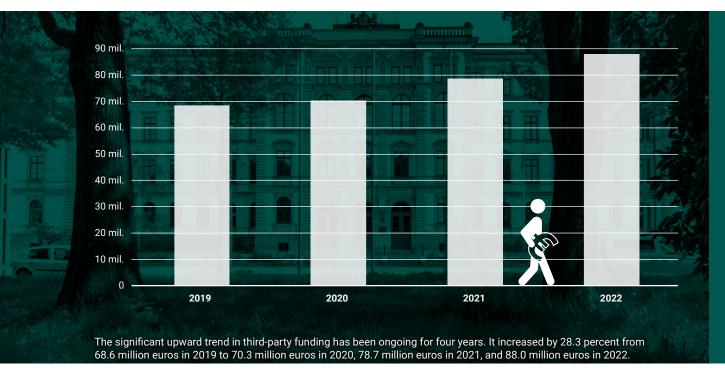
At this point, on behalf of the university management, I would like to express my heartfelt thanks once again to all members and affiliates of our university, as well as to the institutions, bodies and representatives of TUC, who are responsible for the successes presented in the TUCreport 2022. On behalf of the university management, I would also like to thank all of TUC's partners in academia, politics, business and society who have actively supported our university in a variety of ways.

Best regards

Prof. Dr. Gerd Strohmeier

President

# **Highlights of our University**



# New record: 88.0 million euros in third-party funding at Chemnitz University of Technology

Chemnitz University of Technology was able to significantly increase its third-party funding from 78.7 million euros in 2021 to 88.0 million euros in 2022, thus reaching a new record high - despite the Covid-19 pandemic. Accordingly, professors at Chemnitz University of Technology each raised an average of around 600,000 euros in 2022. The largest share of third-party funds comes from federal funds and the German Research Foundation (DFG), which are associated with high-profile research projects in the core competencies of Chemnitz University of Technology. While federal funds have increased by over 40 percent compared to 2019, DFG funds have almost doubled over the same time period. The acquisition of two DFG research groups in the past two years has also contributed to this significant increase (p. 10).



# Important steps on the way to a European University

An alliance of ten European universities, co-ordinated by Chemnitz University of Technology, seeks to provide impetus for successful cross-border exchange and transfer in Europe as the European Cross-Border University Across and together become a European University as part of the EU program Partnerships for Excellence - European Universities. An important step towards this goal was the signing of a new European University Convention in 2022, which will sharpen the strategic profile of the network. New ideas for the projects of the alliance were developed at an Across and Presidents Meeting, as well as a working meeting of the Executive Board of Across in Brussels which lasted several days. Within Chemnitz University of Technology, a funding program was established to support exchange within Across in research, teaching, and administration, and was compiled with the participation of the other Across members as part of the application process.



In the presence of Saxony's Prime Minister Michael Kretschmer (2nd from left), the Memorandum of Understanding on the formation of the Saxon Hydrogen Union was signed by the President of Chemnitz University of Technology, Prof. Dr. Gerd Strohmeier (2nd from right), the Rector of the Technical University of Dresden, Prof. Dr. Ursula M. Staudinger, and the Prorector for Research and Transfer of TU Berga-kademie Freiberg, Prof. Dr. Jörg Matschullat..

# Universities in Chemnitz, Dresden and Freiberg form the Saxon Hydrogen Union

Chemnitz University of Technology, the Technical University of Dresden and TU Bergakademie Freiberg joined forces on August 10, 2022 in the presence of Saxony's Prime Minister Michael Kretschmer to form the Saxon Hydrogen Union in order to deepen and formalize their cooperation in the areas of research and teaching along the entire hydrogen value chain. Synergies are to be used even more effectively in the future to strengthen Saxony as a location for science and business. Against the backdrop of climate change and the energy transition, the structured expansion of renewable energies is more important than ever.

Chemnitz University of Technology is already making extremely valuable contributions to the hydrogen strategy of the Free State of Saxony. For example, it has been working for several years to develop Chemnitz into the leading location for hydrogen research. A visible expression of these efforts is the Hydrogen and Mobility Innovation Center (HIC) - a national innovation and technology center for hydrogen technologies, which will be funded by the federal government with a total of 72.5 million euros and is being built on the South Technology Campus with significant participation by Chemnitz University of Technology.

# An excellent appointment: First Heisenberg Professorship for Chemnitz University of Technology



On April 1, 2022, Prof. Dr. Martin Breugst was appointed Heisenberg Professor of Theoretical Organic Chemistry, within the Faculty of Natural Sciences. This is the first Heisenberg Professorship of the German Research Foundation (DFG) to be established at Chemnitz University of Technology. Heisenberg professorships are among the most prestigious and highly endowed instruments of thirdparty funding for postdoctoral scientists in Germany. With the award of the Heisenberg Professorship to Martin Breugst, the DFG has confirmed the excellent status of his research work at Chemnitz University of Technology and is funding it with a total of around 760,000 euros over five years. If the interim evaluation is positive, he will be appointed to a permanent professorship at the Institute of Chemistry of the Faculty of Natural Sciences at Chemnitz University of Technology.

# Several professorships at Chemnitz University of Technology have already been contributing their expertise to the two alliances since 2019, which are very strongly linked to the Erzgebirge region and are intended to contribute to structural change there.

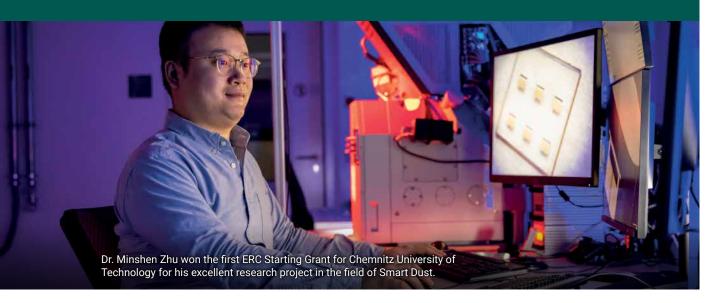
# Further millions in funding for two WIR! projects

The two joint projects Smart Rail Connectivity Campus (SRCC) and Smart composites ERZgebirge (SmartERZ), in which Chemnitz University of Technology is significantly involved, will continue to receive funding from the Federal Ministry of Education and Research (BMBF) through the program WIR! - Change through Innovation in the Region. This is the result of a successfully completed interim review, in which the strategy concepts convinced the jury. The SRCC under the leadership of Prof. Dr. Uwe Götze and the WIR! alliance SmartERZ under the leadership of Prof. Dr. Lothar Kroll will now be funded with a further total of 12.8 million euros until 2025. This brings the total funding to 28.8 million euros.



# Successfully completed system accreditation and TOP rankings

In June 2022, the German Accreditation Council, a joint institution of the German federal states, approved the accreditation of the quality management system of Chemnitz University of Technology with only a few conditions. Bachelor's and Master's degree programs can thus be independently accredited by TUC in internal procedures. Every study program that has successfully passed through TUC's study success management system will in future bear the coveted quality seal of the German Accreditation Council. Graduates and their future employers can thus be sure that degree programs at Chemnitz University of Technology meet high quality standards. This is also confirmed by the top rankings in the online evaluation portal StudyCheck.de in the ranking "Most Popular Universities 2022" (4th place nationwide, 1st place in eastern Germany), for which the TUC also received the certificate "Top University 2022", and in the "Digital Readiness Live Ranking" (3rd place nationwide, 1st place in eastern Germany, as of 20.12.2022).



## First ERC Starting Grant for Chemnitz University of Technology

An outstanding example of successful third-party funding acquisition is the award of an ERC Starting Grant to Dr. Minshen Zhu, research associate under Prof. Dr. Oliver G. Schmidt, Professor of Materials Systems for Nanoelectronics. This is first time that an associate of Chemnitz University of Technology has received the grant, which is one of the most prestigious EU grants for excellent cutting-edge research. The ERC Starting Grant is endowed with over 1.5 million euros and is awarded for extraordinarily innovative and excellent research ideas from early-career scientists. Within his project "Smart Dust Batteries Integrated with Near-Zero-Power Surveillance (SMADBINS)", Zhu aims to develop the smallest batteries for so-called "smart dust" applications, which, for example, provide the energy for intelligent microsystems and microrobots.



# Chemnitz University of Technology hosted the Build Peace Conference 2022 and provided extensive support for Ukrainian partners, students and refugees

From November 4 to 6, 2022, the Build Peace Conference took place not only for the first time in Germany, but - as part of the Capital of Culture project - at Chemnitz University of Technology. This important international conference on issues of peace building and democratic participation was organized locally by the association ASA-ff e. V. (Friends and supporters of Student Visits in Africa, Asia and Latin America) in cooperation with TUC's Professorship of Sociological Theory (headed by Prof. Dr. Henning Laux).

The patron of the conference was Katja Meier, the Saxon Minister of Justice and Democracy, Europe and

Equality. Around 300 guests from all over the world dis-

cussed new challenges for world peace, among other topics, under the motto "Exploring the Unseen". The focus was on the Russian war of aggression against Ukraine in contravention of international law. Since the beginning of the war, the TUC has taken a clear and committed position on this issue on several occasions, for example by establishing structures to support Ukraine and refugees. In addition, a comprehensive package of emergency aid for researchers and students from Ukraine and for cooperation in research and teaching has been launched. To date, almost one million euros in third-party funds have been raised to support Ukrainian partners and students as part of DAAD programs (p. 32).

# **From University Management**







Highlights from the area of higher education policy and development:

- the university development plan was updated and the first TUC sustainability report was published,
- a successful engagement regarding the prioritization of the planned new starts of major construction measures for the double budget 2023/2024 was undertaken,
- the Professorship of Theoretical Organic Chemistry (Prof. Dr. Martin Breugst) at the Faculty of Natural Sciences has been established, the first Heisenberg professorship at TUC.

Highlights from the area of **research**:

- the "Saxon Hydrogen Union", consisting of the three technical universities in the Free State of Saxony, was founded in the presence of the Saxon Prime Minister Michael Kretschmer,
- the Centre for Humans and Technology was founded as a central facility, and Prof. Dr.
   Oliver G. Schmidt was introduced as the first Scientific Director of the Research Centre MAIN,
- an ad-hoc commission for the ethics of security-relevant research (KEF) was established initially within the framework of the Commission for Research and Promotion of Scientific Talent (KFF).

#### Highlights from the area of **teaching**:

- the second TUC "Common Room" was opened in the Weinhold Building on the Reichenhainer Straße campus,
- a new video campaign for TUC degree programs was produced and a new online platform was developed to present all study opportunities in a clear and modern tile look,
- ambassadors for TUC were appointed as part of the newly launched TUCdiscover campaign.

#### Highlights from the area of **young scientists**:

- Dr. Laura Ackermann was appointed as the new President's Delegate for Junior Scientists
- the program for bridging financing of third-party funded junior scientists was extended and expanded during the COVID-19 pandemic,
- generally higher classification options were created for adjunct professors on budgetary posts as well as a teaching position concept as a fourth tenure concept, among other things in order to offer reliable and attractive career opportunities to junior scientists.

#### Highlights from the area of international affairs:

- the convention of the European Cross-Border University "Across" was signed under the coordination of TUC and the network was expanded by two partners, including the University of Nova Gorica in the European Capital of Culture 2025 in Slovenia,
- a summit meeting of the European Cross-Border University "Across" was held at the University of Craiova (Romania),
- a funding program was established to support international exchange within the Across University Alliance and the Across Summer Schools 2022 were conducted at TUC with around 70 students from over 25 countries.

#### Highlights from the area of transfer:

- a concept "Scientific Further Education and Lifelong Learning at Chemnitz University of Technology" was adopted,
- a cooperation agreement was concluded with the town of Annaberg-Buchholz to further advance the establishment of the Smart Rail Connectivity Campus,
- the landing page TUCculture 2025 was set up as a platform for TUC activities in the context of the European Capital of Culture 2025.

#### Highlights from the area of university communication:

- a clear position was taken in the face of the Russian war of aggression against Ukraine, which was backed up by various measures, and the petition "Chemnitz for Humanity Your Voice for Respect and Solidarity" was signed,
- the university supported the campaign of the city of Chemnitz and the BuntmacherInnen e. V. to commemorate the Jewish people deported 80 years ago and the action "Lichtpunkte" (Points of Light) of the initiative "Lichterwege" (Paths of Light) of the BuntmacherInnen e. V. and the alliance Chemnitz for Humanity on the occasion of the so-called "Reichspogromnacht" (Night of Broken Glass) 84 years ago,
- the university supported TUC employee and extreme swimmer Dr. Joseph Heß, who swam the entire length of the 1,232-kilometer-long Rhine in record time – and also acted as an ambassador for Chemnitz as European Capital of Culture 2025 as well as TUC.











Further selected activities, including in the area of appreciation, can be found on the following pages.



A comprehensive overview is provided in the University Management's report for 2022. www.mytuc.org/bericht-2022

# From Our Faculties



# Faculty of Mathematics

On May 19, 2022, a regional event was held at Chemnitz University of Technology as part of Stanford University's worldwide initiative Women in Data Science (WiDS). It provided outstanding female scientists with the opportunity to present their work in the field of data science. Around 50 participants exchanged their latest findings and built networks within the community. The organization of WiDS Chemnitz was led by Dr. Franziska Nestler and Theresa Wagner from the Faculty of Mathematics. Both are part of the junior research group SALE (Fast Algorithms for Explainable Recommendation Systems), which is funded by the Federal Ministry of Education and Research (BMBF), and were WiDS ambassadors in 2022. As such, they belong to a global network of leading researchers in the fields of artificial intelligence and data science.

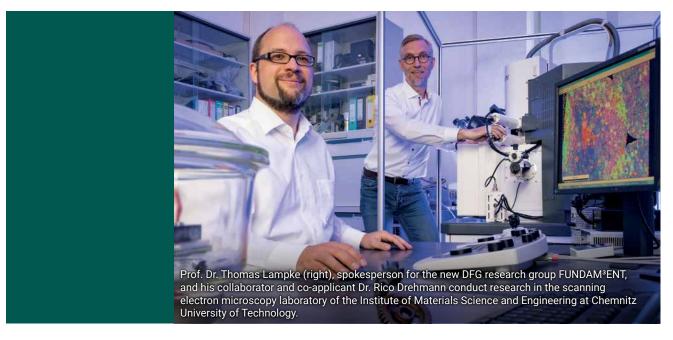


# Faculty of Electrical Engineering and Information Technology

Chemnitz University of Technology is making significant research and development contributions to the transition to renewable energy. As part of the infrastructure project "Clean Energy City", the Professorship of Power Systems and High-Voltage Engineering, in collaboration with the Faculty of Mechanical Engineering, has set up the PowerHiL-Lab with a budget of around 2.4 million euros. In this laboratory, a future intelligent power grid is simulated, with a high proportion of renewable energies, storage systems, and electric vehicles. This includes energy-efficient and reliable technologies as well as control and prediction algorithms based on artificial intelligence. One of the first collaborations is the ESF junior research group HZwo: StabiGrid, which is funded with around one million euros from EU and state funds, starts in 2023 and researches the stabilization of the power grid. This project is led by Dr. Farhad Safargholi, a research associate at the Professorship of Power Systems and High-Voltage Engineering. For his outstanding dissertation, Dr. Safargholi was honored with the Johann-Andreas-Schubert Prize in December 2022. The prize, endowed with 3,000 euros, was donated by the SACHSENMETALL Unternehmensverband der Metall- und Elektroindustrie Sachsen e. V. (Confederation of the Saxon Metal and Electrical Industry).

#### **Faculty of Mechanical Engineering**

The German Research Foundation (DFG) is setting up the new research group "Functional surfaces by adiabatic high-speed processes: microstructure, mechanisms and model development - FUNDAM³ENT" under the leadership of Chemnitz University of Technology. This decision was made by the main committee of the DFG on June 28, 2022. The research group will be funded with approximately 3.72 million euros for the first four-year funding period, of which about 1.54 million euros will be allocated to Chemnitz University of Technology. The spokesperson for the research group is Prof. Dr. Thomas Lampke, Professor of Materials and Surface Engineering at Chemnitz University of Technology. The focus of the research is on high-speed shear cutting, which, from an economic and ecological perspective, represents an efficient alternative to the shear cutting of steel and light metals compared to conventional methods. Scientists from the Fraunhofer Institute for Machine Tools and Forming Technol ogy IWU in Chemnitz, the Fraunhofer Institute for Mechanics of Materials IWM in Freiburg, TU Dortmund, and TU Munich are also involved in the research group.



#### **Faculty of Natural Sciences**

The German Research Foundation (DFG) is setting up the new research group "Printed & Stable Organic Photovoltaics with Non-Fullerene Acceptors - POPULAR" under the leadership of Chemnitz University of Technology. According to a resolution by the DFG's main committee on December 8, 2022, the research group will receive funding of 5.05 million euros in the first four-year funding period, with approximately 3.26 million euros going to Chemnitz University of Technology. The spokesperson for the research group is Prof. Dr. Carsten Deibel, Professor of Optics and Photonics of Condensed Matter at Chemnitz University of Technology. The researchers aim to manufacture organic solar cells using mass production printing processes and to understand and improve them with complementary experiments and simulations. In addition to Deibel and his team, the research group includes other scientists from Chemnitz University of Technology, from the Professorship of Semiconductor Physics (headed by Prof. Dr. Dietrich R. T. Zahn), the Professorship of Polymer Chemistry (headed by Prof. Dr. Michael Sommer), the Professorship of Printed Media Technology (headed by Prof. Dr. Arved C. Hübler), the Professorship of Scientific Computing (headed by Prof. Dr. Martin Stoll), and the Professorship of Inverse Problems (headed by Prof. Dr. Jan-Frederik Pietschmann). They are co-operating with researchers from the universities in Dresden, Bayreuth, Erlangen-Nuremberg, Potsdam, Heidelberg, and Durham (United Kingdom).



#### **Faculty of Computer Science**

At the Professorship of Media Informatics (headed by Prof. Dr. Maximilian Eibl), the mobile app BirdNET has been developed as one of the most popular and successful apps for bird sound recognition. The team around Dr. Stefan Kahl has already registered the 100 millionth bird observation as well as two million active app users. Since 2022, 750,000 euros in funding from the Federal Ministry of Education and Research have been available for the fundamental revision of the app and its algorithm as part of the BirdNET+ project.

The new project is based on the realization, among other things, that there is a great need for the identification of other animal species. Therefore, part of the project will revolve around further developing the algorithm-based recognition system. In addition, Kahl's team wants to open the recognition algorithm for use in the professional and vocational field. This offers potential applications in ecotourism and for planning offices, which would like to get an overview of the local animal species before starting construction projects.



# Faculty of Economics and Business Administration

The European Macro Policy Network is funding two comprehensive meta-analyses of existing research literature to investigate the effects of monetary policy interest rate steps on the economy and the impacts of energy price increases on demand and CO2 emissions. Prof. Dr. Sebastian Gechert, head of the Professorship of Macroeconomics at TUC, is leading the project. The cooperation partner is the Vienna Institute for International Economic Studies. The background to this research project is that although there is already

extensive literature on the correlations mentioned, it shows partly contradictory and widely scattered results. As part of the project, the sources are to be systematically evaluated. In this way, current and urgent questions about the relationships between factors such as interest rates, GDP growth, employment, CO2 pricing, energy price changes and emissions are to be answered. The project is funded until 2024 with approximately 350,000 euros.

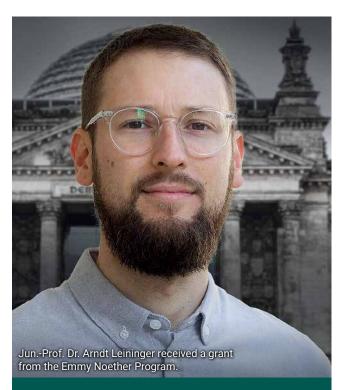




# of the SMJusDEG, Prof. Dr. Gerd Strohmeier (right), President of Chemnitz University of Technology, and Harald Baumann-Hasske (2nd from left), Federal Chairman of the Association of Social Democratic Lawyers.

## Faculty of Behavioural and Social Sciences

On November 22, 2022, the Centre for Criminological Research Saxony e. V. (ZKFS) held an event at the "IdeenReich" of the university library to review the development and research activities of its first year of existence. The institute is closely associated with the Faculty of Behavioral and Social Sciences and is an associated institute of Chemnitz University of Technology, the first independent research institution for criminology in East Germany. Among those attending was Katja Meier, the Saxon State Minister for Justice and for Democracy, Europe and Equality. Prof. Dr. Frank Asbrock, Director of the ZKFS and Professor of Social Psychology at Chemnitz University of Technology, presented results from the nationwide and representative survey of 5,000 citizens on the perception of crime and of offenders. Afterwards, the ZKFS team provided insights into current research projects, such as "Fear of Crime", "Trust in Institutions", "Youth Crime" and "Prisons in Saxony", using posters and in discussions.



## **Faculty of Humanities**

Prof. Dr. Arndt Leininger, head of the Professorship of Political Science Research Methods at Chemnitz University of Technology, has obtained funding for his research project Polarization through and in referendums: mapping polarization within and beyond the party system as part of the German Research Foundation's Emmy Noether Program. The sum of around 600,000 euros will be made available for the project until 2028. In the project, Leininger will put together a research group that will investigate the influence of referendums, so-called "public votes", on the attitudes of citizens. The focus will be primarily on whether referendums create new divisions along political issues within a society or merely expose existing divisions. To this end, Leininger will focus on three main research areas: firstly, he and his research group aim to provide an overview of existing approaches to explaining the phenomenon of political polarization. Secondly, the team wants to develop a completely new approach to measure and describe polarization beyond party affiliations. In addition, they plan to examine the existing data on this hitherto little researched issue and systematize the current state of research.



#### **Research Centre MAIN**

Prof. Dr. Oliver G. Schmidt, a Leibniz Prizewinner and Professor of Materials Systems for Nanoelectronics, was introduced as the first scientific director of the Research Centre for Materials, Architectures and Integration of Nanomembranes (MAIN) by the President of Chemnitz University of Technology, Prof. Dr. Gerd Strohmeier, on September 5, 2022. Prof. Schmidt's name continues to be associated with outstanding innovations in 2022. For instance, an international research team under his leadership developed for the first time a method that allows electronic skin with tiny electronic hairs to "feel" touches regardless of direction. This paves the way for a novel type of biomedical sensing on the body and artificial skin for humanoid machines. In addition,

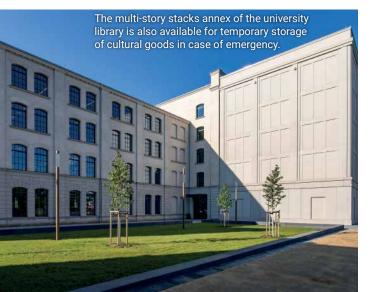
Schmidt, along with researchers from the Leibniz Institute for Solid State and Materials Research (IFW) Dresden and the Changchun Institute of Applied Chemistry, presented the "smallest battery in the world", a groundbreaking technology for energy storage capabilities in the sub-millimeter range. Under Schmidt's aegis, the first ERC Starting Grant was also acquired for Chemnitz University of Technology. In 2022, Schmidt was once again among the most cited researchers in the world. This is based on results from the Institute for Scientific Information's analysis of the "Highly Cited Researcher Rankings" from the American company Clarivate Analytics.

#### **MERGE** Research Cluster

On September 16, 2022, the Mayor of Chemnitz, Sven Schulze, visited the central MERGE facility. On-site, Prof. Dr. Lothar Kroll, coordinator of the MERGE research cluster, informed him about current research activities in the field of lightweight construction and possible impulses for the Chemnitz Capital of Culture activities. This includes, among other things, the carbon concrete developed at Chemnitz University of Technology, which is reinforced with textiles instead of steel. It could be used in the form of event pavilions, functional furniture, or interactive functional elements as part of the activities in 2025. The use of a cargo bike completely made of plastic by the Munich brand mocci is also being considered. This work and cargo bike was developed for the B2B sector and operates entirely without a chain and belt thanks to intelligent software and hardware. All parts of this fully plastic e-bike were calculated and simulated by lightweight construction experts at Chemnitz University of Technology.



Prof. Dr. Lothar Kroll (left) informed Chemnitz Mayor Sven Schulze about current research projects during a tour of the MERGE hall.



## **University Library**

On September 22, 2022, the custodians of Chemnitz archives, libraries, museums, and collections, including the University Library of TU Chemnitz, signed an agreement for mutual support in emergencies. The goal of this so-called emergency network is to collectively prepare for emergencies with resources and personnel, support each other in rescuing cultural assets during disaster situations, and also to prepare in advance for possible emergencies and to exchange experiences. The participating partners also wish to use this partnership to emphasize the importance of preserving cultural heritage, especially in preparation for the Chemnitz European Capital of Culture year in 2025.

### **University Computer** Centre

In 2022, the University Computer Centre initiated a comprehensive modernization of the Linux administration processes. Through additional automation possibilities, existing and new services can be provided more efficiently. The operating system Linux is used for both servers and computer workstations at the university and forms the foundation for scientific computing. In the modernization project, robust security measures were also integrated to protect sensitive data and systems. The transition underscores the commitment of the University Computer Centre to ensure a more efficient and secure computing environment for all.





# **University Didac**tics Saxony

Chemnitz University of Technology signed a new cooperation agreement with the other three Saxon universities, seven universities of applied sciences, and five art and music colleges for the University Didactics Saxony. At Chemnitz University of Technology, lecturers can now develop their teaching and teaching competencies over the long term in individual and joint further education programs and exchange formats. The network of the University Didactics Saxony, which has received core funding from the Saxon State Ministry for Science, Culture and Tourism since 2022, is coordinated and designed by the Leipzig office. A highlight event in 2022 at Chemnitz University of Technology was

formed by the TUCdigital days of digital

higher education.

#### **Centre for Teacher Training**

The Professorship of Didactics in Sports and Physical Education (headed by Prof. Dr. Meike Breuer) carried out the project "Experiencing democracy (easily) through play!" in a 4th grade class at a primary school in Chemnitz in 2022. The project served to promote democratic values in physical education through preventative measures and interventions. Aspects such as tolerance, solidarity, self-organization, cohesion, and fairness were the focus and were intended to be practically experienced through small games and forms of play. In addition, teachers and students were further trained on the mentioned topics in workshops. Since sport, as a social space, offers various possibilities to learn social processes not only theoretically but also through action, physical education has a high potential for democratic value education. The project was funded by the local action plan of the city of Chemnitz.



# Centre for Humans and Technology

Prof. Dr. Marco Ragni, head of the Professorship of Predictive Analytics, was appointed the first Scientific Director of the Centre for Humans and Technology (MeTech). This central institution of Chemnitz University of Technology, which forms an inter- and transdisciplinary interface in the area of the university's core competency in Humans and Technology, will be led by Ragni until December 2027. The MeTech research centre investigates the fundamental factors of a beneficial interaction between humans and technical systems. The necessary prerequisites from the humanities, communication and cultural sciences, social sciences, engineering and technology, economics, and natural sciences are in focus for this purpose.



# As part of the Visiting Scholar Program, Zagdkhorol Bayasgalan, a visiting professor from Mongolia, is also conducting research at TUC.

#### **International Office**

Promoting international research collaboration is a central part of TUC's internationalization strategy. With the Visiting Scholar Program, TUC supports research partnerships that are established and have already achieved joint successes. The Visiting Scholar Program is coordinated by TUC's International University Centre (IUZ). The program is aimed at tandems of Chemnitz professorships and international guests who have already worked together, for example in projects or in publications.

Visiting scholars can research at the university for a period of three to six months. By tailoring the program in this way, TUC enables the intensification of international research cooperation and the development of new networks, for example in the context of joint events on site, which provide opportunities for interdisciplinary acquaintance and discussion.

# Centre for Knowledge and Technology Transfer

A new record number of submissions was achieved for the fifth TUClab competition, in which the jury selected three winners from Freiberg and Dresden from 30 innovative, highquality, and broadly positioned business concepts in the fields of surface finishing, glass hardening, and multi-material 3D printing. These winners will now receive support in the early startup phase. The TUClab is a component for the promotion of spin-offs from the Chemnitz University of Technology. The goal of the TUClab is firstly to strengthen the competitiveness of the university and its better networking with the economy. In addition, sustainable growth is to be stimulated in the Chemnitz region. The success of entrepreneurs from Chemnitz University of Technology can be seen in the recognition of Dr. Martin Böhringer, a graduate of Chemnitz University of Technology and co-founder of the software company Staffbase, which is valued at over one billion euros. The business magazine Capital named him one of the forty leading German personalities under 40 years old in the field of business. Martin



TU graduate Dr. Martin Böhringer, CEO of Staffbase, is one of the most important German personalities under 40 according to the "Top 40 under 40" ranking of the magazine Capital.

Böhringer was nominated by Prof. Dr. Gerd Strohmeier, President of Chemnitz University of Technology and alumnus of the "Top 40 under 40".

#### Foreign Language Centre

The Foreign Language Centre (ZFS) offered language courses to approximately 1,500 students in 2022, which included languages such as Arabic, Chinese, and Czech. A new addition to these courses was the English Conversation Course, specifically designed for students and academic staff. For the first time, the centre also organized a writing week and consultation hours on academic writing, with the aim of helping students develop vital academic skills. Moreover, starting from March 2022, the ZFS launched three independent courses entitled German as a Foreign Language for Refugees. These courses were established independently of the refugees' affiliation with Chemnitz University of Technology, with the goal of facilitating their integration into a new environment.





# Centre for Junior Scientists

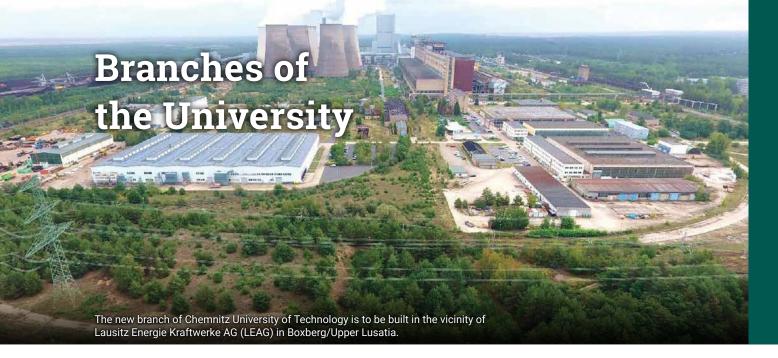
Around 50 junior scientists took part in the 9th Day of Junior Scientists on November 24, 2022. The focus was on essential aspects of the doctoral process and academic career. Many questions were discussed, including the typical course of the doctoral phase, perspectives after a doctorate, routes to a professorship, and good scientific practice. At the request of many early-career academics, the Centre for Junior Scientists also expanded its workshop program in the summer semester of 2022, adding to the "Workshop for Successful Appointment Negotiations" two workshops dealing with successful applications for a professorship in engineering and natural sciences and in the humanities and social sciences respectively. The three events, in which a total of 31 people participated, took place online.





## Centre for Sport and Health Promotion

The Centre for Sport and Health Promotion (ZfSG), in partnership with the health insurance provider Techniker Kranken-kasse, the ias group, and others, organized the "Year of Health" at Chemnitz University of Technology for the first time. From the start of the summer semester 2022, employees and students were able to choose from a wide portfolio of health promotion offers. Each month carried a health-relevant motto, including topics such as working from home, exercise, nutrition, mental health, sleep, esteem, and sustainability. For its diverse activities in health management and its sustainable commitment in university sports, Chemnitz University of Technology was awarded the adh Sustainability Award in 2022. The project "Vitality and Sustainable Diversity at Chemnitz University of Technology" (ViNaL-TUC) received first place out of a total of eleven universities. It is led by Dr. Kristin Röhr, head of the ZfSG, and by Prof. Dr. Marlen Gabriele Arnold, the president's representative for sustainable campus development. ViNaL-TUC includes a variety of health-promoting and sustainable measures such as "Sustainable Campus Design", "Movement in studying - be moved by studying!", the establishment of flowering meadows, a teaching and learning garden, and processes in the area of fair trade and sustainable procurement.



# German government to fund construction and expansion of Carbon LabFactory in Boxberg/Upper Lusatia with 5.87 million euros

Chemnitz University of Technology is set to take a global leading role in the research of "green" carbon fibers and the development of a value chain for carbon materials. The university received a grant of 5.87 million euros from the Federal Office for Economic Affairs and Export Control (BAFA) for the establishment and expansion of the Carbon LabFactory as a branch of Chemnitz University of Technology in Boxberg/Oberlausitz. The funds are provided by the Federal Ministry for Economic Affairs and Climate Action (BMWK) as part of its program STARK to strengthen energy transition dynamics and new initiatives in the coalmining regions and at coal power plant sites, which supports the transformation process towards an innovative economic structure in the these regions. The project is located within the Professorship of

Lightweight Structures and Polymer Technology (led by Prof. Dr. Lothar Kroll) at Chemnitz University of Technology. In addition to Chemnitz University of Technology, the Fraunhofer Institute for Applied Polymer Research (IAP) in Potsdam is also involved. In a cross-state collaboration, the entire value chain - from raw material extraction and processing, through materials and processes, to structures and systems - is being developed and tested in a pilot project as part of the Carbon LabFactory and the InnoCarbEnergy project. Thanks to this innovative profile, Chemnitz University of Technology and its new branch will be among the future global pioneers. Comparable facilities exist only in the USA and Australia.



Prof. Dr. Lothar Kroll (center) and his team are setting up the new Chemnitz University of Technology branch in Boxberg/Upper Lusatia. The project team includes (from left): Katharina Götz, Sven Storck, Harry Beyer, Patrik Evers, Philipp Zehrtner, Dr. Isabelle Roth-Panke, Dr. Susann Anders, Torsten Mitschke, Constanze Bach and Ricarda Künzel-Ripp.

# Cooperation agreement concluded for **Smart Rail Connectivity** Campus

future, a branch of Chemnitz University of Technology is to move into the lower train station of the town of Annaberg-Buchholz. In 2022, the renovation of the north end of the station building progressed well.

Chemnitz University of Technology and the town of Annaberg-Buchholz have signed a cooperation agreement to further advance the ambitious model project Smart Rail Connectivity Campus (SRCC) in the Ore Mountains. The agreement was signed by the Mayor of the Annaberg-Buchholz, Rolf Schmidt, and the president of Chemnitz University of Technology, Prof. Dr. Gerd Strohmeier. It supplements and specifies the cooperation framework agreement that has been in place since 2018. The aim of the project is to permanently establish an internationally leading research, development, and testing site with a state-of-the-art research campus as a branch of Chemnitz University of Technology in Annaberg-Buchholz, where numerous partners will collaborate to research digitalized, connected, automated, and sustainable mobility. The goal is to create innovations that also enable successful regional change, in line with the WIR! - Change through Innovation in the Region funding program. In 2022, the construction of the SRCC infrastructure in Annaberg-Buchholz continued to progress well. In addition to preparations for the establishment of a 5G network along the test track between Annaberg-Buchholz and Schwarzenberg, the renovation of the train station building, which is owned by the town of Annaberg-Buchholz and where the branch of Chemnitz University of Technology is to be located, was almost completed.



## Research Platform Refrigeration and Energy Technology (KETEC) presents itself on the Internet



Since June 2022, the Research Platform for Refrigeration and Energy Technology (KETEC) - the centerpiece of the Chemnitz University of Technology branch in Reichenbach in the Vogtland region - has had its own website. At www.ketec.online, all 13 sub-projects are described in detail. These include basic research on refrigerants, the development of high-temperature heat pumps for industrial applications, and improvements in the construction and operation of coolers. The website also includes the latest scientific publications by the participating researchers and an introduction to the 23-member industry advisory board of KETEC. The Federal Ministry of Education and Research is funding the establishment of the research platform in Reichenbach in the Vogtland region by Chemnitz University of Technology, the Institut für Luft- und Kältetechnik gGmbH Dresden, and the Fraunhofer Institute for Solar Energy Systems ISE Freiburg to a total of 15 million euros until April 2025. The Professorship of Applied Thermodynamics (headed by Prof. Dr. Markus Richter) is responsible on the Chemnitz side, with KETEC project coordinator Prof. Dr. Thorsten Urbaneck.

# About Our Students



#### Radio UNiCC celebrated its 20th anniversary

In 2022, the campus radio station UNiCC celebrated its 20th anniversary. More than 30 students are currently working at the station, organizing a daily radio program consisting of the news magazine On Air, thematic programs, and podcasts. They also work in their own news and music editorial office, a technology department, and a marketing/social media department. UNiCC now serves as a training platform in radio journalism for volunteer students and provides all interested parties with important news about Chemnitz and the region.



# Student initiative T.U.C. Racing e.V. presented its new racing car

On May 30, 2022, the student initiative T.U.C. Racing e. V. presented a new development, the Mkx. IV, a partially autonomous racing car, for the first time at the Chemnitz event center Kraftverkehr. Around 60 students worked in various teams for about two years on the design and completion of the vehicle. For the first time, the Mkx. IV competed in Formula Student events in Germany, the Czech Republic, and Switzerland.

# Student Council mobilizes, promotes and connects

The TUC Student Council (StuRa) is in regular contact with the Saxon transport associations in order to be able to offer students optimal transportation options - this was also the case from June to August 2022, in order to link the 9-euro ticket with student IDs. In addition to mobility, the cultural and social life of TUC students is also part of the StuRa's responsibility. This ranges from events on campus to those in the wider city community - for example, in the organization of the Days of Jewish Culture and the maintenance and further development of the culture ticket for all students.





# Success at the Chemnitz leg of the climate campaign CITY CYCLING

Stefanie Zelt and Kilian Tasche, students at TUC, topped the statistics with the most kilometers ridden at the conclusion of the Chemnitz leg of the nationwide climate initiative CITY CYCLING 2022 from September 5 to 25, 2022. In the women's category, Stefanie Zelt covered 1,110 kilometers by bike. Kilian Tasche rode around 2,788 kilometers in the men's category. Both competed for Chemnitz University of Technology and the Lauf-KulTour e. V.

# About Our Junior Scientists

## New University Management Representative for Junior Scientists

Since November 2022, Dr. Laura Ackermann from the Faculty of Behavioral and Social Sciences has been the New University Management Representative for Junior Scientists at Chemnitz University of Technology. She succeeds Dr. Michael Schmischke in this role. The new president's delegate is intended to inform the university management first-hand, help shape various processes, and act as a link between the university management and the junior scientists.





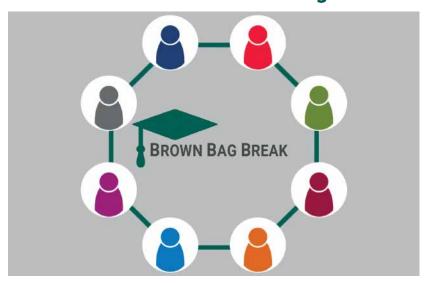


# Awards for outstanding junior researchers

In 2022, many junior scientists at Chemnitz University of Technology also celebrated outstanding successes. Among them was nano-researcher Yeji Lee, a research associate in the research group of Prof. Dr. Oliver G. Schmidt (Research Centre MAIN). She was honored with the Junior Scientist Award at the conference of the Korean Scientists and Engineers Association. Lee received this award as an exceptionally outstanding junior scientist for her latest research results in the field of microelectronics and smart dust applications.

Dr. Robert Wonneberger, a research associate at the Professorship of Electron Microscopy and Microstructure Analysis (headed by Prof. Dr. Andreas Undisz) at Chemnitz University of Technology, was awarded the Faculty Prize of the Faculty of Physics and Astronomy of the Friedrich Schiller University Jena for his outstanding dissertation "Early stages of the oxidation of non-rusting austenite 316L - On the formation of multilayer oxide layers". The prize, which is endowed with 1,500 euros, is awarded for the best dissertation of the past year and is sponsored by the Munich company Rohde & Schwarz.

#### Ideal format for networking - also online



"Brown Bag Break" is a format in which participants can get to know each other informally over a snack. In 2022, due to the pandemic, the Centre for Junior Scientists at Chemnitz University of Technology offered this format online. 16 junior scientists took advantage of the opportunity to exchange information about research priorities at other institutes and the doctoral career path followed by the establishment of a company. The event took place for the first time with the SAXEED start-up network. All participants were sent an information and lunch package, funded by the Federal Ministry for Economic Affairs and Climate Action.

# Awards and Scholarships

On December 15, 2022, Chemnitz University of Technology honored outstanding achievements of its members in the fields of study,

Some of the scholarship holders gathered for a group photo in front of the Chemnitz Opera House.

teaching and research as well as in social and intercultural commitment. During a ceremony in the St. Petri Church in Chemnitz, TUC awarded three teaching prizes, four research prizes, nine university prizes, the DAAD Prize as well as five Eleonore-Dießner Prizes and five Marie-Pleißner Prizes for 2022. In addition, the university awarded 94 scholarships for outstanding academic and societal achievements. The teaching, research and university prizes as well as the Eleonore-Dießner and Marie-Pleißner prizes are each endowed with 1,000 euros. The University Prizes for the best final theses of all faculties and the Centre for Teacher Training are awarded by the university together with the Society of Friends of Chemnitz University of Technology e. V. The Eleonore-Dießner and Marie-Pleißner prizes honor outstanding final theses of young female scientists of all faculties and the Centre for Teacher Training. The DAAD Award honors excellent achievements of international students or doctoral candidates at German universities.





The **Eleonore-Dießner Prize** was awarded to (pictured from left to right):

- Esther Rauschert (Faculty of Natural Sciences)
- Josie König (Faculty of Mathematics)
- Mei Yun Liu (Faculty of Mechanical Engineering)
- Saskia Mareen Heinrich (Faculty of Electrical Engineering and Information Technology)
- Alexa Becker (Faculty of Computer Science)

The Marie-Pleißner Prize was awarded to:

- Johanna Hölig (Faculty of Economics and Business Administration)
- Hannah Zacher (Faculty of Humanities)
- Nadine Giesemann (Faculty of Behavioral and Social Sciences)
- Katrina Körner (Center for Teacher Education)

The **university prizes** for their outstanding scientific works were received by (in picture, starting: upper row, left to right):

- Dr. Martin Winter (Faculty of Mathematics)
- Dr. Clemens Göhler (Faculty of Natural Sciences)
- Dr. Charlotte Bruns (Faculty of Humanities)
- Marie Meischner (Centre for Teacher Training)
- Luisa Closmann (Faculty of Economics and Business Administration)
- Dr. Karin Matko (Faculty of Behavioral and Social Sciences)
- Dr. Vineeth Kumar Bandari (Faculty of Electrical Engineering and Information Technology)
- Vera Sophia Evers (Faculty of Mechanical Engineering)
- Dr. Norman Peitek (Faculty of Computer Science)

The DAAD Prize for **Outstanding Achievements of Foreign Students or Doctoral Candidates at German Universities**, endowed with 1,000 euros, was awarded to Linto George Thomas. The student from India, studying in the Advanced Manufacturing master's program, impressed both with his academic achievements and his social and intercultural commitment, particularly in the area of intercultural exchange and integration.







The **teaching prize for the use of digital technologies** in a way that promotes learning was awarded to Tobias Heß from the Professorship of Human Locomotion for the use of videos and online discussion platforms in the exercise "Clinical Gait Analysis". The teaching award was sponsored by GPP Chemnitz - Gesellschaft für Prozeßrechnerprogrammierung mbH.



The **teaching prize for innovative teaching** was awarded to Dr. Sylvia Jurchen from the Professorship of History of German Language and Literature at Chemnitz University of Technol-ogy and PD Dr. Silvan Wagner from the Chair of German Medieval Studies at the University of Bayreuth for their blended learning format for the tandem seminar "The Book of Natural Wisdom". The teaching award was sponsored by wohnen in chemnitz gmbh.



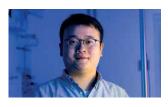
The **teaching award for junior academics in teaching** was given to Christian Huber (left) from the Professorship of Organization and International Management and Dr. Fabian Teichert from the Professorship of Theoretical Physics - Simulation of New Materials for their SoTL project (Scholarship of Teaching and Learning) and the innovative combination of research and teaching.



The **research prize in the category "DFG - Successful DFG Initial Proposal"** was awarded to Dr. Philipp Heinrich Kindt (left), head of the Junior Professorship of Pervasive Computing Systems at the Faculty of Computer Science until the end of the summer semester 2022, and Dr. Karl Kopiske from the Professorship of Cognitive Systems. In his project, Kindt is optimizing wireless networks. Kopiske, together with his colleague Carl Müller, is researching how peo-ple adapt to small motor disturbances when grasping and walking.



The research prize in the category "Industry - First successful acquisition of an industry-funded research project" was awarded to Dr. Katrin Müller from the Professorship of Social Science of Physical Activity and Health for her research on the long-term consequences of an occupational SARS-CoV infection.



The research prize in the category **"EU - First successful project acquisition from EU funds"** was awarded to Dr. Minshen Zhu from the Professorship of Materials for Nanoelectronics, who acquired an ERC Starting Grant endowed with over 1.5 million euros and thus one of the most renowned EU grants for excellent cutting-edge research (p. 6). This research award was sponsored by Akkodis Germany GmbH.



The research award in the category "Federal Government - First Successful Acquisition of a Project Funded by a Federal Ministry" was awarded to Jun.-Prof. Dr. Danny Kowerko, head of the Junior Professorship of Media Computing, who acquired funding for the project "Ophthalmology meets Diabetology: Medical Text Mining, Progression Modeling and Demonstrator Development".



Further information on the university, teaching and research prizes, the Eleonore-Dießner-Prize, the Marie-Pleißner-Prize and the DAAD-Prize:
<a href="https://www.mytuc.org/cyps">www.mytuc.org/cyps</a>

# **Participation and Inclusion**

# First TUCfeierabend brought the TUC family together on campus

Under the motto "Science, Sounds and Synthesizer", Chemnitz University of Technology invited students, staff and their families to spend the evening on campus. The TUCfeierabend event took place for the first time in 2022 and was both the starting point of the event and an invitation to get together as a "TUC family" after the pandemic-related restrictions. In addition to games and activities for families with children, there were various sports and culinary offers. In the evening, a DJ duo took over the musical aspects and transformed an open space behind the Weinhold Building on the Reichenhainer Straße campus into a dance floor. Students from the student radio station UNiCC hosted the TUCfeierabend event.





# Running for peace and a good cause

As part of the Chemnitz Day of Peace on March 5 each year, the city of Chemnitz commemorates the victims of the city's destruction in the Second World War. The predecessor institution of Chemnitz University of Technology was also affected, and so the university also par-ticipates annually with its own program points. In 2022, this included a sporting event from the student initiative Lauf-KulTour e. V. and the Stadtsportbund Chemnitz e. V. Using a GPS tracker, participants ran the outline of a peace dove within the city area - thereby setting a sporting sign for peace.

# Enriching learning opportunities for young and old

The educational offerings of the Children's University and the Senior College were very diverse in 2022. The Children's University Chemnitz started with a lecture on luminous gemstones. Here, boys and girls aged seven to twelve learned, among other things, about the secrets of light-emitting diodes and the invisible light at the end of a rainbow. In the summer, the junior students moved to the Chemnitz City Hall Park, where they were introduced to some magic tricks. The highlight at the end of the year in December was an experimental lecture by the Institute of Physics. Also, seniors from the Chemnitz region were able to continue their education by attending interdisciplinary lectures as well as language and smartphone courses, most of which took place digitally. Particularly popular were the lectures on Alzheimer's disease, the energy transition, and the war in Ukraine.



# **Accolades**

# Medal of Honor of Chemnitz University of Technology for outstanding merits

In recognition of his outstanding contributions to the Research Centre MAIN and beyond, Prof. Dr. Thomas Otto received the Medal of Honor of Chemnitz University of Technology. The Honorary Professor for Optoelectronic Systems at Chemnitz University of Technology was presented with this special award by President Prof. Dr. Gerd Strohmeier on September 5, 2022. Prof. Otto had taken over the interim leadership of the Professorship of Microtechnology and the Centre for Microtechnologies at Chemnitz University of Technology for an extended period of time, led the task force assigned during the setup and development phase of the MAIN research center as a central scientific institution, and acted as a bridge-builder in various areas both within and outside the university.



# Chemnitz University of Technology honored as "Exemplary Training Company"



Chemnitz University of Technology was honored by the Chemnitz Chamber of Commerce and Industry (IHK) as an "Exemplary Training Company". Crucial for this recognition were criteria such as the continuous quality of dual vocational training (formal training and in the workplace) at the university and a high success rate. Factors that were also considered included the voluntary participation of university members in the chamber's committees, participation in career orientation events, and the year-round offering of internships for students.

# Congratulations on successful completion of vocational training and welcoming new trainees

In 2022, Tim Labestin, Dominik Ludwig, Johannes Müller, Stefan Sarmatzki, and Lucas Richter successfully completed their vocational training at Chemnitz University of Technology. Labestin and Ludwig underwent a three-and-a-half-year training program as industrial mechanics specializing in precision engineering. Müller, Sarmatzki, and Richter successfully completed their training as electronics technicians for devices and systems, also after three and a half years. On June 21, 2022, the President of Chemnitz University of Technology, Prof. Dr. Gerd Strohmeier, and the acting Chancellor, Thomas Lang, personally congratulated the newly qualified apprentices and wished them all the best for their future careers.

Twelve new trainees began their training on September 1, 2022, in the professions of administrative clerk, office management clerk, IT specialists for system integration, industrial mechanics, and electronics technicians for operational technology. The new trainees and apprentices got to know Chemnitz University of Technology during the first few days of their training as part of a special introductory program. They were also personally welcomed by Prof. Dr. Gerd Strohmeier and Thomas Lang.



Prof. Dr. Gerd Strohmeier (right), President of Chemnitz University of Technology, and the acting Chancellor, Thomas Lang (left), congratulated five apprentices on successfully completing their vocational training.

# **Campus Development**



# Special recognition for the university library as part of the German University Building Award 2022

The University Library of Chemnitz University of Technology, located in the Alte Aktienspinnerei

# Milestone for the completion of the structural work of the new sports hall

In 2022, the construction of the new laboratory and sports hall complex on the Reichenhainer Straße campus of Chemnitz University of Technology entered a new phase. In November, four special steel beams were installed, each weighing around 8.5 tons and supporting the basic structure of the sports hall. With this essential piece of the overall con-struction project now in place, the construction of the sports hall can be completed in the subsequent months. By 2024, the entire complex is to be completed, thus concentrating the teaching in the field of sports at Chemnitz University of Technology along with significant aspects of sports science research in one location. The total construction costs amount to around 23 million euros, which are being funded by resources from the European Regional Development Fund (ERDF) and from tax funds based on the budget passed by the Saxon State Parlia-ment.

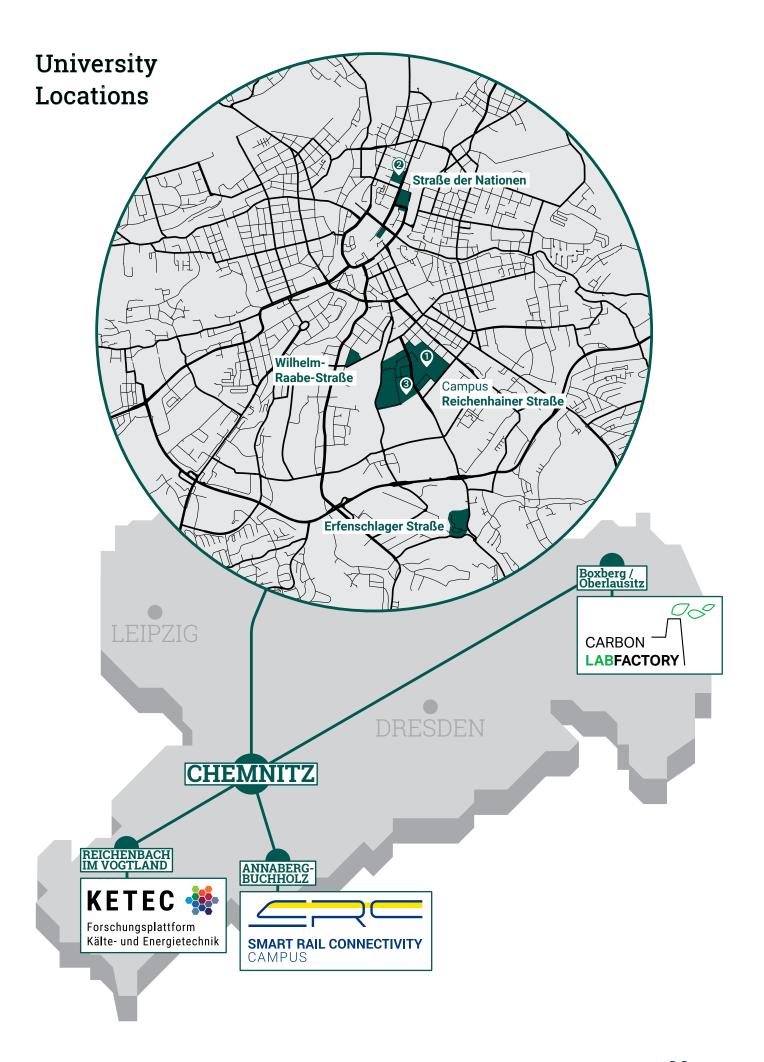


building, received a commendation worth 5,000 euros as part of the German University Construction Prize 2022 on March 28, 2022. The award went to the working group ARGE Aktienspinnerei - consisting of the architects Siegmar Lungwitz, Lydia Heine, Thorsten Mildner (all from Dresden) and Thomas Rabe (Berlin) - as well as to the client, the state-owned Saxon Property and Construction Management. The German University Construction Prize 2022 awards university buildings or ensembles, whether as new constructions, renovations or modernizations, which demonstrate a special architectural quality or exemplary handling of historic building substance. The prize was announced for the sixth time by the German University Foundation under the patronage of the Federal Ministry for Housing, Urban Development and Building.



# Second common room opened in the Weinhold Building

Just in time for the start of the summer semester 2022, Chemnitz University of Technology offered its students and employees another place for collective learning and working. The new so-called "common room" is located on the ground floor of the Weinhold Building and is therefore the first community area of the university on the campus at Reichenhainer Straße. Five open work islands are equipped with power sockets and USB ports. In addition, the permanently installed islands can be supplemented with mobile stools, making larger group work possible. The establishment of this and future common rooms was both a goal of the university management and a wish of the students, which was mentioned in the context of the student survey TUCpanel.



# Partner University of Elite Sports



A total of nine new elite athletes enrolled for the first time at Chemnitz University of Technology for the winter semester 2022/23, more than ever before. This shows that Chemnitz University of Technology attracts outstanding athletes with its very good conditions for students as part of the Partner University of Elite Sports program. For this purpose, TUC has been cooperating with the Chemnitz/Dresden Olympic Training Centre and the German University Sports Federation (adh) since 2002. Elite athlete and psychology student Rebekka Haase celebrated a very special success in the summer of 2022 - she won the gold medal in the women's sprint relay over 4x100 meters at the European Athletics Championships in Munich. In addition, Haase won her first World Championship medal in 2022. At the World Athletics Championships in Eugene (USA), she won bronze in the women's relay over 4x100 meters. The medal win was not only Haase's first World Championship success, but also the first German medal success of a women's relay team at a World Championship since 2009.





Elite athletes from Chemnitz University of Technology won three gold medals and one silver medal at the 2022 German Athletics Championships in Berlin:

Former European champion Max Heß, who is studying industrial engineering at Chemnitz University of Technology, became the outdoor triple jump German champion for the sixth time after winning previously in 2016, 2017, 2019, 2020, and 2021. Sprinter Corinna Schwab, who is studying economics in Chemnitz, secured her third gold medal in the women's 400-meter final with a new personal best time. Sprinter and psychology student Rebekka Haase achieved second place over a distance of 100 meters and won the gold medal in the 200-meter final.

Michelle Süß, who is part of the national karate team and is studying primary school teaching at Chemnitz University of Technology, achieved three sporting successes in 2022. At the 6th WGKF Goju Ryu World Championships in Italy, she won one gold and two bronze medals. In the category 18 years and older (-55 kilograms), she finished first among six starters. She won third place in the category 18/19/20 years (-55 kilograms). Along with two team colleagues, Michelle also won a bronze medal in the team competition.





Saskia Oettinghaus is a diver and is studying in the bachelor's program for Prevention, Rehabilitation and Fitness Sports at Chemnitz University of Technology. In 2022, she won two silver medals at the FINA Swimming & Diving World Cup in Berlin. The World Cup took place from October 20th to 23rd and is one of the most important competition series in international swimming. Saskia Oettinghaus won a silver medal in the German Swimming Federation synchronized diving team. She also achieved another silver medal in the mixed team competition.



Since the start of the Partner University of Elite Sports program, a total of 139 athletes have been supported at Chemnitz University of Technology. Among those supported are nine athletes who began their studies at Chemnitz University of Technology in the winter semester of 2022/23 and are active in the following disciplines (pictured from left to right):

- Maximilian Weser (professional road cyclist)
- Aurelio Maulana (400-meter sprint)
- Lisa Schäfer (formation dance)
- Matteo Maulana (shot put and discus throw)
- Marius Schreiber (football)
- Steven Richter (shot put and discus throw)
- Nico Planken (handball)
- Ruben Kretzschmar (cross-country skiing)
- Roman Eppendorfer (football)

# **University Communications**

# University ambassadors presented various aspects of Chemnitz University of Technology

In 2022, as part of its degree promotion campaign TUCdiscover, Chemnitz University of Technology introduced ambassadors for the first time to showcase the study location, reasons for studying at TUC, and life in Chemnitz from an individual perspective. The campaign launch took place as a live talk via the Chemnitz University of Technology Instagram channel, which is still available as a video.



The ambassadors of Chemnitz University of Technology include (pictured, top row from left): psychology professor Prof. Dr. Bertolt Meyer, student Natalie Lena Hartig, blogger Ronny Mayerhofer, elite athlete Jost Kobusch, student Melanie Falke, the team from T.U.C. Racing e. V., elite athlete Maria Purtsa and student Ronja Mittag.



# Video campaign makes study programs and study location tangible

In order to better highlight the special features and innovations of its courses and the advantages of the location, Chemnitz University of Technology presented itself in a video campaign in 2022. The first season contains ten course videos. In the two to three-minute clips, Chemnitz University of Technology students describe from an individual perspective what makes Chemnitz such an attractive place to study and why they value their course so much. Teachers and researchers provide insights into their daily routine. Graduates of the respective course talk about career prospects.

#### "Points of light" against forgetting

On November 9, 2022, Chemnitz University of Technology commemorated the victims of the Reichskristallnacht (Night of Broken Glass) and the Nazi regime at the memorial for the deported Jews of the city of Chemnitz, which is sited in the inner courtyard of the Böttcher Building. The event against forgetting took place as part of the "Points of Light" campaign, which supported the "Paths of Light" initiative of the Chemnitz association BuntmacherInnen e. V. and was coordinated by the Chemnitz for Humanity alliance. At each stand, Jun.-Prof. Dr. Thomas Laux, head of the Junior Professorship of European Culture and Civil Society at Chemnitz University of Technology, and Stephan Luther, head of the university archive, spoke with visitors.



Candles were lit at the memorial stone as "points of light" against the forgetting of Nazi crimes.



# Matriculation, commencement and graduation ceremonies

Around 2,200 students started their first semester in the 2022 academic year. As part of the traditional enrollment and kickoff ceremony on October 11, 2022, Chemnitz University of Technology personally welcomed the new students in the Richard Hartmann Hall in Chemnitz. In addition to welcoming words from the President of Chemnitz University of Technology, Prof. Dr. Gerd Strohmeier, and Sven Schulze, the mayor of the city of Chemnitz, highlights of the ceremonial welcome included statements from university ambassador Melanie Falke, an interview with world championship and European championship medalist Rebekka Haase, a humorous declaration of love for Chemnitz and TUC by poetry slammer Antonin Fischer, and moving words of thanks from graduates. On July 9, 2022, Chemnitz University of Technology had already bid farewell to over 300 graduates and seven new doctorate holders as part of the graduation ceremony on the Chemnitz Theater Square. In addition to the honorees, around 500 guests and family members followed a moving academic ceremony.

### Social Media Highlights

Which social media posts by Chemnitz University of Technology were able to inspire the most people in 2022? The following overview is sorted by platform and shows the top three of the respective posts. Their reach and the number of video views were decisive criteria for the selection.

#### Facebook @tuchemnitz

The most successful post on Facebook was about the presentation of the Study Check Award 2022 to Chemnitz University of Technology as the Top University in Germany (p. 5). This is followed by the post about the 2022 enrollment and commencement ceremony in the Hartmannhalle (p. 29). In third place comes the post on the success of university graduate Dr. Martin Böhringer - the CEO of the Staffbase company was ranked among the "Top 40 under 40" by the renowned business magazine Capital (p. 15).





#### Twitter @tuchemnitz

The most people on Twitter in 2022 were reached by the photo tweet of Chemnitz University of Technology's Böttcher Building, illuminated in the national colors of Ukraine. Second place among the most successful tweets in 2022 went to the podcast episode on the topic of scientific communication. The tweet announcing the funding of the BirdNet+ project by the German Federal Ministry of Education and Research (p. 11) was ranked third.

#### YouTube TU Chemnitz

A particularly large number of people wanted to see the recording of the online panel discussion on the war in Ukraine on YouTube. In the context of a digital panel discussion, Prof. Dr. Vladimir Shikhman, Prof. Dr. Stefan Garsztecki, Prof. Dr. Birgit Glorius and Prof. Dr. Kai Oppermann (pictured from left to right) gave their assessments and analyses shortly after the beginning of the war. The video announcing the first open day in 2023 achieved the second most views, followed in third place by the welcome video "Welcome to the TUC Family", which was shown as part of the traditional kick-off and matriculation ceremony in October 2022.



You Tube



#### Instagram @tuchemnitz

On Instagram, the post about the graduation ceremony 2022 inspired the most subscribers of Chemnitz University of Technology. The second most likes went to an atmospheric photo of Chemnitz University of Technology's campus square with the new lecture hall building in the background and a reflective water surface in the foreground. Third place went to the posting about coloring the TUC logo in the national colors of Ukraine (p. 32).

# Contributions to the European Capital of Culture 2025



# Online portal TUCculture2025 informs about Capital of Culture activities of Chemnitz University of Technology

In the new online portal TUCculture2025, Chemnitz University of Technology informs readers about its activities as part of the Capital of Culture and connects actors with people from the university who would like to help shape the Capital of Culture. On the platform, Dr. Anja Rautenstrauch (Faculty of Mechanical Engineering), Margreet Kneita (Student Council), and Dr. Benny Liebold (International Office) also introduce themselves as the three spokespersons for the Task Force TUCculture2025. The task force is the central body of Chemnitz University of Technology for activities in the context of the Capital of Culture, and it includes 27 students and employees from numerous areas of Chemnitz University of Technology.



## Swimmer Dr. Joseph Heß conquered the Rhine in record time as Capital of Culture ambassador

Dr. Joseph Heß is an employee at Chemnitz University of Technology and an extreme swimmer. As an ambassador for the European Capital of Culture 2025 and his university, he conquered the Rhine in 2022 by freestyle swimming. On his journey, he passed through various cities, including Konstanz, Basel, Karlsruhe, Mannheim, Mainz, Wiesbaden, Koblenz, Bonn, Cologne, Düsseldorf, Duisburg, and Rotterdam. He covered the 1,232 kilometers from the source in Switzerland to the mouth in the Netherlands within 25 days. With this outstanding athletic achievement, he secured the world record. In addition, the project also had a scientific background: Researchers from Chemnitz University of Technology, the University of Leipzig, and Furtwangen University accompanied the long-distance swimmer from Chemnitz with studies in sports and natural sciences. These included, for example, investigations into the physical strain on Dr. Heß and the water quality of the Rhine. In addition, Heß had conversations with representatives of several cities along the route.

# New lecture series "Cultural Heritage Mathematics and..."

The Faculty of Mathematics at Chemnitz University of Technology and the Evangelical Forum Chemnitz initiated a new lecture series in 2022 - on the occasion of the successful application of Chemnitz as the European Capital of Culture 2025. Under the title "Cultural Heritage Mathematics and...", they offer a short cultural history of mathematics. The three dots in the title stand for areas to which mathematics should be connected in the context of a one-hour lecture. These include, among others, religion, politics, art, justice, and logistics. Suitable venues in Chemnitz which will be used until the winter semester 2024/2025 include a church community hall, the town hall, the art museum, a courtroom, and the railway museum. The first lecture by Prof. Dr. Vladimir Shikhman, head of the Professorship of Economathematics, on November 1, 2022, was dedicated to the topic "Cultural Heritage Mathematics and RELIGION".



The opening lecture "Cultural Heritage Mathematics and RELIGION" by Prof. Dr. Vladimir Shikhman focused on the judgment of King Solomon. This judgment is an example of mechanism design, a subfield of game theory.



# Support for Ukraine

# Chemnitz University of Technology positioned itself early and clearly and supported Ukrainian partners and students extensively

Immediately after the start of the war in Ukraine on February 24, 2022, Chemnitz University of Technology reached out to its Ukrainian partner universities with a show of solidarity and offers of support, coloring its logo in the colors of the Ukrainian national flag as a sign of support. In addition, approximately one million euros in third-party funds were raised by the end of 2022 for Ukrainian partners and students. Furthermore, a project in the DAAD's long-term scholarship program Future Ukraine was successfully acquired, as well as scholarships as part of the Philipp Schwartz Initiative of the Alexander von Humboldt Foundation, the Volkswagen Foundation, and the Marie Sklodowska-Curie Program. The spontaneously-formed TUC Refugee Aid Group offered support with questions about arrival and everyday life in Chemnitz. In addition, the university's Foreign Language Centre supported the refugees from Ukraine with free courses in German as a Foreign Language.



Prof. Dr. Vladimir Shikhman, Prof. Dr. Ste fan Garsztecki, Prof. Dr. Birgit Glorius and Prof. Dr. Kai Oppermann (pictured from left) from Chemnitz University of Technology discussed the war in Ukraine online.

# Academic classifications on the war in Ukraine

On March 9, 2022, Chemnitz University of Technology held an online panel discussion with four experts on the historical, social and political background of the war in Ukraine. This was followed by over 200 interested people, many of whom took part in the discussion.



The recording of the stream is available on the YouTube channel of Chemnitz University of Technology and as a podcast special in the series TUCscicast.



# The campus barbecue brought refugees together with representatives of Chemnitz University of Technology and into conversation

To welcome refugees from Ukraine who are already enrolled or potential students at Chemnitz University of Technology, the university organized a campus barbecue on June 30, 2022. The space in front of the Central Lecture Building on the Reichenhainer Straße campus was transformed into a meeting place. Balloons and flags on the tables in the colors of Ukraine provided the right atmosphere.



# **Facts and Figures**



9,481 persons
were enrolled in the winter semester of 2022/2023, including students, guest students and students on leave of absence - of which 4,367 were women.



1,589 graduates

completed their studies at Chemnitz University of Technology in the examination year 2022.



7 121 doctorates and habilitations were completed in 2022.



1,286 projects were financed by third-party funding in 2022.



persons worked at the university, about 43% of whom were financed by third-party funds.



31.6% of students at Chemnitz University of Technology in 2022 were international students from 87 countries.



3 DFG Collaborative Research Centre and participations in DFG Collaborative Research Centres/Transregios (one of them as a co-applicant institution) as well as **DFG research groups** were among the major research projects of Chemnitz University of Technology in 2022.



96 degree programs

were offered by the eight faculties and the Center for Teacher Training in the winter semester 2022/2023: 33 bachelor's and 59 master's degree programs, 2 Diplom programs, and 2 degree programs at the Centre for Teacher Training.



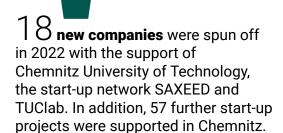
169 **professorships** were held at Chemnitz University of Technology in 2022. In addition, there were nine junior professorships.





Score competencies of

Chemnitz University of Technology address important questions for the future: Materials and Intelligent Systems, Resource Efficient Production and Lightweight Construction, and Humans and Technology.





the university bibliography.

1,462 publications
by TUC members and affiliates
appeared in 2022 and can be found in



103.9 million euros
was received by
Chemnitz University of Technology
as a state grant in 2022.



88.0 million euros in third-party funding was raised by TUC researchers in 2022.



1 4 part-time distance and continuing education courses were offered at the TUC, 12 of which were conducted at TUCed - An-Institut für Transfer und Weiterbildung GmbH.



1.2 million printed books and journals and 377,000 digital media were made available by the University Library in 2022. 17,400 library users appreciated this.

# Imprint

#### **Publisher**

President of the Chemnitz University of Technology, Prof. Dr. Gerd Strohmeier

#### Editorial Office

Press Office and Crossmedia Communications Mario Steinebach, head Matthias Fejes, editor Jacob Müller, graphics and layout Brent Benofsky, translation

#### Photos and graphics

Jacob Müller, Sven Gleisberg, unsplash.com, Martin Breugst, Screenshot/Alexandra Shaburova/Jacob Müller, SmartERZ, Stiftung Akkreditierungsrat, PS Media Point, Niklas Schindler, Brita Jacob, Lauf-KulTour e. V., T.U.C. Racing e. V., UNiCC, Kilian Tasche, Stefanie Zelt, Forschungsgruppe Prof. Dr. Oliver G. Schmidt, Staffbase/Capital, Student\_innenrat, Phillip Hiersemann, Allgemeiner Deutscher Hochschulsportverband, pexels.com (CC 0)/TU Chemnitz, Sharon Pluschke, Internationales Universitätszentrum, studioinges Architektur und Städtebau BDA, MERGE, Nicolas Poussin: Das Urteil des Salomon (Louvre, Paris), Alexandra Shaburova, Zentrum für Lehrerbildung, LEAG, Hans Günther



**CHEMNITZ** 

Study materials are up to date, professors are active and kind, also the city is green, calm and nice. Many student work positions available at the university, as long as you work with dedication, supervisors help to increase your dominance on the field.

Armin, studied Advanced Manufactoring (M.Sc.)

Source: studycheck.de

In my experience, every one of my fellow students at the university has been given a very warm welcome. You are involved a lot in the content, your own opinion is respected and there is a lot of room to think for yourself and exchange ideas with others. So all in all, I can say that I felt very well taken care of.

Mia, studied Education (B.A.)

Source: studycheck.de

The course of study is taught well completely. Laboratories are conducted with disciplined and strict manner, so that students will get hands on experience with the devices and instruments. Classrooms are vast and huge for enough students to listen. Lecturers are highly competent and qualified. Modern materials are used for learning.

Gopinath, studied Micro and Nano Systems (M.Sc.)

Source: studycheck.de

The physics program is very diverse and the lecturers are very friendly and helpful. In contrast to other departments or other universities, you always have the feeling that the lecturers are there to support you and guide you through your studies. After the first semester I am very satisfied.

Raphael, studied Physics (B.Sc.)

Source: studycheck.de

I previously studied for a bachelor's degree in psychology at Chemnitz University of Technology and I am following it up with a master's degree. So far, I have found the time in Chemnitz and at the university to be an incredibly enriching experience and a time full of opportunities. The campus and the courses are very informal. The lecturers always have an open ear and you quickly make friends on campus. Maja Riedel (pictured), studied Psychology (bachelor's) and is now enrolled in the master's program in psychology.

Source: e-mail contact from March 20, 2023

# CONTACT

**University Management** 

Address Straße der Nationen 62

09111 Chemnitz

Phone +49 371 531-10000

E-mail rektor@tu-chemnitz.de

**Press Office and Crossmedia Communications** 

Address Straße der Nationen 62

09111 Chemnitz

Phone +49 371 531-10040

E-mail pressestelle@tu-chemnitz.de