

Welcome speech at **Dies academicus**

Change by Design

Prof. Dr. Thomas F. Hofmann
President

December 3, 2020

The spoken word prevails.

Welcome speech at the Dies academicus
of the Technical University of Munich

Change by Design



From left: Bavarian State Minister Bernd Sibler, TUM President Prof. Thomas F. Hofmann and student Silja Wöhrle discuss the future of Bavarian universities.

Dear honorary doctors, senators and citizens of our university;
Dear colleagues, staff members and students;
To all of our generous supporters, donors and patrons,
and to our dear friends who join us – from both near and far – from the
worlds of science, business, politics and civil society:

I speak to all our esteemed guests when I say that it is my pleasure to
welcome you to this year's Dies academicus. Although we cannot meet
in person as we usually do in the Audimax, I trust this digital event
reaches you all in good health. I certainly greatly appreciate your loyalty
and ongoing commitment to our university.

I would also like to extend a very warm welcome to the Bavarian State Minister for Science and the Arts, Bernd Sibler. My thanks, also, for agreeing to enrich our panel discussion as the guest of honor as we explore the future prospects facing Bavarian universities.

While I have had the good fortune to attend the Dies academicus many times before, today's event is a very special one for me. Partly because it marks the first anniversary of my presidency. But even more to the point, because on this day when we celebrate our TUM family, we will be turning our attention to the many accomplished people that contribute to our university.

2020 has demanded a great deal of people around the world, with each day presenting new challenges and pushing many of us close to our limits. In times such as these, it is all the more important that we remain connected and united as a university community, and that we continue to support each other. If there's one thing the COVID-19 pandemic clearly showed us, it's that even with all our human and artificial intelligence, we were initially no match for a "tiny, brainless virus".

But we did not simply take cover in the hope that the global storm would blow over. On the contrary: More than 275 projects were swiftly kicked off to develop rapid or antigen test and tracing technologies, predict intensive care occupancy in hospitals, identify suitable drug candidates in the fight against COVID-19, and devise effective prevention and vaccination strategies.

Thanks to exceptional levels of personal commitment, flexibility, mutual understanding and respect, not to mention a healthy dose of pragmatism, we have managed – so far – to steer TUM through this crisis with a steady hand.

On behalf of the entire Board of Management, I would therefore like to thank all of you – regardless of what capacity you were acting in – for your hard work and perseverance. I would also particularly like to thank our teaching staff and students. Despite strict security regulations and severe restrictions, in the summer semester we were able to master the tandem leap into TUM-wide online teaching.

The Digital Education Experience



45,693 | Students on Moodle

> 500 | E-Scouts

4,619 | Courses on Moodle (85% of all courses)

183,742 | Video Conferences (Zoom, live)

32,871 | Teaching Videos (recorded)

3,241,077 | Teaching Video Downloads

Within a very short time, we produced more than 30,000 new teaching videos, which were then downloaded over 3.2 million times. These were supplemented by over 180,000 live conferences for groups of all sizes. Crucially, this enabled us to bring our teaching programs to our many thousands of international students who were unable to come to Munich due to travel restrictions.

My thanks go to the 500 student assistants who acted as e-scouts, assisting our staff by

editing teaching videos, holding online tutorials and hosting discussion forums. And I look forward to the upcoming speech by our student representative, Henry Winner, who will not only be taking a look back at 2020, but undoubtedly also to the future.

I would next like to thank the team from TUM ProLehre | Media & Didactics. You have made a truly outstanding contribution to mastering the educational challenges involved in the transition to online teaching. In recognition of

the entire department, we awarded its Head, Dr. Andreas Fleischmann, a Karl Max von Bauernfeind Medal last week.

I would also like to thank Markus Haggemiller. As Head of Central IT, he and his team, led by our CIO Hans Pongratz, scaled up our IT system and rapidly enabled over 1,000 administrative staff members to work from home. My personal thanks go in particular to the many indispensable members of our administrative team who keep the university up and running despite heavy restrictions on coming into the office.

Developing online examination concepts in accordance with the General Data Protection Regulation was another daunting challenge. However, we turned it into a new opportunity and, under the leadership of Vice President Gerhard Müller, became a pioneer for online

exams in Germany. I would like to thank Gabriele Kunnes from the TUM Center for Study and Teaching for this success, in recognition of which we have also awarded her a Karl Max von Bauernfeind Medal.

Many of our achievements would not have been possible with state support alone. I would thus like to thank the TUM Partners of Excellence and the many private individuals who supported us in driving the digital transformation of education. Above all, the BMW Group, which, with its donation of one million euros, has once again demonstrated an exemplary sense of corporate social responsibility in securing the future of up-and-coming generations.

Our utmost respect goes to those on the medical frontline in these critical times: the many physicians at TUM's Klinikum rechts der Isar

hospital and the German Heart Center Munich, and the dedicated nurses, care assistants and other staff in general hospital care, intensive care, diagnostics and tracing. For almost ten months now, they have been giving their all around the clock in the fight against COVID-19. They care for patients suffering from this disease – despite the risks to their own health, provide the public with expert information about the pandemic and support policy making. This applies first and foremost to our renowned virologist Prof. Ulrike Protzer and our medical ethicist Prof. Alena Buyx – along with TUM's Post-Corona Economy think tank at our Bavarian School of Public Policy.

Vice President Gerhard Kramer will award a Heinz Maier-Leibnitz Medal to Ulrike Protzer today in recognition of her outstanding achievements and exemplary service to our university.

Despite all the constraints, we continued to shape the future with energy and vigor – after all, successful entrepreneurs are not easily diverted from their ambitious goals. This is exemplified by the three tech startups that will be demonstrating their innovative capabilities at today's event.

We kept our sights fixed firmly on the “change by design” blueprint enshrined in our TUM AGENDA 2030 strategic path, building on this to shape our mindset at both a structural and ideation level.

In these times of change, we are maximizing promising opportunities for sustainable development across science and research, ecology, the economy and society. And these opportunities are bringing new levels of motivation, drive and joy to our work, ensuring TUM's indispensable role in tomorrow's academic space.

Virtual First-Years' Welcome

45,000 Students | 14,000 Incoming

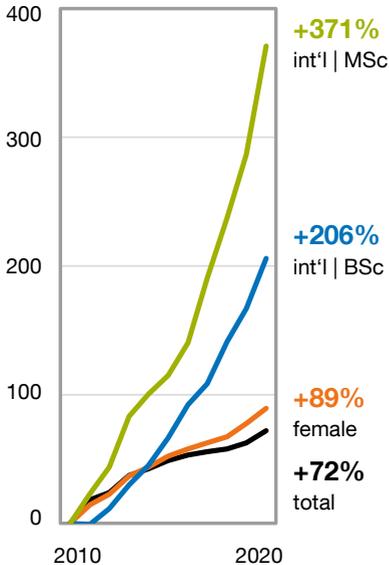
- 37 % Female • 34 % International



And, since change begins with a curious mind, November 2 was a very special day for me. For the first time, we welcomed our 14,000 newcomers through digital doors. With their fresh, unfettered perspective, these proud new members of the TUM community bring enthusiasm, diversity and a thirst for knowledge to our university. They fill our university with life – and me, as President, with great joy.

With over 45,500 students, we have reached a new record high. We are welcoming more and more women. At 37 percent, the share of female students has grown almost 90 percent over the last decade. And we are becoming more diverse, with 34 percent of our students coming from abroad. This figure even tops the 50 percent mark at Master's level. This year alone, we are observing another surge in international enrollment, with numbers of

relative change



2019 → 2020

EU	+3%
Non-EU	+14%
Africa	+23%
Asia	+16%
America	+6%



EXZELLENZ [®]
IN DER LEHRE

first-year students from Africa up 23 percent, from Asia up 16 percent and from European countries outside the EU up 14 percent. TUM has become a truly global university.

We were delighted to receive the Genius Loci Award for Teaching Excellence, especially as TUM was the only university to achieve this distinction this year. Our selection by the Donors' Association for the Promotion of

Sciences and Humanities in Germany and the Volkswagen Foundation recognizes TUM's excellent university-wide teaching strategy – proof that pioneering research and first-rate teaching go hand in hand at our institution. And to ensure this remains the case, we have launched the TUM Future Learning Initiative. Here we plan to shape our teaching moving forward by harnessing creative ideas and visions from our students.

TUM. Strengthening Compliance and Entrepreneurship



Prof. Angelika Görg
Vice President Compliance



Prof. Helmut Schönenberger
Vice President Entrepreneurship

To strengthen our university to meet evolving requirements, we have appointed two new Vice Presidents for two key action areas: On April 1, 2020, Prof. Angelika Görg, biochemist and TUM Emerita of Excellence, took up her role as TUM's first Vice President Compliance. She reports independently to the President and is the point of contact for all compliance issues. She is supported by the new TUM Compliance Office – a strategic element of our good governance policy and the first of its kind in German academia.

Prof. Helmut Schönenberger has been our new Vice President Entrepreneurship since January 1, 2020. He is also an honorary professor at our university and the CEO of UnternehmerTUM, our center for innovation and business creation. Working in tandem, our aim is to establish Munich as Europe's top innovation hub.

We are proud to honor our scientific talents – and of course all the more so when they receive distinguished awards.

TUM. Top Tier Awards



DFG Gottfried Wilhelm Leibniz Prize 2020

Prof. Thorsten Bach
Organic Chemistry (CH)

DFG Gottfried Wilhelm Leibniz Prize 2020

Prof. Thomas Neumann
Data Base Systems (IN)



A. v. Humboldt Professorship

Prof. Angela Schöllig
Learning Systems (EI)

For instance, Prof. Thorsten Bach from the Department of Chemistry and Prof. Thomas Neumann from the Department of Computer Science both received the German Research Foundation's prestigious Leibniz Prize in 2020 – endowed with 2.5 million euros respectively. The prizes were awarded for their pioneering and internationally acclaimed work on light-induced enantioselective catalysis and on the efficient management and analysis of large volumes of data.

A grand total of 22 Leibniz Prizes are testament to the excellence of our researchers, as is the eighth Alexander von Humboldt Professorship we have secured. Awarded to Prof. Angela Schöllig, who we have recruited from the University of Toronto, this prestigious professorship – endowed with 5 million euros – is now going to an outstanding female engineer at TUM for the first time.

The Future Insight Prize was awarded to Prof. Stephan A. Sieber, Dean of our Department of



**Merck Future Insight Prize
2020**

Prof. Stephan A. Sieber
Organic Chemistry (CH)



**Helmholtz Distinguished
Professorship**

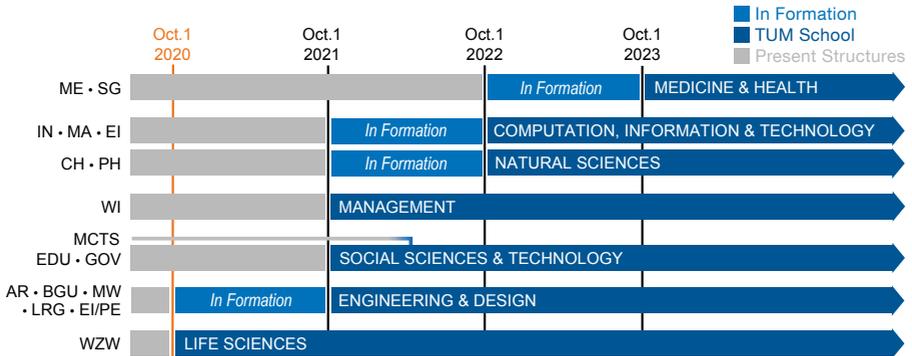
Prof. Julia Schnabel
Comput. Imaging & AI in Medicine
(ME/IN)

Chemistry. He has succeeded in identifying new targets in the metabolism of multi-resistant bacteria for a new generation of antibiotics. This research prize from technology company Merck is endowed with 1 million euros.

And Prof. Julia Schnabel, from King's College London, was awarded a Helmholtz Distinguished Professorship shared by Helmholtz Zentrum München and TUM. This represents another major boost for the field of computation, imaging and AI in medicine for Munich.

Such successes are the result of high-caliber appointments – a skill at which we have increasingly excelled since the introduction of our TUM Faculty Recruitment and Career System in 2012.

TUM Schools. Timeline



Engagement & Communication Strategy	<ul style="list-style-type: none"> • Round Table Workshops: with all stakeholder groups • Targeted Stakeholder Group Exchange, e.g. TUM Presidential Student Lunch • Community Visits: Faculty Meetings, Faculty Graduation Ceremonies, Staff Committee Meetings • WIKI: Current developments, documents, FAQs & Inbox
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To ensure we remain agile and to increasingly mobilize interactivity across scientific disciplines, we have launched a structural transformation project at TUM. As part of this, our transition from departments to schools is progressing according to plan.

Since October 1, 2020, the Center of Life and Food Sciences Weihenstephan has been operating as the TUM SCHOOL OF LIFE SCIENCES, with a new organizational structure and more dynamic processes.

At the same time, we have embarked on the formation phase for our new TUM SCHOOL OF ENGINEERING AND DESIGN, bundling our competencies from the departments of Mechanical Engineering; Civil, Geo and Environmental Engineering; Aerospace and Geodesy; Architecture; and part of Electrical Engineering. October 1, 2021 will mark the launch of this new school and the existing departments will then be wound down. The TUM SCHOOL OF MANAGEMENT will also be adopting a modified governance policy in October 2021.

And the new TUM SCHOOL OF SOCIAL SCIENCES AND TECHNOLOGY will unite the competencies of the TUM School of Governance, the TUM School of Education and the Munich Center for Technology in Society to create a new TUM brand destined for strong visibility on the international stage. Through new appointments, we are actively modifying the dynamics at TUM to give the technically oriented social, political and educational science disciplines a chance to develop their own profile within their overarching strategy, while at the same time creating integration vectors leaning towards natural sciences and engineering. This entire process is a major step in the journey towards human-centered, socially responsible and trustworthy innovations.

Initial scouting work is also under way for other departmental alliances. The TUM SCHOOL OF NATURAL SCIENCES, for example, will make more efficient use of the rich synergies between our well-established departments of Chemistry and Physics, jointly providing an even stronger framework for the molecular biosciences.

At the same time, the TUM SCHOOL OF COMPUTATION, INFORMATION AND TECHNOLOGY will enter the kick-off phase in a year's time. By bringing together the specialties of Mathematics, Computer Science and a large part of Electrical and Computer Engineering, we are bundling core scientific,

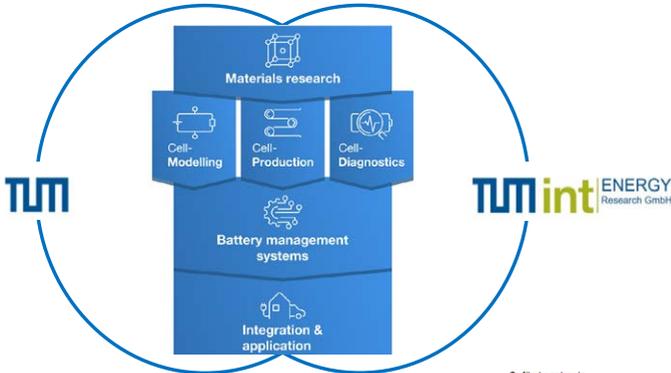
methodological and technological competencies for the emerging field of digital transformation. The school will integrate algorithms and software with electrical, electronic and quantum electronic technologies, also connecting basic scientific research with concrete innovative applications.

In a final step, starting in 2022/23, the TUM SCHOOL OF MEDICINE AND HEALTH will add a third dimension to our established strengths in precision diagnostics and personalized therapies, namely disease prediction and prevention.

We are facilitating this important process with roundtable workshops bringing all TUM staff groups to the table, dedicated forums for dialog such as the new TUM Presidential Student Lunch, numerous departmental visits, and collaboration with staff councils and the Research Associates' Council. And it makes me proud to see such commitment and determination to collectively find the best solution from all stakeholders during these exchanges.

Innovating Batteries

TUM Competence Center for All Solid-State Electrolytes



€ 24 M



ETH Zürich/Giulia Marthaler

Prof. Jennifer Rupp
Solid-State Electrolytes
(CH)

Gefördert durch



Bayerisches Staatsministerium für
Wirtschaft, Landesentwicklung und Energie

In parallel, we are expanding our transdisciplinary research activities to include tomorrow's technologies. Our TUM Competence Center for All Solid-State Electrolytes is a case in point. Currently being established, this center bundles our basic and application-oriented research in physics, electrochemistry, materials science, process engineering and production technology under one roof, also partnering with major industry players to drive commercialization of solid-state batteries via our new second-tier subsidiary TUMint.Energy Research GmbH.

We have appointed Prof. Jennifer Rupp as the center's director. She is currently still a professor at MIT in Boston and will move to TUM to take up the professorship in solid-state electrolytes in mid-2021. The Bavarian Ministry of Economic Affairs is supporting this center with a total of 24 million euros, of which approximately 6.5 million will go directly to TUM for infrastructure changes. These will include, for instance, a coating facility for sulfide solid-state batteries that will be the only one of its kind in Europe.

Providing Neutrons for Research, Innovation and Medicine

Heinz Maier-Leibnitz Center

2 Buildings • € 38 M • 4,550 m²



We can even take a look inside these batteries thanks to the neutrons produced by TUM's FRM II research neutron source, as they give unique insights into the structure and function of materials and components.

What began more than sixty years ago with the “atomic egg” here in Garching has now become one of the world's leading centers of neutron-based research. Joining forces with Forschungszentrum Jülich and Helmholtz-Zentrum Geesthacht research centers under the umbrella of the Heinz Maier-Leibnitz Center (MLZ), we attract up to 1,200 visiting scientists each year. We develop radioisotopes against cancer, research strategies for new antibiotics, lay the foundations for more efficient data storage and semiconductors for electricity transmission, and advance the transition to a

more sustainable energy economy through battery and hydrogen research.

A few weeks ago, we inaugurated two new buildings here to secure much-needed additional space, including new experimentation, office and workshop areas – one building commissioned by the German Federal Ministry of Education and Research for non-university research; the other by the Bavarian State Government for TUM. The total construction costs amount to 38 million euros. I would like to thank the Ministry of Science and, in particular, Ms. Kirste for their active support of the MLZ over many years now. Looking to the future, this expansion should help secure Germany's current position as one of the world's leading nations for neutron research.

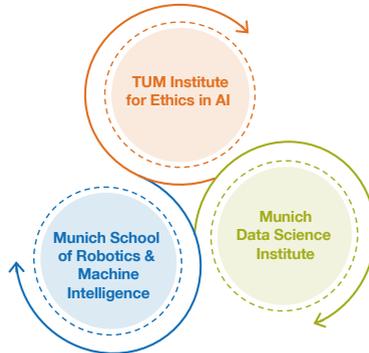
Spearheading the Next Digital Revolution

Data Sciences • Machine Learning • Embodied AI

Future of Health
Geriatrics
Digital Operating Room

Future of Work
AI.Factory

Future of Mobility
MCube



Foundations in Data Sciences
TUM-DI-LAB
ELLIS Munich

Domain-spec. Data Sciences
AI4EO Future Lab
TUM Georg Nemetschek Institute

Data Management
CoE, SFB/TRRs,
NFDI Consortia

+10 | New Professorships | **+6**



Similarly, we must ensure we are positioned at the forefront of the digital transformation. Breathtaking advances in data analytics, machine learning and artificial intelligence (AI) together with major breakthroughs in high-performance computing have triggered a paradigm shift in research, converging the traditional theoretical and experimental paths to new insights and knowledge. Advanced data science holds the potential to validate models and hypotheses even in highly complex fields of research, for instance explaining global developments, making reliable predictions and optimizing materials, technologies and processes.

In 2017, we founded the MUNICH SCHOOL OF ROBOTICS AND MACHINE INTELLIGENCE (MSRM), pooling our intellectual and financial resources across disciplines to focus

on the fields of artificial intelligence, perception and robotics. Building on embodied artificial intelligence and technical systems capable of acting autonomously, our objective here is to shape the future of mobility, work and health. In these times of demographic change and aging populations, our Geriatrics research center in Garmisch-Partenkirchen is looking to develop technical assistance systems that will help older people to continue to live independently and with dignity. In the medium term, this is set to become a veritable “geriatrics campus” – an international one-stop reference center offering a unique combination of cutting-edge research and teaching on the one hand, and new care and living concepts for later stages of life on the other.

Our AI Factory is a flagship initiative for the future of work. This factory of the future will be

the first networked and AI-supported facility for state-of-the-art IT and mechatronics components. With support from Bavaria's High-Tech Agenda and under the stewardship of MSRМ, it is scheduled to open its doors in Bavaria by 2030 in collaboration with industry partners and startups. With 10 million euros for infrastructure development and 5 million euros for initial research projects, the Bavarian state government has now set the first phase in motion.

Today, robotic systems are used in the manufacturing industry to automate individual, narrowly defined, repetitive processes. In the future, though, AI will enable fully flexible, networked factories that can be controlled remotely and used for local, crisis-proof and cost-effective production of the latest IT and mechatronics components. People would no longer need to be on site for dangerous activities, for instance, but would control them using intelligent systems. AI-based solutions could also be deployed to perform physically strenuous activities – particularly those that prove detrimental to human health in the long term.

We founded the TUM Institute for Ethics in Artificial Intelligence in 2019 as a new flagship in our approach to human-centered engineering. Focused on trustworthy AI innovations that serve the interests of society, this is the only institute of its kind in Europe. Rounding out this unique set-up is our brand-new MUNICH DATA SCIENCE INSTITUTE (MDSI). MDSI conducts basic research into

data science, machine learning and artificial intelligence, and applies TUM's pioneering expertise to emerging application areas, where data science holds the potential for transformative breakthroughs.

Examples include the digitalization of medicine and material sciences, sustainable design and construction, and the prediction of natural events or social change processes using satellite-based remote sensing (at the German Ministry of Research and Education's Future Lab: AI for Earth Observation). In addition, MDSI is developing a professional, central data management system for TUM research teams – covering everything from genome research to engineering. This platform also provides connection points for data-intensive research alliances such as clusters of excellence, collaborative research centers and National Research Data Infrastructure (NFDI) projects.

And ten new professorships for MSRМ plus six for MDSI – courtesy of Bavaria's High-Tech Agenda – will take these institutes to a whole new playing field. The launch of the TUM "Georg Nemetschek Institute Artificial Intelligence for the Built World" – will give another turbo boost to the development of MDSI.

Transforming Building Technologies

TUM Georg Nemetschek Institute • AI for the Built World



Board representatives of the Nemetschek Innovation Foundation and TUM President Prof. Thomas F. Hofmann (r.) at the signing of the contract for the new “TUM Georg Nemetschek Institute Artificial Intelligence for the Built World”. Prof. Georg Nemetschek was connected by video link.

€ 50 M | 10 yrs.



Here, we are establishing a unique research and teaching institute that will leverage state-of-the-art computer technology, artificial intelligence and machine learning to support the economically and ecologically sustainable design, construction and management of buildings and infrastructure. The non-profit Nemetschek Innovation Foundation is supporting this institute with 50 million euros over the next ten years: 20 million euros in basic funding with an endowed professorship, plus project funds of 30 million euros.

This Foundation was established by a TUM alumnus from the field of civil engineering, Prof. Georg Nemetschek. He is a perfect example of a TUM visionary who is now enabling independent, top-flight research and teaching at his alma mater. This new institute will hopefully propel the German construction industry and its next-generation talent to the forefront of a digitalized future.

Accelerating High-Tech Translation

Industry on Campus • Strategic TUM-SAP Partnership



SAP Co-CEO Christian Klein, Science Minister Bernd Sibler, and TUM President Prof. Thomas F. Hofmann (from left) after signing the cooperation agreement.

Additionally, in these times of change, we must look at ways of transferring technology to industry more efficiently. This is a key step in supporting the state of Bavaria in implementing its High-Tech Agenda.

This requires an open culture of innovation and longer-term, trust-based strategic collaboration between universities and companies. As part of our Industry on Campus[®] strategy, we are combining the outstanding expertise of our Department of Informatics (#14 in the

world rankings) with that of SAP in a long-term research alliance. Mid-2021, construction work will begin on a new building at the Garching campus, where approximately 700 SAP and TUM employees will come together under one roof to engage in joint research into innovative technology solutions such as the Internet of Things, robotics, cloud computing and smart mobility.

This new lineup – flanked by the Munich Data Science Institute, the new TUM Center for



A new building is being constructed on the Garching research campus in which well over 700 SAP SE and TUM employees can conduct joint research.

Quantum Engineering, the Fraunhofer Institute for Applied and Integrated Security, and the new facility for the Department of Electrical and Computer Engineering – will turn the Garching campus into a leading European powerhouse for research and teaching in data and information technology. Alongside Computer Science, the Department of Electrical and Computer Engineering is the key driving force behind digital transformation. After all, the digital transformation calls for a lot more than just software and algorithms. Key to the

value-adding process is the successful integration of this software and these algorithms into electrical, electronic and quantum electronic systems. For this reason, the entire Department of Electrical and Computer Engineering must be quickly moved from the main campus to Garching now that the first construction phase has been completed to avoid fragmenting Germany's best department of its kind.

TUM Venture Labs



Complementing our Industry on Campus” strategy, we are working with our affiliated center for innovation and business creation, UnternehmerTUM, to expand our entrepreneurship strategy. This winning team has established itself as a unique success story in recent years. As it stands, we bring 70 to 80 tech startups to market each year, and startups from the TUM ecosystem successfully raised over 1 billion euros in investment in 2019.

Now, though, we are looking to take our entrepreneurship activities to a whole new playing

field. Our aim is to incubate entire families of deep-tech startups rooted in future-oriented fields such as artificial intelligence, robotics, quantum technology and health, supporting them as they grow into innovative business champions. We will also be establishing collaboration interfaces for entrepreneurs, spanning the whole state of Bavaria.

Together with UnternehmerTUM, we have begun to build a network of innovation centers spanning the entire university: the TUM Venture Labs. These bundle excellence in



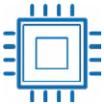
Education



Venturing



Events & Network



Spaces &
Infrastructure

research, venturing and management. The Venture Labs tailor educational and venturing programs to individual needs, flanking these with the perfect development environments covering everything from technical and social infrastructure through entrepreneurial training to accelerated access to regional and global networks of companies and investors. My sincere thanks go to Bavaria's Minister President Dr. Markus Söder for financially supporting this startup initiative, which we are confident will turn Munich into a leading European hub for sustainable technology spin-offs. In this

way, we will play an active role in reversing Europe's growing technological dependency and moving towards a new level of autonomy for our continent.

Department of Aerospace and Geodesy



Prof. Agnes Jocher
Sustainable Future
Mobility



Prof. Martin Werner
Big Geospatial
Data Management



Prof. Markus Ryll
Autonomous
Aerial Systems



Prof. Sophie Armanini
eAviation

Even the latest addition to our university, the Department of Aerospace and Geodesy (LRG), announced as recently as 2018 by Markus Söder in his official governmental address, is expanding dynamically.

Reflecting its motto, “Mission Earth”, this department’s research and teaching focuses on new transportation systems on and above the Earth (such as air taxis and the hyper-loop), satellite swarms to enable seamless Internet connectivity, planet surveying, documentation of urbanization dynamics and the observation of climate change with unprecedented precision. To support this work, we are building strong links between the

department’s main base on the Ludwig Bölkow campus in Ottobrunn/Taufkirchen and the TUM campus in Garching, the Oberpfaffenhofen site and the German Aerospace Center and Research Airport, as well as with TUM’s strong geodesy team at its main campus in Munich.

We are developing an unrivaled competence network in the greater Munich area with local research institutions, such as the German Aerospace Center and Bundeswehr University, and companies including Airbus, IABG, Hensoldt, MTU Aero Engines, as well as numerous high-tech supplier industries and startups such as our TUM company Isar



Aerospace, which recently opened its production facility in Ottobrunn to manufacture low-cost launch vehicles for small satellites.

This department thrives on its high concentration of expert scientists. This is also reflected in the current Shanghai Ranking, with TUM coming in eighth worldwide in the field of geodesy/remote sensing and sixteenth in aerospace engineering – positioning the LRG within the top trio in Europe today.

However, our ambition is to become the leading department in Europe. We are thus strengthening the LRG with several professorships under Bavaria’s High-Tech Agenda.

The first four appointments have already been made: Prof. Agnes Jocher, Sustainable Future Mobility, from MIT; Prof. Markus Ryll, Autonomous Aerial Systems, from MIT; Prof. Sophie Armanini, eAviation, from Imperial College London; and Prof. Martin Werner, Big Geospatial Data Management, from the Bundeswehr University. Seven further appointments are also in progress, with more following hot on their heels. In November, the department moved into its first dedicated building, spanning 2,000 m², and this will increase to 6,000 m² from April. Appointing more top talents makes swift expansion a necessity here.

Growing TUM Campus Heilbronn

Management • Technology • Information Engineering



TUM Talk in Heilbronn is a new format encouraging constructive dialog around today's challenges and pressing issues. The first TUM Talk topics centered on "Digital Transformation" and "New Leadership".

Similarly, our TUM Campus in Heilbronn is growing and thriving. Since 2018, the Dieter Schwarz Foundation has been endowing thirteen new professorships in Heilbronn, in addition to seven in Munich, focused on economic sciences at the interface between management and technology.

In July 2020, we launched the next expansion phase with a further nine plus two professorships – this time in computer science with a particular focus on information engineering. Our aim here is to explore the entire process chain

– ranging from sensors through IT systems to business models – as a major building block in the digital transformation of companies.

Ultimately, you might say, we came, saw and stayed in Heilbronn. In September, we held a TUM Talk there, kicking off a series of roundtable discussions with experts from science, business, civil society and politics. These addressed topics such as digital leadership skills and the sustainability of family-owned businesses – which will be the focus of our next event in March 2021.

Strategic Flagship Partnership with Tsinghua University



Presidents Prof. Qiu Yong and Prof. Thomas F. Hofmann with the signed partnership agreement.

The big challenges facing future generations can only be effectively tackled through interdisciplinary research coordinated across national borders. And so in July 2018, we entered into our first flagship partnership with Imperial College London.

Building on a foundation of trust that has developed over many years, we also entered into another strategic flagship partnership this October: with Tsinghua University. This will focus in particular on its campus in the southern Chinese city of Shenzhen – one of the nation's highest-potential innovation hubs. I would especially like to extend my heartfelt thanks to Vice President Prof. Juliane Winkelmann for her exceptional commitment to expanding our international relations and for her contribution to making this new partnership happen.

As a result, two outstanding global universities are now pooling their strengths in the fields of machine intelligence, additive manufacturing, sustainable mobility and aerospace. In addition to joint research and entrepreneurship programs, the alliance will be focusing on double-degree programs for Master's students on the teaching side. And to meet the evolving demands of working and professional lives around the world, we also intend to develop joint lifelong learning programs for experts and executives – from both within and beyond our universities. This will take place in close cooperation with our new TUM Institute for LifeLong Learning, directed by our Vice President Prof. Claudia Peus, which we will officially open in 2021.



In closing, then, dear guests:

We have certainly accomplished a great deal over the past twelve months. However, the new year will have plenty of challenges in store for us too – many of them already foreseeable, but some, no doubt, completely new.

I would like to thank everyone who has made today's Dies academicus possible in this format – especially our Student Council, AStA, for their technical support, my team from the Presidential Office for coordinating the event, and our TUM Jazz Band for livening things up with their music.

My thanks also go to the entire TUM family, which is growing and – most importantly – growing together as we look to the future and embrace change. After all, in the words of Alfred Delp: “Whoever does not have the courage to make history is doomed to become its object.” I am deeply grateful to you all for your personal

contributions to the success of our university on a day-to-day basis. Not only are we building TUM's artificial intelligence; we are also building on the collective intelligence of our community. Much like our great jazz ensemble, we are playing to our strengths, engaging with our partners old and new, seizing promising opportunities, improvising, harnessing our creativity and daring to innovate. All of which brings to mind Miles Davis: “It's not the note you play that's the wrong note – it's the note you play afterwards that makes it right or wrong.” And I am convinced that, together, we will hit exactly the right note.

My very best wishes to you all for the upcoming holidays; stay safe and healthy – and, of course, please keep in touch!

Thomas F. Hofmann
President of the
Technical University of Munich

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