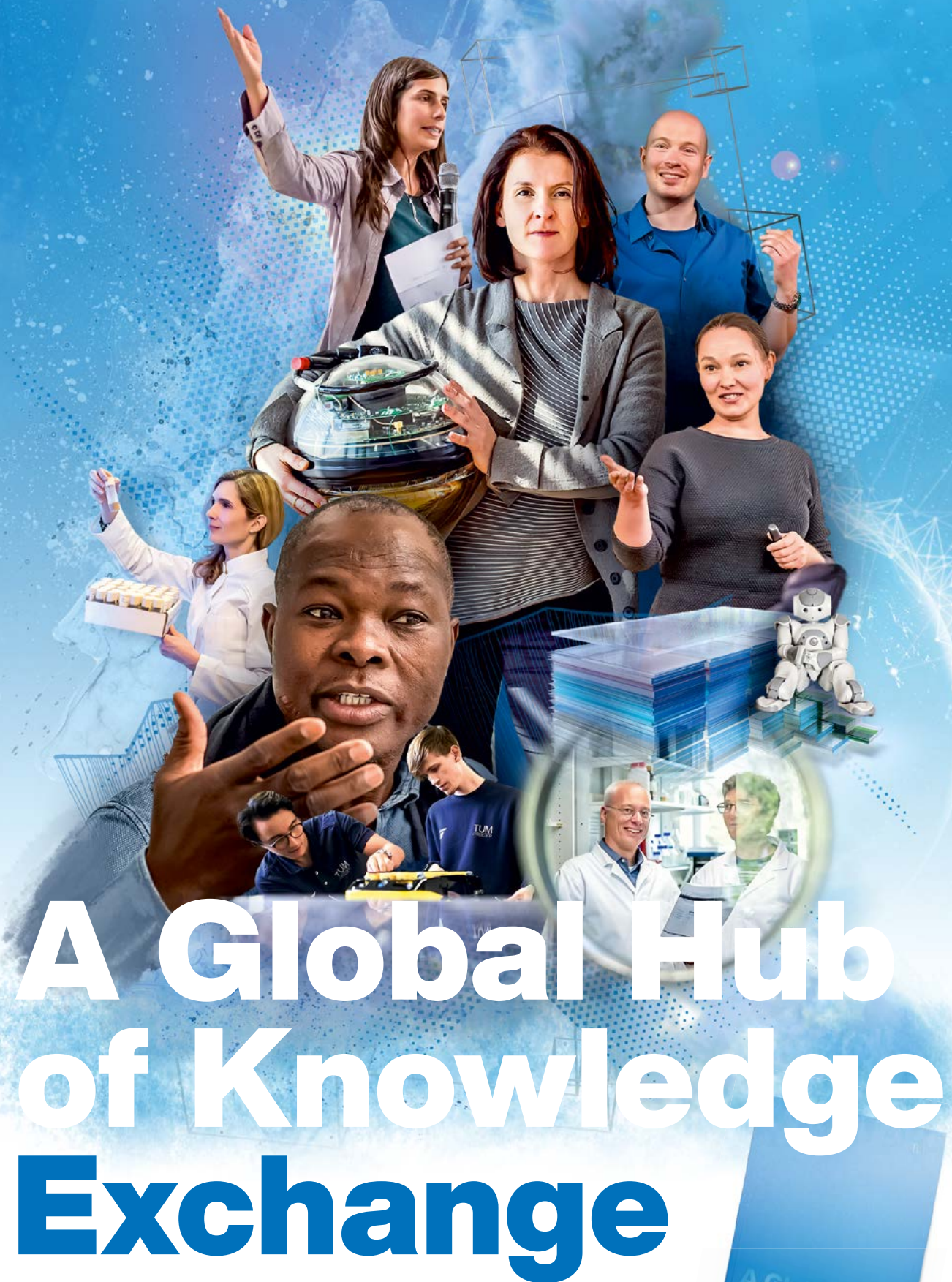


KontakTUM Magazine

For Alumni of the Technical University of Munich
Spring/Summer 2021





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Dr. Verena Schmöller and Dr. Sabrina Eisele
from the KontakTUM editorial team

Responsible Engineers

What is it that makes an apple a healthy snack? What makes a nursing robot the ultimate caregiver? And what makes a passenger capsule a trustworthy means of transportation? Today's engineers are considering people's needs and the benefits for society as early as the development stage of their innovations. In this issue, you can find out why this is so important.

At the Round Table on the topic, TUM President Thomas F. Hofmann discussed with four TUM Alumni how responsibility can be instilled in young engineers. Additionally, we will introduce you to a TUM team that is developing a transport pod that travels at just under the speed of sound. In the second part of the issue, you will find, as usual, TUM events to which we would like to extend a warm welcome to you as alumni.

We look forward to catching up with you and wish you an inspiring read.

THIRD TUM UNICORN



For the third time, a TUM spin-off has been valued at at least one billion US dollars. Read more about the founders – all of them TUM Alumni – at www.150.alumni.tum.de/einhorn

THEY ARE TAKING OFF!



They develop unmanned aircrafts and build Mars rovers. Numerous students at the Department of Aerospace and Geodesy are contributing their ideas and talent to student initiatives.

www.lrg.tum.de/en/flr/research/projects/student-initiatives



Have you seen TUM's YouTube channel yet?

go.tum.de/709343

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As many events had to be postponed or cancelled at short notice due to the coronavirus pandemic, this KontaktTUM issue does not provide an index of events and offers. Updated information can always be found here:

Alumni & Career events and online services:
www.community.tum.de/en/events

TUM calendar of events:
www.tum.de/en/about-tum/news/events

University operations at TUM during the pandemic:
www.tum.de/en/about-tum/news/coronavirusw



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KontaktTUM
online

in English and German
[www.community.tum.de/
 en/kontaktum](http://www.community.tum.de/en/kontaktum)

HOSTED BY TUM PRESIDENT THOMAS F. HOFMANN

THE KONTAKTUM ROUND TABLE



Engineers
are
shaping
the future



“We don’t develop innovations just for the sake of technology, but for the benefit of the people and their environment.”

Prof. Dr. Thomas F. Hofmann

An ultra-fast transport pod that nobody wants to get into. A power plant whose electricity nobody buys. A robot nurse that nobody trusts. Nowadays, our engineers are able to develop the most exciting of innovations, but if no one wants them, they are pretty much useless. That is why it is important to think about whether or not – and how – each new technology can be introduced in a socially acceptable way.

For the Round Table on Engineers for the Future, TUM President Thomas F. Hofmann invited four alumni who are deeply involved with this issue on a daily basis – whether it is as a globally recognized researcher in Robotics, as an entrepreneur, as President of VDI – The Association of German Engineers, or as a doctoral student in the Hyper-loop research program. They talk about how they personally experience social responsibility as engineers, how creative thinking can be promoted and why diversity plays a key role here.

The Round Table is set for the beginning of March 2021. The COVID-19 pandemic and its restrictions still have a firm grip on Germany. By now, we have all become used to all the rescheduling and spontaneous decision-making. Therefore, it comes as no surprise to any of the participants that in the end our meeting has to take place online. TUM President Thomas F. Hofmann is the first to login.

Good afternoon Mr. President, nice to have you here. Where have you just been?

Prof. Dr. Thomas F. Hofmann: In another Zoom meeting (laughs). At the moment, one online meeting is chasing the next. The digital daily schedule is intense and exhausting. I miss the personal exchange face to face. That’s why it was nice to see my Vice Presidents in person again recently. In the process, we realized that for weeks we had only been exchanging information digitally.

During your inaugural speech in October 2019, you emphasized the importance you place on engaging directly with all university members.

Hofmann: Yes, that is something I now really miss. But I’m trying to cover a lot digitally – for example, by holding the TUM Presidential Student Lunch as a virtual event. This is a format in which I meet with our students at lunchtime to discuss their individual visions for the future and their expectations of “their TUM”. Or a meeting like this one, at which I get together with our alumni. This is a source of inspiration, new strength and motivation for me, and is very important to me personally.



“It is us engineers who influence what the future will look like, and for that we need a broad education.”

Prof. Dr. Sami Haddadin

Why is this exchange so important for you?

Hofmann: It is the people who make our university successful. This applies to university management just as much as to research, teaching and innovation at TUM. And we have now incorporated this into our mission statement. In line with our missions Responsible Research and Innovation, our research and innovation processes are aligned with the values, needs and expectations of society. We don't develop innovations just for the sake of technology, but for the benefit of the people and their environment. Human-Centered Engineering is therefore our guiding principle.

How does this impact on the education of engineers in practical terms?

Hofmann: On the way to becoming resourceful engineers, our students will of course still need in-depth specialist knowledge, but they will increasingly need to combine their expertise with that of other disciplines. That's why we are designing our teaching in a way that allows students to explore how their subject might interact with other disciplines, and to take advantage of exciting opportunities at the interfaces with, for example, Informatics and Medicine.

Professor Dr. Sami Haddadin is joining us. The alumni is one of the world's leading experts in Robotics and Director of the Munich School of Robotics and Machine Intelligence at TUM, and holds the Chair of Robotics and Systems Intelligence.

Hofmann: Good afternoon, Professor Haddadin. We were just talking about research at the interface of disciplines. You are currently developing a robot assistant for the elderly, which is also able to perform ultrasounds, for example.

Prof. Dr. Sami Haddadin: Yes, its name is GARMI, it has two arms and can assist elderly people in their everyday activities. It uses artificial senses to learn, for example, how to help them stand up, make meals or clear the table. Also, doctors can communicate with it, connect via video call, make a remote diagnosis and even carry out sensitive rehabilitation interventions using Teletouch.

In the development process, you are working closely with the future users. What does that look like exactly?

Haddadin: Pretty straightforward. We let them interact with the robot. In the beginning, the seniors often approach it with a rather negative attitude, but once they have interacted with the robot assistant for a while, it clicks and we get very good feedback from them. They tell us what they like, what they don't like so much; and which of their problems we developers may not have thought of at all. As a result, we know exactly what our next step needs to be. In the process, we have gained much more than we initially had expected.

PROF. DR. SAMI HADDADIN

Prof. Sami Haddadin is Director of the Munich School of Robotics and Machine Intelligence at TUM and holds the Chair of Robotics and System Intelligence. The internationally renowned researcher in Robotics studied Electrical Engineering and Informatics at the Universities of Hannover, in Oulu, Finland, and at TUM. Before his move to TUM and appointments at Stanford University and MIT in the USA, Prof. Haddadin held the Chair of the Institute of Automatic Control at Gottfried Wilhelm Leibniz Universität Hannover from 2014 to 2018.

Prior to that, he held various positions as a research associate at DLR. Prof. Haddadin is the founder of Franka Emika GmbH. During his time as a DLR employee, he played a key role in the development of the lightweight robot technology, which became the KUKA LBR iiwa in the technology transfer. He has published more than 200 scientific articles in international journals and conferences. He has received numerous awards for his scientific work, including the German Future Prize of the President of Germany (2017) and the Leibniz Prize (2019) – Germany's most prestigious research funding award.



“Feasibility, health impacts and sustainability are key aspects of our project.”

Sofía Ramírez

SOFÍA RAMÍREZ BERNINI

Native to Costa Rica, she came to TUM for her bachelor's and master's degrees in Physics. During her studies, she joined the student initiative WARR Hyperloop. It had been launched at TUM to participate in the SpaceX Hyperloop Pod Competition initiated by Elon Musk. The goal of the competition was to develop and build a pod prototype. The students taking part in the initiative were able to win all four Hyperloop competitions in a row, reaching top speeds of up to 467 km/h with the 80-kg pod they developed. Sofía Ramírez initially supported the team as a power supply engineer, but she is now in charge of developing the driver's cabin for the Hyperloop pod. She is one of a total of nine doctoral students in the TUM Hyperloop research program, which is funded by the Hightech Agenda Bayern. The program aims to develop and test a comprehensive ultra-high-speed ground transportation system based on the WARR Hyperloop prototype, and to investigate future technical and economic feasibility in terms of system analysis.

How do you train your research team in order for them to handle this multifaceted input?

Haddadin: The starting point of our innovations is a shared vision, which is the first thing we develop. We use tangible visual storyboards, which we create with the stakeholders, to try to show by way of examples what the benefits of a development will be in the end. When it comes to the actual implementation of the project, we then first need hard-core technical input and progress. This means we need robot developers, electrical engineers, Informatics experts, AI experts and programmers. After that, the non-technical specifications come in: Early on and again and again, the vision is calibrated with the future users. In Geriatrics, we also often work with design prototypes to do this, or even more unconventional methods, such as trying out and testing human-robot interaction in scenarios with people and people in cardboard robot costumes.

Putting engineers in cardboard boxes: isn't that taking things a bit too far?

Haddadin: Perhaps we should first take a step back and look at what an engineer actually is. The term derives from the Latin ingenium, which means creative talent or the ability to invent something meaningful. In my understanding, engineers are the ones shaping the future. And here I include computer scientists, so all scientists involved in developing technology. After all, it's not as if someone shows up with an idea of what the future should look like, and then we engineers simply make it happen. On the contrary, we are the ones who influence this future, and so in order to be able to do this in the most positive sense of all and for the benefit of people, we need a broad education that includes technical content as well as, for example, philosophical-ethical content.

A philosophical engineer?

Hofmann: Why not? If we are to secure our future as a center of innovation in Germany, it is not enough to tread the well-trodden paths of recent decades over and over again. In the future, engineers will need sociopolitical intuition in addition to their technical expertise, in order to align their innovations with the values, needs and expectations of society.

What exactly would this entail at TUM?

Hofmann: For example: We will replace some of the numerous classroom formats with team projects in which students from different disciplines work together on technological challenges. However, these will not only include their own community of engineers and natural scientists, but will also integrate other disciplines, such

as the Humanities and Social Sciences. After all, ethical implications can be better understood by looking at actual research objects in interdisciplinary teams than in theoretical lectures.

Sofía Ramírez is joining the online discussion from Costa Rica. She is visiting family in her home country. The doctoral student is conducting research in TUM's Hyperloop project: This transport system involves a high-speed train traveling just under the speed of sound in partially evacuated tubes. Sofía Ramírez is in charge of developing the passenger cabin.

Ms. Ramírez, the President has just reported how important team projects are when it comes to training engineers. How did you experience collaboration in the Hyperloop team?

Sofía Ramírez: Our team is the bedrock of our success. Four times in a row, we have built the world's fastest pod and were able to claim victory in the international competition in California. Before the project, I wouldn't have guessed what is possible – even within a limited period of time – if everyone pulls together. We love the project and give everything. Let's not forget, it's also a lot of fun. Meanwhile, what was once a student project has become a real research program funded by Hightech Agenda Bayern.

The project team is very interdisciplinary in nature.

Ramírez: Our 85 members are from 29 different countries and a wide range of faculties. We have computer scientists, physicists, electrical engineers, mechanical engineers, people from Business Administration and we need all this expertise to build our pod. We need hardware, software, electronics, mechanical engineering. Add to that the people who support us to run the business. All the events, the sponsorship and so on.



Catharina van Delden is CEO and founder of innosabi, one of the leading providers of software for Agile Innovation. In 2020, she received the TUM Entrepreneur of Excellence award from TUM President Thomas F. Hofmann. The award honors significant and committed entrepreneurs who serve as role models.

Catharina van Delden: I can only agree to how important an interdisciplinary team can be for a business. My three co-founders and I are all from different faculties, even though we are all from TUM. We have four very different personalities, different perspectives, contrasting approaches. That was often challenging, but today I would say that this interdisciplinarity was the cornerstone of our success.

How so?

van Delden: For any kind of innovation and unconventional thinking, it is pivotal to be willing to look beyond your own nose, to be open, to make space for new things and to remain curious. Only then can we be truly visionary. I personally get the best ideas when interacting with other people. I love meeting new people, getting to know other people's perspectives and different ways of life. This helps me to develop my own new ideas. In the same way, our software is helping companies to look beyond their own walls and find people in their environment with whom they have not previously had a business relationship when developing their products and services.

You are supporting companies in incorporating user opinions into product development at an early stage. Why is that important?

van Delden: A product has to be technically flawless, but above all it should be tailored to the user. If it doesn't match, people won't buy it. That's how the market works. That's why you need a holistic approach when developing new products, one that doesn't only consider the technical aspects. You should be asking yourself the question: Why am I doing what I'm doing? For whom am I developing this product?

Hofmann: We are trying to implement something similar in research. In the future, we will need formats along the lines of an expanded process of co-creation. This means integrating the expertise of people outside our university – including that of our alumni – directly into the design process of new technologies, for example, to make them more intuitive and easier to use. This is an outstanding opportunity to let the public participate in processes of innovation. Furthermore, we already have numerous formats for dialogue at TUM that aim to bring

scientific research into discourse with society. These events are held, for example, at the TUM Institute for Advanced Study or the Munich Center for Technology in Society.

Our fifth guest is Dr. Volker Kefer. The TUM Alumni holds a doctorate in Mechanical Engineering and has been President of VDI – Association of German Engineers since 2019. Previously, he served as a member of the Board of Management at Deutsche Bahn for several years.

Hello, Dr. Kefer. We were just talking to Ms. van Delden about the fact that a product is actually only any good if it meets someone's need. What do you think that means with regard to the skills of an engineer?

Dr. Volker Kefer: I believe that the technical content of an engineer's education is key and extremely important. He or she simply has to know what they are doing. Beyond that, however, I see a few additional requirements for engineers that have become much more important recently. I'm talking about a whole range of skills that are necessary to perform certain jobs. For example, jobs that require convincing people, communicating on a large scale, or participating in decision-making processes.

Could you give us an example?

Kefer: I believe that engineers, i.e. people with a technical education, should be on the management boards of large or important companies. But they will only be able to do this job properly if they have an understanding of how to run large companies. In other words, leadership, the communication involved and the ability to develop sound decision-making within a team are just as important as personal integrity, the ability to work under pressure, dealing with stress and so on.

And outside the executive level?

Kefer: If you intend to be a member of any social, public or political body today, you need a lot more than knowledge of technology, because otherwise you won't be heard. In this context, I always remember the saying: "Not everything that is technically possible is worth striving for or socially desirable." There are some projects that forced us to realize that social and political acceptance are indeed strong influencing factors. An example here is nuclear power. Society's rejection of nuclear power and the commitment of engineers have led to the emergence of many alternative approaches to generating power. Time will tell whether these will prevail. In any

CATHARINA VAN DELDEN

Catharina van Delden is co-founder and CEO of software company innosabi. Catharina van Delden has studied Technology and Management at TUM. She completed her bachelor's degree in 2008 and added an Executive MBA in Innovation and Business Creation in 2010. The founding idea for her successful startup innosabi had already emerged during her undergraduate studies. The nucleus for today's company was a so-called crowd economy startup. The community "unserAller", founded in 2010 as a group on a well-known social media platform, united users who collaborated on the development of new products. Today, Catharina van Delden and her co-founders Jan Fischer, Hans-Peter Heid and Moritz Wurfbaum develop and distribute a unique software for innovation processes. Catharina van Delden is actively involved in promoting the next generation of founders, as well as in issues relating to digital transformation. Among other things, she was an advisor for the Federal Ministry of Economics and Energy on the Advisory Board "Young Digital Economy", advocates for the interests of start-ups as a member of the Executive Board of the IT industry association Bitkom, and enjoys giving guest lectures at TUM. Computerwoche described her as one of the 50 most influential women in German IT. In 2020, she was awarded the title "TUM Entrepreneur of Excellence" by TUM President Thomas F. Hofmann.



DR. VOLKER KEFER

Volker Kefer is the President of VDI – The Association of German Engineers. From 1975 to 1977, he studied Electrical Engineering at Technical University of Erlangen, then went on to study Mechanical Engineering at TUM. Following his diploma in Engineering, he began his professional career as a design engineer at Siemens in Erlangen. In 1989, he earned his doctorate as part of a research project at the Institute for Thermal Power Plants at TUM. Until 2006, Volker Kefer worked for Siemens AG in Erlangen in various management positions in Germany and abroad. Most recently as Division Manager for Sales, Engineering, and Manufacturing of Regional Rail Vehicles worldwide. From 2006 to 2016, he worked for Deutsche Bahn AG, including as Group Board Member for Infrastructure, Services and Technology from 2013 to 2016 and additionally as Deputy Chairman of the Management Board of DB AG from 2015 onwards. Many remember him as a formative figure in the large-scale project Stuttgart 21, in which he was involved in the conciliation talks. Volker Kefer has been President of VDI since 2019. About a year after leaving DB, he started to support young entrepreneurs. Since 2018, he has been mentoring, among others, the TUM start-up KONUX founded by TUM Alumni and CEO Andreas Kunze.

“Not everything that is technically possible is socially desirable.”

Dr. Volker Kefer



case, it is not enough to approach these challenges from a technical point of view alone; when making decisions of this kind, we have to keep everyone's interests in mind. And we need to be able to provide information on the respective projects.

You once said in an interview that engineers are not necessarily naturally gifted with communication skills.

Kefer: That might have been slightly exaggerated (laughs). But this statement is based on my own experience. For example, one of my tasks as a member of the Board of Management at Deutsche Bahn was to communicate with and for the general public. It so happens that people at Deutsche Bahn like to talk about what they call “grade-separated junctions” in construction projects. A complicated and incomprehensible word that basically refers to nothing more than a bridge. Why not just say bridge? When dealing with topics in a certain degree of depth, we tend to detach ourselves somewhat from normal reality and speak in a jargon that is no longer comprehensible to most people.

Is it possible to learn to communicate more clearly?

Kefer: Communication is something that needs to be practiced and it should be part of university education. If someone aims to present a complicated issue to a broader audience in a way that is comprehensible, they have to be able to significantly simplify things. Unfortunately, nothing is more challenging than explaining a difficult issue in three sentences. As engineers, we tend to always point out some kind of caveat. When we are asked “Is that correct?” we say “Yes, provided such and such applies or as long as so and so exists as a qualifier.” Most people either don't understand such relativization or even find it dubious. It gives the impression that the engineer is not quite sure either. If someone is really good, they dare to say yes or no in the end, knowing full well that there are limiting conditions and caveats. That is the whole secret.

Haddadin: This is true. When I was a student at the Center for Digital Technology and Management, we had seminars on presentation technique. Our lecturer gave us a topic that was not part of our field of study and asked us to give a short ad hoc presentation on it. I had been given an offshoring topic and, as a technologist, of course had no idea. I thought very carefully about what I wanted to say, but to be honest felt that I was superficial and that a lot of half-knowledge was involved. However, after the presentation and to my great incomprehension,

the course instructor said to me, “Dear Sami, when you speak, we all feel like fools in comparison.” I found that very hard to believe, because I perceived myself to be utterly uninformed. At the same time, I realized that I obviously had to work on my way of communicating. In the meantime, I have to and am also lucky to have many opportunities to communicate a lot, but it's still not easy for me. I often try to get feedback from my children and my wife beforehand on whether what I am saying can be understood.

Ms. Ramirez, have you experienced challenges like this too when presenting the Hyperloop project to the public?

Ramírez: It is completely new technology and there is indeed some apprehension. Many people think that humans cannot tolerate the speed. There is this anecdote that in the past people were warned against traveling by train because it was believed that the rapid movements would cause mental unrest in passengers. At that time, the speed was 60 kilometers per hour at best. The TUM Hyperloop does more than 460 kilometers per hour (laughs). We actually have to deal with the fact that we as engineers ourselves don't yet know everything about the implications of the technology. That's why it's only natural for us to look at aspects of feasibility, sustainability, cost-effectiveness and, of course, health compatibility as early as in the development phase. If we make this clear, we are able to meet most people where they are at.

How was it that TUM's Hyperloop project was so successful? After all, numerous teams from all over the world have participated in the competitions.

Ramírez: We benefited tremendously from the knowledge that was available at TUM and had massive support from professors and industry partners. But I think that our freedom in the development stage was also a particularly crucial factor. Nobody told us what to do. We always had the freedom to decide for ourselves. A lot of things we didn't know, a lot of things were new to us, but we always had this freedom to try everything ourselves. That was pretty nice and gave us self-confidence in our own abilities.

Do you think there should be more freedom like this for students at the university?

Ramírez: Comparing TUM with other universities, for example, in the U.S., we're doing pretty well. Universities in the U.S. are very expensive and students can't afford to take a semester off and devote themselves fully to

a student project, like we did. But what would be even better, would be if the project was recognized as course credit. Then no one would have to take a semester off. But it was definitely worth it. I would recommend everyone to have this experience.

Haddadin: I would support recognizing such projects as course work. We are now setting up a new international master's program in Robotics and Artificial Intelligence, which will be largely project-based. Let me illustrate this by using the Cybathlon as an example. This is a competition for people wearing prostheses who, supported by state-of-the-art technical assistance systems, compete against each other in solving everyday tasks. Project teams are challenged to develop their own completely novel prostheses and equip the competitors. This is relatively complex and also costs a lot of money. We have now decided to cover those costs so that our students have the opportunity to participate. And we have made it possible at TUM for the project to be officially recognized as course work.

Ramírez: That is so cool.

Haddadin: I know, right? (laughs).

van Delden: I have to say that I have always found TUM to be very progressive in this regard – especially when it came to the development of our business idea and the support we received during the start-up process. We got a lot of practical help in setting up our company, but the most important thing for me was that we had the freedom to develop our ideas and continuously received positive encouragement. When I started studying, I didn't have any intention of starting a business, but at TUM I was shown that entrepreneurship was a realistic path to take.

Hofmann: This is a core aspect of the entire topic we have been discussing today. We need to encourage our young talent to go their own way and implement their individual visions. As a university, we can and should lend them a helping hand. We can do this by encouraging free thinking across disciplinary divides and by not just letting students memorize what's in the standard textbooks. We need to point out where there are exciting interfaces between disciplines. And we need to take away their fear of failure and also encourage them, for example, to start their own business if that's where their path takes them. I believe that this kind of promoting creativity, new ways of thinking, and entrepreneurial spirit, is a key element of the ability to innovate.

We would like to thank you very much for the interesting conversation.

The online meeting is over. One by one, the participants say goodbye to the panel.

In the wake of the meeting, the fascinating discussion and the wide range of opinions stimulate further reflection. The participants agreed on how important it is for them personally to take social responsibility and that technology should not be developed just for its own sake. TUM is taking a forward-looking approach to this issue. Many new projects will be launched in the coming months and weeks. TUM wants to transcend boundaries – between disciplines as well as between science and society.

“I believe that this kind of rethinking is a key element of the ability to innovate.”

Prof. Dr. Thomas F. Hofmann



PROF. DR. THOMAS F. HOFMANN

Thomas F. Hofmann has been President of the Technical University of Munich since October 2019. The food chemist studied Food Chemistry at Friedrich-Alexander Universität Erlangen-Nürnberg and received his doctorate in 1995 from the TUM Chair of Food Chemistry under Professor Peter Schieberle. In 1998 he completed his habilitation at the same department. Until 2002, he taught as a private lecturer in Food Chemistry at TUM and was also Assistant Director of the German Research Center for Food Chemistry. From 2002 to 2006, he was Professor and Managing Director of the Institute for Food Chemistry at Münster University, before being called back to TUM by President Emeritus Wolfgang A. Herrmann. From 2007 on, he held the Chair of Food Chemistry and Molecular Sensory Science at TUM at the Wissenschaftszentrum Weihenstephan (now TUM School of Life Sciences). There he also headed the Bioanalytics unit of ZIEL – Institute for Food & Health until 2014. Between 2017 and 2019, he was Director of the Leibniz-Institute for Food Systems Biology at TUM. From 2009 to 2019, Thomas F. Hofmann was TUM's Executive Vice President for Research and Innovation.

This is how **TUM** implements **responsibility**

Technische Universität München

TUM's New Mission Statement

Autonomous driving systems, sustainable solutions for urban energy and robots that support us in our everyday lives: At TUM, research on important issues of the future is being conducted at all levels. People, with their thoughts and behaviors, always take center stage here.

Find out more about TUM's Mission Statement in the latest brochure at mediatum.ub.tum.de/1584084

Rethinking Research

How do pedestrians behave when it comes to autonomous vehicles? How should a nursing robot be designed in order for people to appreciate it as a caregiver? Nowadays, there are many questions that can no longer be answered by just one field of research. This is why TUM is relying on strong interdisciplinary cooperation. The TUM.Mobility platform with more than 40 professors conducting research on sustainable mobility, for example, pools the university's expertise in the field of Mobility. TUM's great strength here is the close collaboration among disciplines from Engineering, Natural Sciences, Economics and Social Sciences.



TUM President Thomas F. Hofmann with the robotic assistant GARMi: The robot will one day act as a personal assistant to assist elderly people with everyday tasks and allow them to live independently in their own homes for as long as possible.



EXAMPLE 1

Robotics – Ethically Appropriate

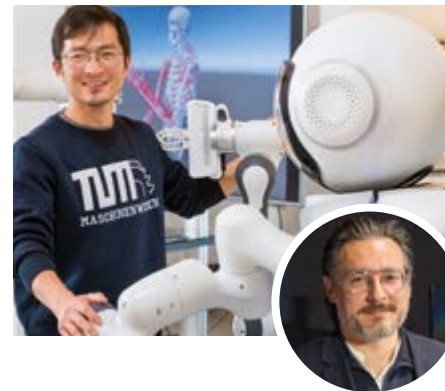
The use of innovations such as surgical and nursing robots will be accompanied by a large number of ethical, social, political and legal challenges. These need to be addressed early in the research and development processes. The Responsible Robotics project led by TUM Professor Dr. Ruth Müller aims at establishing interdisciplinary methods that allow for this to happen. More specifically, she is right now investigating the social, ethical and legal dimensions of GARMi, the robot assistant, in collaboration with Prof. Dr. Alena Buyx and Prof. Dr. Sami Haddadin. On the basis of this research, recommendations and methods for the responsible design of future developments will be drafted.



EXAMPLE 2

Enabling Autonomous Driving

Vehicle automation has been identified as a game-changer in transportation, promising to significantly reduce traffic fatalities while improving mobility. To achieve this goal, it is vital to understand how the users of such vehicles interact with them and utilize them in their everyday lives. This is what the EU project SHAPE-IT is dedicated to investigate. A total of fifteen doctoral students in Europe are researching these topics together with experts from academia and industry; two of them from South Africa and Taiwan at TUM Professor Dr. Klaus Bengler's Chair of Ergonomics. The overall goal is to develop safe and user-centered automated vehicles that are also suitable for urban environments.



EXAMPLE 3

Lighthouse Research Initiative Geriatrics

The trailblazing initiative Geriatrics, under the leadership of TUM Professor Dr. Sami Haddadin, is based at the Munich School of Robotics and Machine Intelligence (MSRM). The MSRM scientists have developed a two-armed robotic assistant called GARMi to help elderly people in everyday situations. Its tasks range from communicating with relatives to clearing the table. Furthermore, doctors can perform examinations and make diagnoses remotely using GARMi. But GARMi is also designed to relieve caregivers by taking over tedious tasks, thereby leaving more time for the carers to have human interaction with those they care for. This will enable seniors to live a more self-determined life within their own homes.

A FUTURE-ORIENTED MODEL FOR SUSTAINABLE MOBILITY

"Mobility is a paramount factor for the prosperity, quality of life and sustainability of our society," says Prof. Dr. Sebastian Pfotenhauer, Co-Director of the Munich Center for Technology in Society (MCTS) at TUM. "Right now, we are facing tremendous challenges here, such as overburdened infrastructures, climate change, urbanization and, last but not least, social justice." At the same time, technologies such as high-performance electric drive systems and the advancement of Artificial Intelligence, complemented by new digital business models such as Mobility-as-a-Service and ride-sharing, are profoundly changing the mobility sector. New forms of mobility, however, need to be integrated into existing infrastructures and into the design of livable spaces.



mobility sector. "We cover a broad spectrum of players – from NGOs and the City of Munich to high-tech start-ups and three DAX-listed companies. Our approach therefore covers much more than just technological developments," Sebastian Pfotenhauer, one of the heads of the M Cube strategy team, says.

Much More Than Just Technological Developments

The Munich Cluster for the Future of Mobility in Metropolitan Regions (M Cube), under the leadership of TUM, will pursue this goal. It will be launched in October 2021 and will receive up to 45 million euros in funding over a nine-year period. The regional network brings together an interdisciplinary research team and partners from business and society to work on solutions to the major challenges facing the



Rethinking Teaching

TUM'S NEW STRUCTURE

Only those who are able to link the expertise of Data Science, Psychology, Neuroscience and Business Administration will be able to better understand human decision-making processes. Only those combining tools and knowledge from Political Science, Climate and Environmental Research, Geodesy, Social Networks and Artificial Intelligence will be able to improve the prediction of regional conflicts. And only those who succeed in integrating methods from Social Sciences and Design Thinking into innovation processes in Engineering Sciences will be able to better align the functionality of technical systems with human needs. After 150 successful years, TUM is now fundamentally changing its structure and will move from a department system to a matrix structure in order to promote a networked way of thinking. As a result, experts and students from all departments will be able to systematically network with each other in the future. The previously existing departments will be converted into a total of seven schools.

The transition of the Weihenstephan Science Centre (Wissenschaftszentrums Weihenstephan – WZW) into the TUM School of Life Sciences, which was launched on the 1st of October, 2020, has already begun. With a holistic research and teaching approach, it focuses on the entire ecosystem: humans – animals – plants – soil – climate. The next step will be the establishment of the TUM School of Engineering and Design. This will bring together the expertise of the Departments of Architecture, of Civil, Geo and Environmental Engineering, of Aerospace and Geodesy, Mechanical Engineering and part of the Department of Electrical and Computer Engineering. Its establishment is scheduled for 2021.

More info at go.tum.de/758974

“Breaking down the historical departmental structure is tantamount to a revolution in the German university system. Together the TUM Family is now setting out on an exciting journey into the future.”

TUM President Thomas F. Hofmann

TUM has made it its mission to educate its students in such a way that they are equipped to apply their skills in the best possible way in future fields relevant to society. To this end, the degree programs are designed to include opportunities and prompts for interdisciplinary teaching and research. TUM also attaches great importance to innovative and compelling teaching concepts. In 2020, it was awarded the Genius Loci Award for Excellence in Teaching. TUM impressed the jury in particular with a well-structured teaching concept and the corresponding practical measures.



EXAMPLE 1

Interdisciplinary Degree Programs

Interdisciplinary degree programs at TUM combine several subjects in order to study, for example, sustainable technologies or the relationship of technology and the Natural Sciences to society. The master's program Responsibility in Science, Engineering and Technology, for instance, inquires how social, ethical and environmental consequences of scientific and technological change can be regulated or how expert knowledge and technological development could be democratized. Graduates of the master's program in Renewable Resources are not only familiar with the central aspects of the value-added process of renewable resources, but also acquire knowledge of consumer behavior and the political and economic framework, to name just a few.



EXAMPLE 2

Interdisciplinary Project X

The module Interdisciplinary Project X of the TUM Chair of Ergonomics offers a new format bringing together students from different disciplines in interdisciplinary project teams. The open scope of the task, the human-centered way of working, and the individual skill sets of the team members result in a wide variety of solutions: a product service system that supports real board games with participants in different locations, a mobile doctor's office with contact-free diagnostic possibilities, a transparent air filter mask, all the way to a visual and acoustic distance meter for customers in retail stores – all solutions for acute social problems that were designed, constructed, and evaluated by students in close exchange with the users and by using creative methods.



EXAMPLE 3

Module Course of Philosophy

What do we want the relationship between man and machine to look like? What is a fair economic order? What are the ethical limits of Medicine? Whoever is attending university today will sooner or later also have to deal with the ethical dimensions of their actions. As of winter semester 2019, TUM students can attend courses offered by the Munich School of Philosophy (HFPH). TUM students are free to choose from the range of topics offered by HFPH – ranging from basic introductions to the big questions of human existence to concrete ethical problems in their field of study. The volume of module courses can also be chosen flexibly, starting with a lecture and ending with the supplementary academic certificate "Philosophicum".

Rethinking Innovation

TUM is one of the most successful start-up universities in Europe and in this way wants to contribute to bringing innovations to society – especially those that sustainably improve people's lives and coexistence. To this end, TUM is supporting start-ups primarily in four future-oriented fields: Information and Communication Technology, Medical Engineering, Cleantech and Life Sciences. They offer added value for society and potential for economic growth.



EXAMPLE 1
Robots for Scaffolding

TUM Alumni Leonidas Pozikidis and Artem Kuchukov (both Master Advanced Construction and Building Technology 2017) have successfully launched their start-up KEWAZO. Developed by the co-founders in collaboration with TUM Alumni Sebastian Weitzel (Master Informatics 2017), Ekaterina Grib (Master Consumer Affairs 2017), Eirini Psallida (Master Informatics 2017) and Alimzhan Rakhmatulin (Master ESPACE 2018), the intelligent robotic system improves work on construction sites and in industrial facilities. In scaffolding, transporting materials with their robotic elevators saves up to 44 percent of labor costs and improves the safety of construction sites.



EXAMPLE 2
Surgical Navigation System

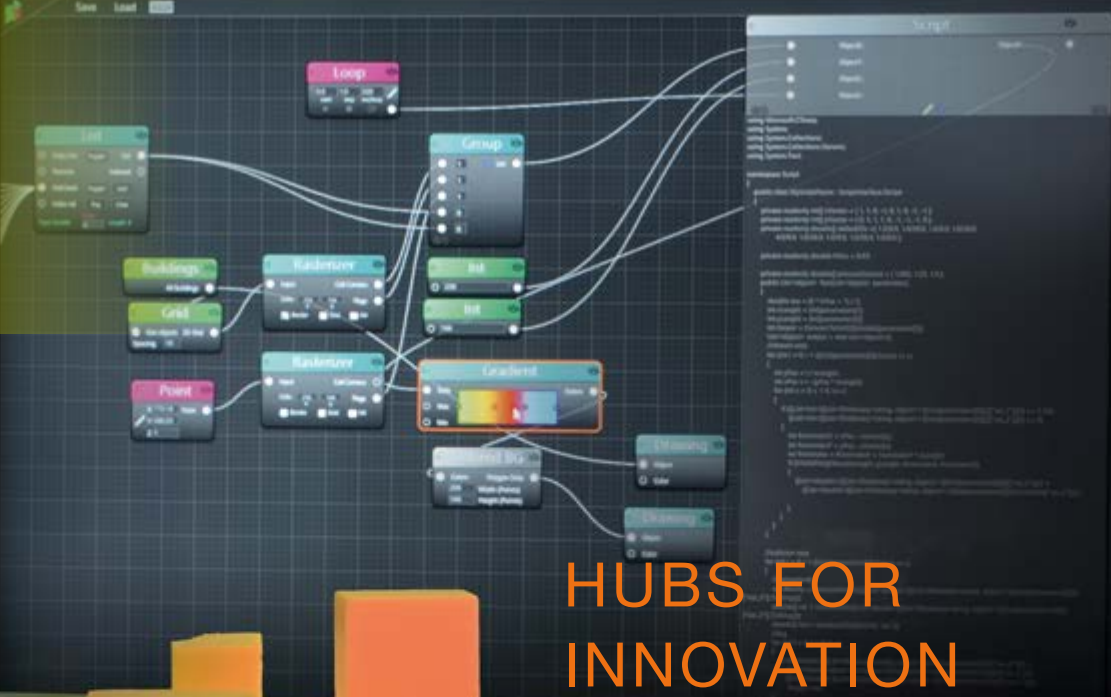
Stella Medical has developed a surgical navigation system for spine stabilization operations. The system uses computer vision technology to enable precise placement of pedicle screws in vertebrae and provides a user-friendly, manageable and cost-effective alternative to existing solutions. The idea for Stella Medical emerged in the context of the MedInnovate Graduate Program, an interactive laboratory course at TUM's Chair of Computer Aided Medical Procedures & Augmented Reality. The interdisciplinary team is composed of alumni and students from the fields Informatics, Industrial Design and Finance and Information Management and is accompanied by a surgeon on staff at the university hospital TUM Klinikum rechts der Isar.



EXAMPLE 3
Electric Air Taxi

Their all-electric air taxi is intended to make its mark on the future of mobility: it is quiet, zero-emission, fast. The start-up Lilium was founded in 2015 by TUM Alumni Daniel Wiegand (Master Energy and Process Engineering 2015) and Patrick Nathen (Master Energy and Process Engineering 2012, Doctorate 2019), Sebastian Born (Master Product Development and Engineering Design 2012) and Matthias Meiner (Diploma Mechatronics and Information Technology 2014). With its vertical take-off and landing jet, Lilium caused quite a stir right from the start. A total of 36 propellers mounted on the wings power the jet. Rechargeable batteries supply the energy. Based on its technology and the success of the latest round of financing, the company has now been valued at over one billion US dollars.

TUM Venture Lab Built Environment's mission is to support start-up ideas that relate to the "built environment". These can be about technologies and solutions for the urban environments of the future, the construction and maintenance of buildings and infrastructure, and socio-technical systems in the context of Design and Architecture. This image depicts a collaborative design platform that enables interactive design planning.



TUM VENTURE LABS

As entrepreneurial innovation hubs, the new TUM Venture Labs drive technology-based spin-offs at the interface of Engineering, Natural and Life Sciences, AI/IT and Medicine in a unique way. They support entrepreneurial talent in tech-based business translation around promising key areas of innovation – and offer entrepreneurs an entire ecosystem providing the necessary environment for their development.



TUM INNOVATION NETWORKS

Transdisciplinary teams, collective creativity, new ideas – and the freedom to chase them: The new TUM Innovation Networks bring together top researchers and young talent spanning disciplines and subjects. They establish new connections between schools and departments and open up trend-setting research questions in high-potential fields of innovation. With the TUM Innovation Networks, TUM promotes innovative "High Risk – High Gain" research projects with a trans-disciplinary profile.



Engineers for Europe's Future

TUM embraces its responsibility to develop innovations for the benefit of the people and society, also on an international level. As a core member of an alliance of leading European technical universities, it has therefore initiated the establishment of the EuroTeQ Engineering University. Not only will the program be open to students from the partnering universities, it will also enable lifelong learning for engineers and the skilled crafts and trades, and will foster mutual understanding of sustainable value creation and systems in a holistic manner.



EuroTeQ
Engineering
University



Who?

The initiative has emerged from the EuroTech Universities Alliance: Technical University of Denmark (DTU), École Polytechnique (L'X), Eindhoven University of Technology (TU/e) and TUM have brought two more strong partners on board: Tallinn University of Technology (TalTech) and the Technical University in Prague (CTU). As part of its European Universities program, the EU will be funding the project over the next three years with around five million euros from the Erasmus+ program and an additional two million euros from Horizon 2020. The project will also integrate two EuroTech members that are not located in the EU, the École polytechnique fédérale de Lausanne (EPFL) and the Technion – Israel Institute of Technology.

What?

The partners will establish a joint Engineering Sciences study program across different disciplines as well as across national and institutional boundaries, reaching well beyond the scope of individual technologies. Within the program, all target groups will be taught on the basis of individually designed curricula and new digital formats, and will undergo continuous training in the spirit of lifelong learning. Through a EuroTeQ Teaching Fund tender starting in spring 2021, new teaching formats are to be developed and tested in a bottom-up approach. Specific project weeks have been scheduled for as early as fall: Here, students and professionals will work on issues and challenges they have identified themselves.

Why?

Purpose of the alliance is to look at technology developments in a new, holistic way. "Today, it is impossible to think about mobility without considering its impact on the climate, and Robotics and Artificial Intelligence cannot be successful without the trust of the people," says TUM President Thomas F. Hofmann. "In addition to technical depth, a modern education in Engineering has to provide students with a broader educational horizon, an entrepreneurial mindset and socio-political sensibility."

For whom?

To promote this approach throughout Europe, the degree programs will not only be offered to students enrolled in the partnering universities but will also be open to interested parties who do not yet have an academic degree but play important roles in value creation and communication processes. In addition, the alliance will bring its students together with trainees from technical professions as well as with a wide range of stakeholders from industry, associations and various sectors of society in order to investigate the challenges of the 21st century and to develop projects for potential solutions. Already, the project has the support of 45 partners. In the ecosystem Munich, these include BMW, Siemens, In neon, the Bavarian Chamber of Civil Engineers and VDI – The Association of German Engineers.



"What unites us with our regional and European partners is an in-depth and responsible reflection on competencies that engineers will have to bring to the table in the future. Based on this and on a common understanding of European values, we immediately had great chemistry at our first meeting in Brussels. Resulting from the convergence of our different perspectives, an incredibly inspiring exchange on the future of the education of engineers ensued. The first meeting was a firework of ideas, which soon led to a very viable concept for teaching formats, teaching content and the involvement of social stakeholders. I am very excited that our grand vision has become reality so quickly."

Prof. Dr. Gerhard Müller,
Senior Vice President for Academic and Student Affairs at TUM



EUROTECH UNIVERSITIES ALLIANCE

In 2006, TUM founded the EuroTech Universities Alliance together with the Technical University of Denmark (DTU). Today, the alliance is a strategic partnership between six of the best technical universities. Together, they have set themselves the goal of finding technical solutions to the major challenges of modern societies. With its close cooperation, the alliance contributes to achieving the goal of smart, sustainable and inclusive growth in Europe. The alliance combines the complementary strengths of its partner universities to jointly drive initiatives of high impact for society and industry in an international context. From left to right: Danmarks Tekniske Universitet (DTU, since 2006), Technische Universiteit Eindhoven (TU/e, since 2008), École polytechnique fédérale de Lausanne (EPFL, since 2011), École Polytechnique (L'X, since 2018), Technion – Israel Institute of Technology (since 2019) and TUM (since 2006).

STUDENTS CHANGING THE WORLD

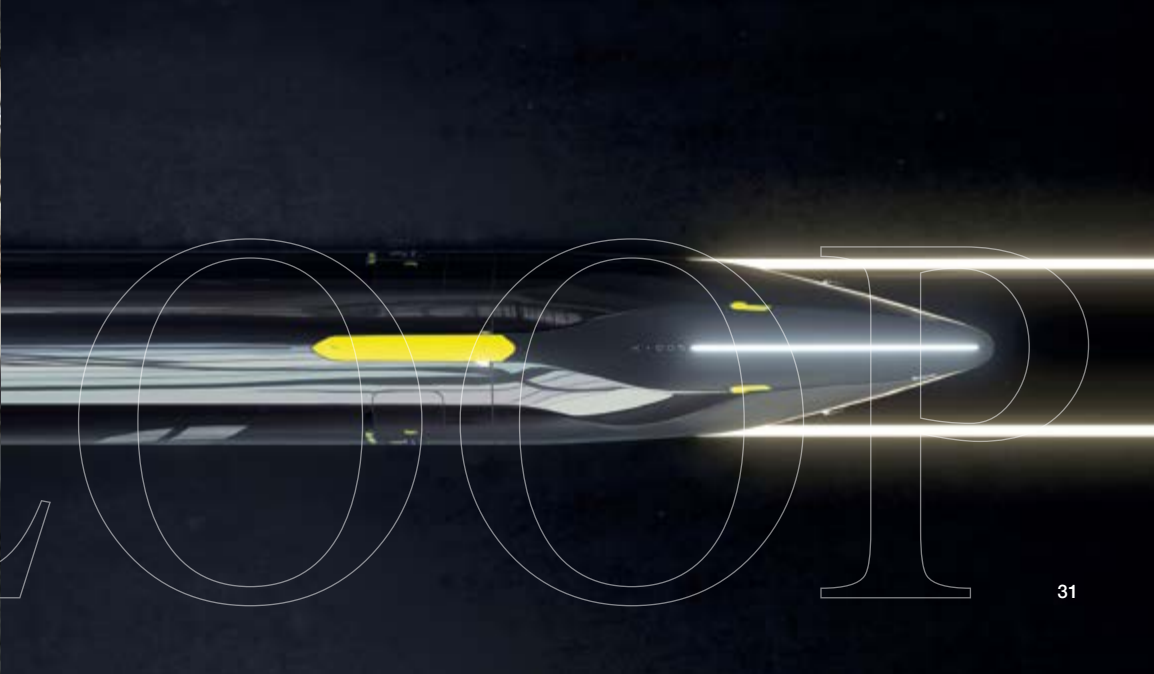


THE HYPERLOOP PROJECT

It is probably one of the most high-profile projects currently underway at TUM. Nine doctoral candidates and around 80 students are collaborating with TUM scientists to develop their vision of a passenger cabin that will travel almost at the speed of sound. But it's not just about speed: The team of inventors is also investigating how the Hyperloop can become a safe, affordable and sustainable means of transport for the future.



A part of the Hyperloop team that developed the pod for the 4th Hyperloop competition. They are standing in the Research Ring, a scaled-down version of the Hyperloop which was designed and built at the time of the fourth competition. The scaled-down version of Pod IV can whiz through this ring.



IT ALL STARTED WITH A WILD IDEA...



Students making final preparations to finalize their entry for the 2019 Hyperloop competition.

...and the call for a challenge.

The Hyperloop is the concept of a transport system in which an ultra-high-speed train travels in a partially evacuated tube almost at the speed of sound. Based on this idea, SpaceX founder Elon Musk announced a competition, the SpaceX Hyperloop Pod Competition. Student teams from all over the world were called upon to compete with their own designed and built pods – the capsules carrying passengers through the tube. A student initiative at TUM took up the challenge and was able to leave the competing teams trailing in its wake in every single one of the four races. With a speed of 482 kilometers per hour, the pod from Munich set the current record at the last competition in July 2019.



During their visit at TUM in September 2019, Minister President Dr. Markus Söder and Bernd Sibler, Bavarian Minister of State for Science and the Arts, examine the interior of the Pod IV prototype.

FROM THE VERY BEGINNING, IT WAS IMPORTANT TO THE STUDENTS...

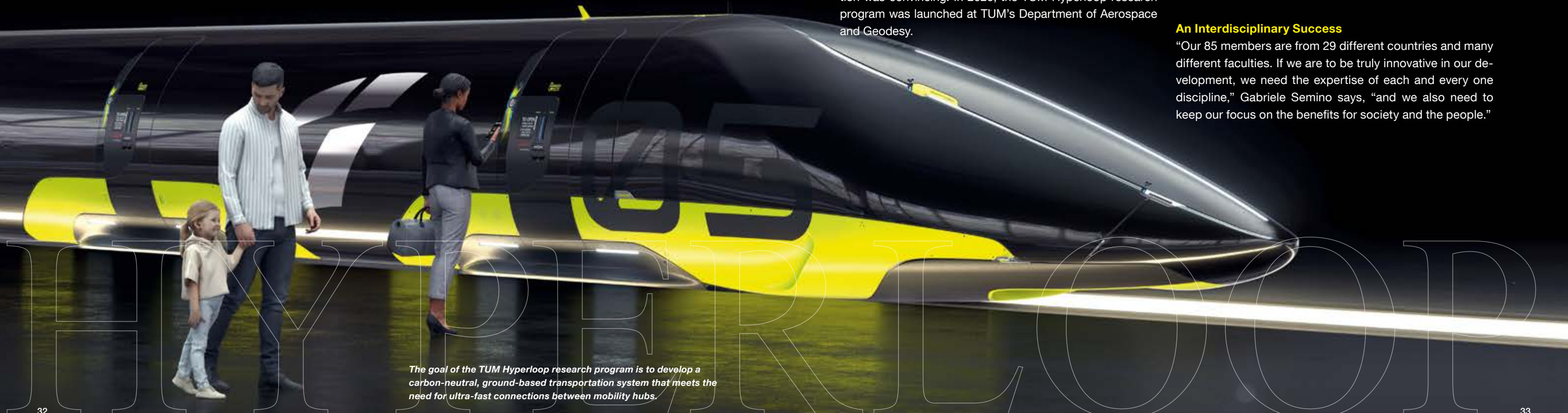
...to develop a means of transportation for the future.

Increasing speed was not the only goal for the students. “We want to develop a means of transport that has a future and is socially acceptable. In short, we don’t just want to build a fast tin can. We also want it to be comfortable and appealing, safe, affordable and sustainable,” says TUM Alumni Gabriele Semino (Bachelor Physics 2016, Master 2019), who has been involved almost from the beginning. The students’ dedication was convincing: In 2020, the TUM Hyperloop research program was launched at TUM’s Department of Aerospace and Geodesy.

The program is being funded by the Bavarian government’s Hightech Agenda Bayern. In an initial phase, concept analyses will be carried out to evaluate the feasibility and potential of the concept for Germany. To this end, a 24-meter test tube and a prototype capsule will be built on a 1:1 scale. This will incorporate expertise from various disciplines, such as Materials Science, Civil Engineering and Propulsion Systems.

An Interdisciplinary Success

“Our 85 members are from 29 different countries and many different faculties. If we are to be truly innovative in our development, we need the expertise of each and every one discipline,” Gabriele Semino says, “and we also need to keep our focus on the benefits for society and the people.”



The goal of the TUM Hyperloop research program is to develop a carbon-neutral, ground-based transportation system that meets the need for ultra-fast connections between mobility hubs.

STEPS TOWARDS THE GOAL

STEP 1

SIMULATION

The Hyperloop team is creating computational tools and models to evaluate the system holistically, providing input for decisions in the development process.

STEP 2

FULL-SCALE

The Hyperloop team is building a scalable, 24-meter-long, full-scale demonstrator to validate the design and collect data for models and future iterations.

STEP 3

FEASIBILITY

The Hyperloop team is analyzing the system's potential, taking into account financial, market, environmental and safety aspects.



The TUM students have won all four Hyperloop competitions in California. Here, SpaceX founder Elon Musk is taking a look at the TUM initiative's pod.

AND THE SAGA CONTINUES...

...with the next challenging competition.

Following the success of the past Hyperloop competitions, the next research project involving TUM students is now underway. In his "Not-a-Boring Competition," SpaceX founder Elon Musk is challenging teams from all over the world to bore a 30-meter-long and 50-centimeter-wide tunnel as quickly and precisely as possible.

A team of TUM students has now joined forces with the aim of once again succeeding in this competition by building the world's fastest tunnel-boring machine. A major motivation here is the students' desire to work on a sustainable future in which less time is wasted in traffic. "We believe that building tunnels is a forward-thinking technology and we want to help shape it with our innovation. Tunnels enable us to become better connected and increase the quality of urban life," says Jona Roßmann of the team TUM Boring – Innovation in Tunneling.

The team has already qualified for the finals of the competition to be held in California in the summer of 2021. The TUM Boring – Innovation in Tunneling initiative consists of a team of over 60 highly motivated students from 16 different departments of TUM, LMU and the Munich University of Applied Sciences. It is sponsored by Bund der Freunde der TUM.

More info at
go.tum.de/083653



KontakTUM Program

For Alumni of the Technical University of Munich
Spring/Summer 2021

The lawn in front of Galileo, the new building opposite the Department of Mechanical Engineering right at the subway stop TUM Campus Garching in summer time.



Due to the coronavirus pandemic, many of the following events are scheduled as online events. In the case of in-class events, these may have to be postponed or cancelled at short notice. We kindly ask you to check the respective website in advance to see if there are any changes to the event.

BREAKING NEW GROUND TOGETHER

TUM STUDENTS ARE INVOLVED IN NUMEROUS PROJECTS, INITIATIVES AND ASSOCIATIONS – FROM STUDENT BUSINESS CONSULTING TO INTERNATIONAL AID. IN DOING SO, THEY RECEIVE THE BEST POSSIBLE SUPPORT FROM THE TUM NETWORK. THE STUDENTS EXCHANGE IDEAS WITH ALUMNI, APPLY WHAT THEY HAVE LEARNED DURING THEIR STUDIES AND HONE THEIR ENTREPRENEURIAL THINKING AND SKILLS.

TUM students and alumni have an opportunity for mutual learning at the regular Career Lounges, at webinars, or at TUM Mentoring events, where they can seek advice on career issues from experienced TUM Alumni. Share your own experience or benefit from the insights of others. No matter in which phase of your life you find yourself, you are cordially invited.



THIRTY CLEVER MINDS

In the fall of 2019, students and doctoral candidates at TUM have formed the HORYZN group. Some of them are from the Department of Aerospace Engineering, others from Chemistry, Physics, Mechanical Engineering, Informatics or Business Administration. Their common goal: to build a vertical take-off and landing aircraft. They have spent an entire year developing the prototype. The result is impressive: Silencio Gamma is the largest vertical take-off and landing aircraft ever built at TUM that is capable of flying. What makes HORYZN special is the fact that its drone has wings: four hover motors are mounted on the wings, and two more on the wingtips. This makes it easier to control and thus safer. The drone is intended for use in the medical sector, for example to transport blood products, medicines or defibrillators.

A video on the project is available at: go.tum.de/813823



CAREER LOUNGES

Precious Insider Knowledge



Insider knowledge is always worth its weight in gold. This is what the TUM Network thrives on. At the Career Lounges during the TUM Career Days, experienced TUM Alumni share their knowledge and insights. They open the panel on a certain topic, talk about their professional and personal life and invite you to exchange experiences. Why not take the opportunity to get to know different career paths and expand your network?

CAREERS IN CONSULTING (IN GERMAN)

Career prospects for the consulting industry are deemed to be promising. But how can you make a successful entry? TUM Alumni share their insights into the job market and talk about the current challenges.

Thur. 06.05.2021, 6 pm – 7.30 pm

REGISTRATION / INFO: www.community.tum.de/en/events

DOCTORATE – AND THEN WHAT? (IN GERMAN)

A wide range of career opportunities are available to you after your doctorate. However, we recommend that you already set the course for your further career during the final phase of your doctorate. Alumni from academia and industry who have completed their doctorates offer tips as to how to launch your individual career.

Thur. 17.06.2021, 6 pm – 7.30 pm



TUM CAREER DAYS

Online Events for Your Career

This summer semester, the TUM Career Days will once again take place in the virtual space. Webinars and other online formats will provide you with comprehensive information on topics related to careers, applications, and career entry.

DATES

Thur. 06.05.2021, Thur. 17.06.2021
All day

REGISTRATION / INFO

www.community.tum.de/en/careerdays

WEBINAR

Gehalt verhandeln

Im heutigen Berufsleben sind häufige Job- und Branchenwechsel an der Tagesordnung. Dabei ist es oft nicht einfach, den eigenen Marktwert richtig einzuschätzen und sich bei der Gehaltsverhandlung souverän aufzustellen. Auch die Gehaltssteigerungschancen innerhalb eines Unternehmens richtig zu bewerten, ist nicht leicht. Um ein Gehaltsgespräch positiv zu gestalten, sollten Sie sich intensiv vorbereiten. In unserem Webinar informieren wir Sie über unterschiedliche Verdienstmöglichkeiten in verschiedenen Branchen und Positionen und geben Ihnen Tipps für eine erfolgreiche Gehaltsverhandlung.

DATE

Tue. 15.06.2021
5 pm – 6 pm

PLACE

Online

REGISTRATION/INFO

www.community.tum.de/en/events

WEBINAR

Netzwerken mit Social Media

Networking und zielgerichtetes Selbstmarketing sind die Basis für einen guten Start und die erfolgreiche Positionierung im Job. Wichtig dabei ist es, sich auf unterschiedliche Menschen einzustellen, um mit diesen eine Beziehung aufzubauen und erfolgreich zusammenzuarbeiten. Die Portale XING und LinkedIn sind hilfreiche Tools, die Sie für Ihre Karriereplanung heranziehen können. In diesem Webinar erfahren Sie, wie Sie eine gute Sichtbarkeit im beruflichen Kontext erreichen und für ein zielgerichtetes Personal Branding sorgen können.

DATE

Wed. 26.05.2021
5 pm – 6 pm

PLACE

Online

REGISTRATION/INFO

www.community.tum.de/en/events

WEBINAR

Rechte und Pflichten im Job

Wenn Sie einen Arbeitsvertrag unterschrieben haben, sollten Sie sich im Klaren darüber sein, welche Rechte und Pflichten sowohl Ihnen als auch Ihrem Arbeitgeber zustehen. Der Arbeitsvertrag sollte alle relevanten Bausteine enthalten, die Ihnen wichtig sind und die Sie bereits im Vorfeld besprochen haben. Für jedes Arbeitsverhältnis ist heute ein Arbeitszeugnis von großer Bedeutung. Sie erfahren in diesem Webinar auch, wie ein gutes Zeugnis aussehen sollte und welche Tücken der Zeugniscode hat.

DATE

Thur. 15.07.2021
5 pm – 6 pm

PLACE

Online

REGISTRATION/INFO

www.community.tum.de/en/events

ADVICE FROM COLLEAGUES

Mutual Growth

ADVENTURE: STARTING A CAREER

The first 100 days on the job, the challenges of everyday work life, and considerations on further career planning – when starting out in professional life, many things are new and unfamiliar. We are inviting young alumni in their first year of work to exchange ideas and experiences with other young professionals. The group offers a safe space to discuss problems with like-minded people, to pass on experiences and to develop possible solutions.

DATES

Wed. 19.05.2021, Wed. 07.07.2021, Wed. 15.09.2021
Always 5 pm – 7.30 pm
Registration at www.community.tum.de/en/events



ADVENTURE MANAGEMENT

People in leadership positions have a lot of questions, too! A group of managers has formed amongst the TUM Alumni, which regularly meets up to exchange ideas and information – this semester this will once again happen online. Whether you want to talk about managing staff or new challenges you are facing in your everyday work-life: the members share their issues with each other and benefit from talking to like-minded people, sharing their experience and ideas. Inexperienced people who have only recently taken on a management position are welcome, as well.

DATES

Thur. 27.05.2021, Thur. 24.06.2021, Thur. 22.07.2021, Thur. 23.09.2021
Always 5.15 pm – 8 pm
Registration at www.community.tum.de/en/events

CAREER ASSISTANCE NETWORK

Mutual Support

Are you looking for a career that suits you? Do you have questions about a specific industry? Are you interested in changing jobs? The Career Assistance Network of the TUM Family aims to connect alumni and students: career-relevant questions can be clarified, or industry and business contacts can be established in a mutual exchange. This protected TUM Community group offers space for confidential exchange and the opportunity to get in touch with each other and discuss career-related topics.

INFO

www.community.tum.de/forum/en/groups/career-assistants-network

MENTORING

MUTUAL GROWTH

NEW OFFER

Alumni Group Stuttgart

Since fall 2020, the greater Stuttgart area has had its own group for alumni and students. The local network was initiated by two highly committed TUM Alumni. With their initiative, Dr. Viktoria Leonhard (Diploma Management & Technology 2008, Doctorate 2013) and Kai-Olaf Dammenhain (Diploma Mechanical Engineering 1989) want to make a contribution to the TUM spirit. "Our goal is to support each other, learn from each other, spend time together and grow together," Viktoria Leonhard explains.

To get to the Alumni Group Stuttgart: go.tum.de/900002



TUM MENTORING ONLINE STAMMTISCH

Finally it's Back!

The TUM Mentoring Stammtisch is back! TUM mentor Siegfried Weigert (Diploma Electrical and Computer Engineering 1985) is reviving the long-standing tradition and is looking forward to the first online Stammtisch. There he will provide insights into the theory of inventive problem solving (TRIZ): how does a structured approach help to overcome mental blocks, how to find ideas in a systematic manner, and how to solve even the most complex problems with the help of contradictions. In the future, the regulars' table will take place four times a year and bring together active and former mentees and mentors.

DATE

Thur. 20.05.2021
6.30 pm – 8 pm

PLACE

Online

REGISTRATION/INFO

Exclusively for members of TUM Mentoring
www.community.tum.de/en/events

BEST PRACTICE

Meet-up for Entrepreneurs

The Meet-up brings together aspiring and experienced entrepreneurs in order to meet online, exchange best practices, discuss and collaborate. It is aimed at TUM members who have already set up a company and generated initial sales. Initiated by TUM Alumni Vincent Hommel (Master Industrial Engineering 2018), the event will take place every last Wednesday of the month in small groups. Share your topics and get feedback on any ideas relating to your business!

DATE

Wed. 28.04.2021 i.a.
7 pm – 8 pm

PLACE

Online

REGISTRATION/INFO

www.community.tum.de/en/events

TUM MENTORING ONLINE NETWORKING EVENT

Mein Tag im Homeoffice

Rückenschmerzen, Nackensteife, ein taubes Handgelenk und das Gefühl, „ständig zu arbeiten“. Kennen Sie das? Bei der Online-Veranstaltung geben die beiden TUM Alumni Niao Wu (Diplom Architektur 2014) und Alexander Mederer (Diplom Sportwissenschaften 2000) Hinweise und Tipps, wie Sie Ihr Arbeitsverhalten und Ihren Arbeitsplatz im Homeoffice aktiv gesünder gestalten können. Neben der Theorie werden wir zusammen ein paar einfache Übungen machen, die Sie im Alltag umgehend anwenden können. Im Anschluss laden wir Sie ein, zu diskutieren, Fragen zu stellen und sich auszutauschen.

DATE

Tue. 11.05.2021
7 pm – 8 pm

PLACE

Online

REGISTRATION/INFO

www.community.tum.de/en/events

MEET TUM STARTUPS

Insights From Felix Haas

The new event series of TUM Mentoring and TUMentrepreneurship offers insights into the personal stories of TUM start-ups in a casual atmosphere, facilitating the exchange of ideas on the topic of start-ups and allowing participants to be inspired by the start-up spirit of the founding teams. TUM Alumni and mentor Felix Haas, co-founder of the start-up IDnow, will kick things off. IDnow is a platform for identity verification in the digital sector.

DATE

Mid-July 2021
6 pm – 7 pm

PLACE

Munich, if necessary online

REGISTRATION/INFO

Exclusively for members of TUM Mentoring
www.community.tum.de/en/events

TUM MENTORING NETWORK MEETING ONLINE

Future Skills

Welche Kompetenzen werden in der Arbeitswelt der Zukunft benötigt? In der Veranstaltung erläutert TUM Alumnus Alexander Pelka (Master TUM BWL 2013) anhand seiner eigenen Erfahrungen und Karrierestationen, welche dieser *Future Skills* am Arbeitsmarkt gefragt sind und wie wichtig dabei auch ein gutes Netzwerk sein kann. Während seines Studiums war Alexander Pelka selbst Mentee bei TUM Mentoring. Er hat vom Erfahrungsaustausch sehr profitiert und gibt nun als Mentor seine Erfahrungen weiter – mittlerweile hat er acht Mentees betreut.

DATE

Tue. 08.06.2021
6 pm – 7 pm

PLACE

Online

REGISTRATION/INFO

www.community.tum.de/en/events



TUM Alumni Felix Haas (Diploma Electrical and Computer Engineering 2006) is a successful entrepreneur. In 2019, he was awarded the title “TUM Entrepreneur of Excellence” by TUM President Thomas F. Hofmann.

Further reading at
www.150.alumni.tum.de/en/felix-haas-en

A SUCESSFUL DOCTORATE

DOCTORATE STUDENTS AT TUM BENEFIT FROM A FIRST-CLASS RESEARCH ENVIRONMENT: EXCITING RESEARCH PROJECTS IN-STEP WITH THE TIMES, THE OPPORTUNITY TO COLLABORATE WITH RENOWNED RESEARCHERS FROM ALL OVER THE WORLD AND THE SUPPORT OF THE TUM GRADUATE SCHOOL ENSURE A HIGH STANDARD IN SCIENTIFIC EDUCATION.

After their doctorate, about half of the young scientists work in industry, often with staff responsibility. In many cases, TUM doctorates are in demand in industry precisely because they have already carried out applied research or worked with the industry during their doctorates. TUM is supporting doctoral students on this path with tailor-made events and contacts with experienced alumni.

THE INDUSTRY-BASED DOCTORATE

Insights on Industry-Based Doctorates

Dr. Susanne Großkurth (Diploma Mechanical Engineering 2008) already established links to the industry during her diploma studies at TUM. To be precise: to MTU Aero Engines. “And somehow I have never really been able to get away from there,” she tells us with a laugh. After graduating, she decided to pursue an industry-based doctorate at Leibnitz University of Hannover in cooperation with MTU.

She has now been with the company for ten years and has held various positions, from technical project manager to team leader in production development. Since February 2021, she has been assistant to the CEO. Susanne Großkurth is also a founding member and core team member of NEW – Network of Engine Women at MTU.

In her webinar “Promovieren mit Industriebezug” on Wednesday, April 28, 2021, Susanne Großkurth will talk about her industry-based doctorate and explain what is needed to complete one successfully.

Why does she want to get involved in the TUM Community? “There are many different approaches to life – and there are no right or wrong ones! Everyone has to decide for themselves what they need to be happy in life. But one thing it does take: people who ask the right questions, who pass on their own experiences, people who encourage you to go your own way!”



WEBINAR

Führungskompetenzen für Promovierende und Postdocs

Wer nach der Promotion in den Job einsteigt, auf den wartet meist recht bald die erste Führungsaufgabe. Eine ganz neue Herausforderung, auf die man sich gut vorbereiten sollte. In diesem Webinar erzählen promovierte Alumni mit langjähriger Führungserfahrung, wie sie ihre erste Führungsrolle gemeistert haben, und geben Tipps, welche Ressourcen Berufseinsteiger nutzen können.

DATE

Mon. 14.06.2021
6 pm – 7 pm

PLACE

Online

REGISTRATION/INFO

www.community.tum.de/en/events

WEBINAR

Convincing CVs

Rarely do the career paths of doctorate students and postdocs fit into standard CV templates. Doctorate, research work – all this needs to be included in a concise manner on a few pages. In this webinar you will learn how to convincingly present your extra skills and experience. The webinar is available in German and English.

DATES

Tue. 04.05.2021 (German),
Tue. 22.06.2021 (English)
From 10 am – 11 am

PLACE

Online

REGISTRATION/INFO

www.community.tum.de/en/events

WEBINAR

Promovieren mit Industriebezug

Im Unternehmen arbeiten und gleichzeitig promovieren: Die Industriepromotion macht es möglich, ihre Absolventinnen und Absolventen sind bei Arbeitgebern hoch begehrte. Gleichzeitig ist die Arbeitsbelastung bei vielen Industriepromovierenden oft deutlich höher und der Kontakt zu Professoren und Forschungskollegen seltener. In diesem interaktiven Webinar berichten TUM Alumni über die eigenen Erfahrungen und beantworten Ihre Fragen.

DATES

Mon. 28.04.2021, 1 pm – 2 pm
Fri. 14.05.2021, 3 pm – 4 pm
Tue. 06.07.2021, 6 pm – 7 pm

PLACE

Online

REGISTRATION/INFO

www.community.tum.de/en/events

WEBINAR

Efficient Job Hunting for Doctorates and Postdocs

Finding an industry job after having completed a doctorate can be challenging – especially for candidates with an interdisciplinary background. This webinar will provide you with valuable advice on how to go about finding possible careers, labor markets and companies. We will also look at how to use keywords effectively for job hunting. The webinar is available in both English and German.

DATES

Tue. 18.05.2021 (German),
Tue. 13.07.2021 (English)
From 10 am – 11 am

PLACE

Online

REGISTRATION/INFO

www.community.tum.de/en/events

START-UPS WITH POTENTIAL

TUM ENTREPRENEURSHIP DAY 2021

It's all about Entrepreneurship!

The TUM Entrepreneurship Day has existed since 2013 and it offers young businesses of TUM a platform. Even though it will take place online this year, there will be plenty of opportunity for the exchange of ideas with start-up consultants and other start-ups – something to look forward to. As an annual highlight, the TUM Presidential Entrepreneurship Award will be presented to an outstanding TUM spin-off.

DATE

Thur. 24.06.2021
All day

PLACE

Online

REGISTRATION/INFO

www.tum.de/en/innovation/entrepreneurship/news-events/tum-entrepreneurship-day

FOR A PERFECT START

Support for Start-ups

TUM has made it its goal to be one of the most successful start-up universities in Europe. Therefore, it offers a wide range of support such as start-up consulting, research and qualifications as well as a strong network for entrepreneurs. More at www.tum.de/en/innovation/entrepreneurship

TUM ONCE MORE THE BEST LAUNCHING PAD FOR START-UPS

TUM offers excellent support for the creation of start-ups. This is what Stifterverband's "Start-up Radar" concludes. For the fourth time in a row, TUM is ranked first among the major German universities. Every year, around 80 companies are founded here.
More at go.tum.de/721089

START-UP CONSULTING

TUM supports students, alumni and scientists who want to start a business with their idea or technology – and does so in all phases of company development: from concept development and generation of the business model, to guidance on suitable funding, to the actual launch and market entry.

go.tum.de/199519

START-UP MENTORING

Start-up mentoring at TUM provides support for start-ups in the market entry phase. Young entrepreneurs can benefit from the extensive experience of senior entrepreneurs. We would like to invite TUM Alumni to share their experience with young entrepreneurs and become part of a new success story.

go.tum.de/199519

START-UP INDEX A-Z

The Start-Up Index reflects the diversity of TUM's spin-offs. Here you will find short profiles of recent and already established TUM spin-offs. The majority of these companies have been founded by TUM Alumni, such as Celonis, Lilium and Personio, which have already been valued at over one billion US dollars.

go.tum.de/513634



Home Office With Style!

The TUM Shop has your back.

You can order stationery and beverage containers, accessories, clothing and much more contact-free at www.shop.tum.de.



VALUED AROUND THE WORLD

NO UNIVERSITY, NO COUNTRY CAN SOLVE TODAY'S SCIENTIFIC CHALLENGES ON ITS OWN. TUM THEREFORE WORKS CLOSELY WITH PARTNER UNIVERSITIES AROUND THE WORLD AND IS ACTIVELY INVOLVED IN INTERNATIONAL NETWORKS.

A new standard of cooperation is being achieved with selected international partners within the framework of strategic alliances. An example is TUM's collaboration with the high-profile partners of the European EuroTech Universities Alliance on joint research strategies addressing important topics of the future. Since 2018, there has been a flagship partnership with the renowned Imperial College in London, and since 2020 with China's Tsinghua University.



STRATEGIC PARTNERSHIPS

Based on their long-standing cooperation, TUM and the Imperial College London (ICL) have agreed on a strategic partnership with a focus on sustainability. The ICL is one of the best technical universities in Europe and is linked to TUM through numerous research collaborations. Since 2020, TUM has now also been deepening its collaboration with China's Tsinghua University. The two presidents Prof. Thomas F. Hofmann and Prof. Qiu Yong have agreed on a strategic partnership in research, teaching and innovation. TUM also maintains extensive exchange with other Chinese universities and has been present in Beijing with its own office since 2006.

Read more at go.tum.de/159968



Presidents Prof. Thomas F. Hofmann and Prof. Qiu Yong signed the partnership agreement during a video conference.

TUM GLOBAL WEEK

TUM’s International Network

Every year the TUM Global & Alumni Office organizes the TUM Global Week, a platform for the exchange of ideas on the topics of internationalization and international experience for the entire TUM Community. In addition to numerous information and networking events for students, scientists, administrative staff, TUM alumni and TUM’s international partners, the week is the occasion for the annual meeting of the TUM Liaison Officers with the TUM Community. Look forward to a varied program and the exchange with our Liaison Officers from the five liaison offices in Beijing, Brussels, Mumbai, San Francisco and São Paulo as well as with the campus in Singapore (TUM Asia).

Registration: www.international.tum.de/tumglobalweek

DATES

Mon. – Fri.
05. – 09.07.2021
All day

PLACE

Online



TUM.AFRICA NEWSLETTER

Connecting Experts on Africa

Four times a year, the newsletter provides updates on projects on the African continent and in particular on TUM's partnership with the Kwame Nkrumah University of Science and Technology (KNUST) in Ghana, one of Africa's leading universities.

Subscribe to the newsletter here: go.tum.de/803800

The Lycée Schorge in Koudougou, Burkina Faso, was designed by TUM Professor Francis Kéré. The architect is one of the most important international representatives of socially responsible architecture. He has received several awards for combining social and ecological approaches in his designs. At TUM, he holds the Chair of Architectural Design and Participation.

LIAISON OFFICE TUM BRUSSELS

Strengthening European Partnerships

Since 2012, TUM has had a liaison office in the capital of the European Union and is integrated into the Brussels office of the EuroTech Universities Alliance. TUM is hereby strengthening its cooperation with the EuroTech partners and the other European institutions, its participation in EU funding programs and initiatives, and also the transfer of knowledge with key players on site. Additionally, Liaison Officer Maria-Valerie Schegk is connecting excellent researchers from all over Europe and is paving the ground for joint projects.

More information at: www.international.tum.de/en/brussels



TUM Brussels Liaison Officer
Maria-Valerie Schegk

EUROPEAN UNION WEEK

The Future of the European Union

As part of this year's European Union Week, the TUM School of Management, in cooperation with the HEC Paris, is going to organize a three-day conference. Each of the conference days will address a major topic of contemporary relevance for the European continent and aims to inform alumni and students all over Europe about the state of the European Union, ultimately providing a perspective about the EU's present and future.

DATES

Mon. – Wed. 10. – 12.05.2021
All day

PLACE

Online

REGISTRATION/INFO

www.wi.tum.de/faculty-research/european-union-week

ENTREPRENEURSHIP DAY

EuroTech Innovation Day

Powered by the motto “Transcending Borders – Striving for Excellence” the EuroTech Innovation Day will be an online celebration of entrepreneurship and innovation to provide audiences with a unique interactive exposure. In the opening panel talk the six presidents of the EuroTech Universities will talk about, how universities support scientific spin-offs and the future directions for the development of academia-industry relations. This will be followed by presentations on topics including “Boosting Entrepreneurship” and “From Product to Market”. TUM Alumni are welcome.

DATE

Wed. 28.04.2021
All day

PLACE

Online

REGISTRATION/INFO

eurotech-universities.eu

GLOBAL MINDS ONLINE

Interkulturelle Kompetenzen

Wollen Sie irgendwann doch einmal (wieder) ins Ausland: im Studium, direkt danach oder auch über die Firma? Immer wieder bieten sich Möglichkeiten, eine kurze oder längere Zeit im Ausland zu arbeiten. Was es dabei zu beachten gilt und welche Fragen auftauchen können, erörtert die Veranstaltungsreihe Global Minds in Zusammenarbeit mit dem TUM Sprachenzentrum. Bei jedem Termin wird ein bestimmtes Zielland oder ein Kulturraum – im Sommersemester Mexiko, USA und Japan – mit seinen spezifischen Rahmenbedingungen, dem dazugehörigen Bewerbungsprozess und den interkulturellen Herausforderungen vorgestellt.

DATES

Japan: Mon. 17.05.2021, 10 am – 11.30 am
Mexico: Mon. 17.05.2021, 4.45 pm – 6.15 pm
USA: Fri. 11.06.2021, 11.30 am – 1 pm

PLACE

Online

REGISTRATION/INFO

www.community.tum.de/en/events

NIGHTWATCHMAN TOUR

On Tour with our Guests

TUM welcomes many international postdocs and guest researchers and provides them with numerous services that support them in everyday life, including a special cultural program. This summer, TUM's international guests are invited to a Nightwatchman Tour through Munich, and TUM alumni can join them for this tour. You get to know Munich via its stories and what life was like as a nightwatchman. At the same time you get to know TUM's international guests and experience the TUM family.

DATE

Sat. 07.08.2021
From 7 pm

PLACE

München

REGISTRATION/INFO

www.community.tum.de/en/events

INSIGHTS THROUGH ROLE MODELS

THE WOMEN OF TUM FORM A VIBRANT NETWORK THAT IS GROWING RAPIDLY AND CONNECTS WOMEN ACROSS CONTINENTS, GENERATIONS, HIERARCHICAL LEVELS AND PROFESSIONAL DISCIPLINES. FEMALE ENTREPRENEURS PROVIDE INSIGHTS INTO THEIR INDUSTRIES, FEMALE SCIENTISTS EXPLAIN THEIR RESEARCH AND EXPERIENCED FEMALE ALUMNI SHARE VALUABLE FINDINGS WITH THE YOUNGER GENERATION.

The Women of TUM Network is also meeting online in the TUM Community. It is one of the most active among the TUM Community groups. The hashtag #womenofTUM makes the Women of TUM visible on social media. As important role models, the Women of TUM support the women of TUM for the future – both in the workplace and at home.

www.community.tum.de/en/women

In her laboratory at the Weizmann Institute of Science in Israel, TUM Ambassador Maya Schuldiner intends to close gaps in our understanding of yeast proteins – and thus save human lives.



Women of TUM
Log in to the TUM Community
and be a part of it



www.community.tum.de/en/women

FAMILY-FRIENDLY SCIENCE – IS THAT POSSIBLE?

TUM Ambassador Maya Schuldiner is a multi-award winning molecular geneticist who researches and teaches at the Weizmann Institute of Science in Israel. For a one-year research visit, she went to Munich to work with Prof. Dr. Thomas Misgeld, Head of the Scientific Institute for Cell Biology of the Nervous System at the TUM School of Medicine. Her husband Oren Schuldiner, who is also a scientist, and her three children accompanied her. "Without my husband, I would not be able to be the scientist I want to be," the renowned researcher emphasizes. "If you are happy in your private life, it enables you to do good research." This is why she also places great importance on gender equality in her own laboratory in Israel.

At a Women of TUM afterwork event on the 9th of June, 2021, Maya Schuldiner will offer insights into the course of her outstanding career in science and will show that an active family life and international professional success are not mutually exclusive.

Further reading
www.150.alumni.tum.de/en/maya-schuldiner-en



COMMITMENT

Women of TUM-Taskforce

More and more women from all over the world are getting involved in the Women of TUM Network and are embracing the services offered to empower each other. As of this year, there is the Women of TUM Taskforce, which assists in approaching female speakers, organizing and promoting events, and works to put the Women of TUM even more into the international spotlight. One of them is TUM student Ananya Bordoloi from India (see right). After attending one of the Women of TUM events, she immediately knew that she wanted

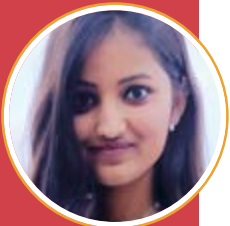
to get involved with the Women of TUM on a larger scale. Her mission now is to tell other female students about the Women of TUM and encourage them to join the network.

You also feel inspired to support the Women of TUM Network with your time and energy? Get in touch with us at alumniundcareer@tum.de



“I am part of the Women of TUM-Taskforce because it is a great platform to encourage and be encouraged, connect with different women and motivate every woman out there! Every woman’s story is worth sharing.”

Ananya Bordoloi
Women of TUM Taskforce
TUM Master Management



WOMEN OF TUM AFTERWORK EVENT

How to Change Career as a Physician

How does a clinically active physician come to trade in her medical specialty for a digital health start-up? TUM alumna Lara Maier (State Examination in Medicine 2014, Doctorate 2018) shares her career path, which led her from Medical Studies at TUM through several clinical stations and projects to her own company. She gives tips on what matters in one's own career and shows the benefits of listening to one's inner voice. Afterwards, there will be time for questions and exchange.

DATE
Wed. 12.05.2021
7 pm – 8.30 pm

PLACE
Online

REGISTRATION/INFO
www.community.tum.de/en/events

WOMEN OF TUM AFTERWORK EVENT

New Digital Modes of Entrepreneurial Work

The afterwork will be opened by Dr. Katrin Hahn from the MCTS at TUM. Her research interests relate to the reorganization of industrial innovation through digital technologies and the increasing importance of addressing societal challenges in technology and policy. In the afterwork she will present her research findings and explain how the Covid-19 pandemic has affected the digitalization of companies. Afterwards, there will be time to network.

DATE
Wed. 10.11.2021
7 pm – 9 pm

PLACE
Online

REGISTRATION/INFO
www.community.tum.de/en/events

WOMEN OF TUM AFTERWORK EVENT

Doing Science like a Woman

“Being a scientist is not a job. It's a passion, a way of life.” With her keynote speech, TUM Ambassador Maya Schuldiner opens the Afterwork and provides insights into the course of her outstanding career in science, which clearly shows how family life and professional success are possible at the same time. She will give tips on how to have a successful career as a professor and woman, answer questions and discuss with the participants. Afterwards, there will be the opportunity to network and exchange ideas and experiences.

DATE
Wed. 09.06.2021
7 pm – 8.30 pm

PLACE
Online

REGISTRATION/INFO
www.community.tum.de/en/events

TASTER COURSE DURING THE SUMMER HOLIDAYS

MINT-Erlebnis an der Uni

Ihre Tochter, Ihre Enkelin oder Ihre Nichte interessiert sich für Naturwissenschaft und Technik? Dann melden Sie sie doch für einen Schnupperkurs in den Sommerferien an! In den zwei- bis viertägigen Mitmachkursen werden die Schülerinnen selbst zur Naturwissenschaftlerin, Forscherin oder Ingenieurin: Sie werden von Wissenschaftlerinnen und Wissenschaftlern der TUM begleitet und gewinnen spannende Einblicke in die unterschiedlichen MINT-Bereiche, deren Schwerpunkte je nach Altersgruppe unterschiedlich gesetzt sind. Fördern Sie die Neugier Ihres Nachwuchses!

DATES
Mon. – Fri. 02. – 20.08.2021
All day

PLACE
All TUM Campuses

REGISTRATION/INFO
For female pupils from 10 years and up
www.explore.tum.de/minterlebnis



WOMEN OF TUM AFTERWORK EVENT

Female (Self-) Leadership

Achtsamkeit macht uns nicht langsam, sondern leistungsfähiger – das zeigt TUM Alumna Rebecca Bürkle (Master Mathematik 2016) im interaktiven Workshop. Zusammen mit den Teilnehmerinnen schaut sie sich bewusste und unbewusste Stressursachen an und ergründet, wie wir unseren Kopf dazu nutzen können, unser Arbeitsleben leicht und nachhaltig selbst zu gestalten. Rebecca Bürkle arbeitet im Bereich IT Inhouse Consulting und ist als Coach selbstständig. In ihrer Coaching-Arbeit zeigt sie vor allem angestellten MINTlerinnen, wie sie Leistung mit Leichtigkeit verbinden können.

DATE
Tue. 14.09.2021
7 pm – 9 pm

PLACE
Online

REGISTRATION/INFO
www.community.tum.de/en/events



MAY WE OFFER YOU SOME MOTIVATION?

Why are people motivated differently? Can motivation be learned? How do I motivate others? At the Women of TUM Talk 2020, three alumnae from Science and Business discussed the topic of “Motivation”.

The recording of the event in German language is available at www.community.tum.de/en/women

LIFELONG LEARNING

TUM SEES ITSELF AS A PLACE WHERE KNOWLEDGE IS EXCHANGED, AND AS A SERVANT TO SOCIETY. IT STRIVES TO SUPPLY PEOPLE WITH EXPERTISE, IMPROVE THEIR LIVES WITH NEW TECHNOLOGIES, EDUCATE AND INSPIRE, AND THUS PREPARE THEM FOR THE FUTURE.

As a TUM Alumni, you not only have the privilege of regularly coming back to TUM to attend lectures or participate in seminars – such as the public lecture series hosted by the Chair of Ergonomics. Additionally, you can continue your education by using online learning tools, webinars or further education programs. The newly established TUM Institute for LifeLong Learning is celebrating the TUM Learning Festival 2021, and among TUM's Massive Open Online Courses (MOOCs) are many exciting courses for TUM Alumni.

AN EYE ON THE DRIVERS

How do drivers behave on multi-lane big city roads and what do they do on small country roads? With the help of the static driving simulator, the researchers at the Chair of Ergonomics are able to answer such questions. A BMW 6-series chassis forms the basis of the driving simulator. The SILAB software developed by the WIVW Center for Traffic Sciences in Würzburg is used as the simulation environment for displaying the scenarios.

Further reading at
www.mw.tum.de/en/lfe/research/labs/static-driving-simulator

LIFELONG LEARNING

TUM Learning Festival

TUM believes in being a partner in education: not only for enrolled students, but for all members of the university community – for a lifetime. And this includes all TUM Alumni. To emphasize this mission, the TUM Institute for LifeLong Learning (TUM IL3) is hosting a series of events under the title TUM LEARNING FESTIVAL 2021.

learningfestival.ill.tum.de/en



TUM LEARNING CHALLENGE 2021

Join And Learn Something New!

"I would like to try agile software development methods at work."
"This year I finally want to learn yoga."
"Even though it's difficult, I want to get into programming."

The TUM Learning Challenge is the TUM Learning Festival's call for action: It is designed to encourage everyone to use TUM's support to learn something new this year. Interested parties can submit their individual Learning Challenge on the website and will receive useful impetus for learning by email, which will help to achieve the personal

target. Any challenge is allowed, they can be about anything, professional as well as private, soft skills as well as hard skills. With the hashtag #tumlearningchallenge, participants can additionally commit to their Learning Challenge 2021 on social media and support each other. Participation in the TUM Learning Challenge is open to everyone at any time and is free of charge.

learningfestival.ill.tum.de/en/learning-challenge

LECTURE SERIES

Ergonomie aktuell

Seit mehreren Jahren bietet Prof. Dr. Klaus Bengler seinen Doktoranden die Möglichkeit, ihre Arbeiten in einer Seminarreihe vorzustellen und mit dem Plenum zu diskutieren. Aber auch Kollegen aus der Fakultät für Maschinenwesen sowie Vertreterinnen aus der Industrie referieren hier über die große Bedeutung der Ergonomie in der interdisziplinären Zusammenarbeit und in der Praxis. Die Seminarreihe hat sich zu einem Forum für Besucherinnen und Besucher entwickelt, die an ergonomischen Erkenntnissen interessiert sind. Alumni der TUM sind herzlich willkommen.

DATES
During the semester on Fridays 1 pm

PLACE
TUM Campus Garching,
if necessary online

REGISTRATION/INFO
Open event without registration,
free of charge
www.mw.tum.de/en/lfe/about/event-calendar

LECTURE SERIES

Lecture Series ‘Environment’

The lecture series organized by the Environmental Department of the TUM Student Representation has a tradition going back more than 35 years. Speakers from research, organizations, authorities and corporations will talk about technical solutions to environmental problems, health or climate protection under one central theme. The lecture series is also a wonderful opportunity for alumni to visit TUM, provided the current situation allows it. For those who prefer to catch up on current environmental topics from home: The lectures will be recorded and are available on the website of the Environmental Department.

DATES
Starting 13.04.2021 Tuesdays, 6 pm – 7.30 pm
Starting 14.04.2021 Wednesdays, 7.30 pm – 9 pm

PLACE
Online

REGISTRATION/INFO
Open event without registration,
free of charge
go.tum.de/472144

VORTRAGSREIHE ONLINE

TUM@Freising

Die beliebte Vortragsreihe TUM@Freising geht online. Die Vorträge geben Einblick in die aktuelle Forschung an der TUM School of Life Sciences und machen Wissenschaft für alle verständlich. Eine anschließende Diskussion ist ausdrücklich erwünscht, denn Wissenschaft lebt vom Meinungsaustausch. Nach der coronabedingten Pause startet die Vortragsreihe ab dem Frühjahr zunächst mit virtuellen Angeboten.

DATES
The current dates can be found on the website or via the Reminder Service: just email us at TUM.Freising@wzw.tum.de.

PLACE
Online

REGISTRATION/INFO
Open event without registration,
free of charge, go.tum.de/488729



VORTRAG

Spitzenforschung live

Die Wissenschaft lebt auch von Persönlichkeiten mit großer Erfahrung. Die TUM Senior Excellence Faculty veranstaltet zusammen mit dem MCTS die Vortragsreihe „Tech-Histories Alive – Zeitzeugen der Wissenschaftsgeschichte“. Dort berichten TUM Emeriti of Excellence aus ihrem Arbeits- und Wissenschaftsleben. Prof. Dr. Dr. h.c. Josef Nossek, ehemaliger Ordinarius an der Fakultät für Elektrotechnik und Informationstechnik, berichtet von seinen Forschungsaktivitäten mit den Schwerpunkten Schaltungstheorie und Signalverarbeitung. www.emeriti-of-excellence.tum.de/a-z/josef-nossek

DATES
Winter semester 2021/22

PLACE
TUM Campus Munich, Vorhoelzer Forum,
Arcisstraße 21

REGISTRATION/INFO
Open event without registration, free of charge
www.emeriti-of-excellence.tum.de/tech-histories-alive

LECTURE

Algen als Treibstoff

Wie können wir Algen für eine nachhaltige Energiegewinnung nutzen? TUM-Professor Thomas Brück ist Leiter des TUM-Fachgebiets für Industrielle Biokatalyse und ein international gefragter Experte auf dem Gebiet der Algentechnologie. Am weltweit einmaligen Algentechnikum der TUM in Ottobrunn erforscht er die Einsatzmöglichkeiten von Salzwasser-Algen, beispielsweise um Biotreibstoff und Carbonfasern herzustellen. In diesem Vortrag erklärt er auf anschauliche und unterhaltsame Weise seine Forschung.

DATE
Thur. 10.06.2021
6 pm – 8 pm

PLACE
TUM Campus Garching

REGISTRATION/INFO
www.community.tum.de/en/events

ONLINE COURSES

Trauma Surgery or Digitalization in Aeronautics

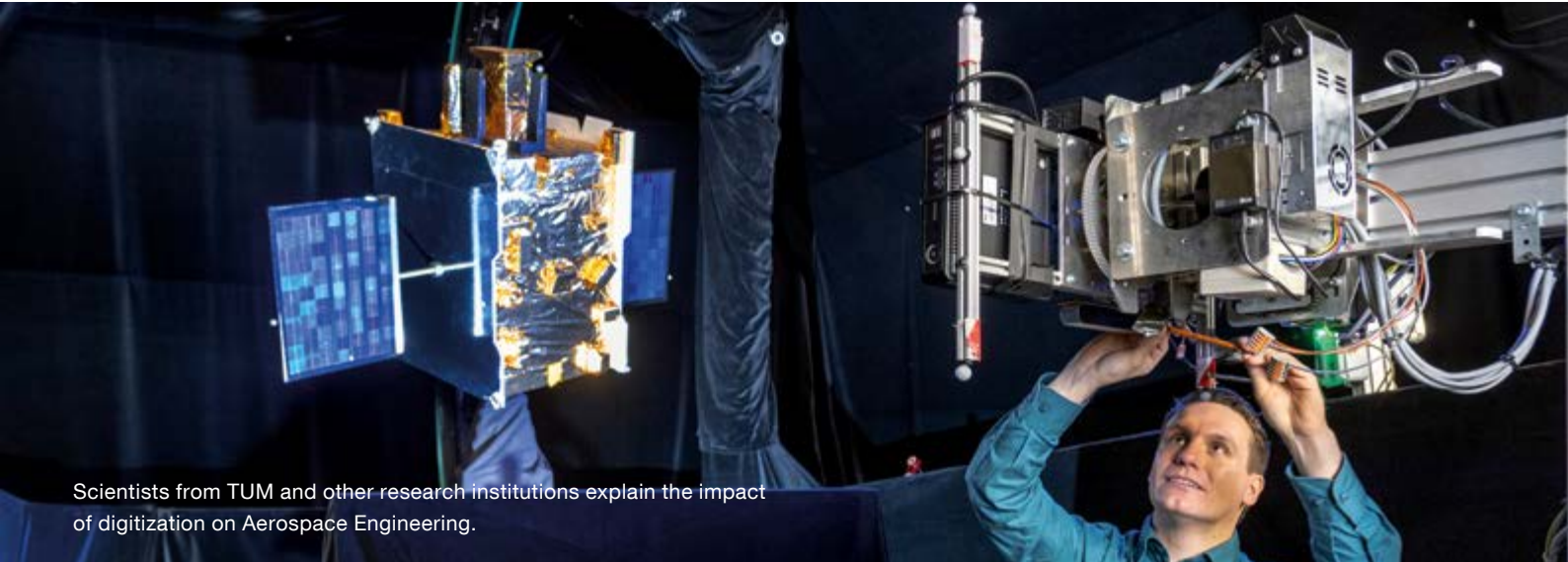
Massive Open Online Courses (MOOCs) are interactive online courses that are accessible world-wide and free of charge. TUM was quick to recognize their potential and was the first German university to publish its own OOCs on reputable American platforms. The ever-growing portfolio has since added to our university's curriculum and provides an international audience with access to top-level education. Current courses include topics such as Trauma Surgery, Digitalization in Aeronautics and Space, and Communication Acoustics.

DATES
Accessible anytime

PLACE
Online

REGISTRATION / INFO
Open event without registration, free of charge

www.tum.de/en/lifelong-learning/moocs



Scientists from TUM and other research institutions explain the impact of digitization on Aerospace Engineering.

ONLINE LECTURE SERIES

Mobilität in der Stadt

Das Mobilitätsverhalten der Menschen ändert sich. Diesen Wandel zu begreifen und mitzugestalten – das ist eine Herausforderung der Stadtentwicklung für die kommenden Jahre. Die Vortragsreihe, organisiert vom Lehrstuhl für Raumentwicklung der TUM, wirft einen Blick auf Bedingungen und Folgen der digitalen Transformation für die städtische Mobilität.

DATES
Tue. 11.05.2021, Tue. 08.06.2021,
Tue. 29.06.2021, 6.30 pm – 8 pm

PLACE
Online

REGISTRATION/INFO
Open event without registration, free of charge
www.ar.tum.de/en/re/public-lecture-series-public-transport

EXHIBITIONS

The Role of Computers in Architecture

For the first time in the German-speaking world, the exhibition “The Architecture Machine” at Architekturmuseum der TUM in the Pinakothek der Moderne takes a comprehensive look at digital development in Architecture. From its beginnings in the 1950s to the present day, the architecture museum tells this exciting story. The fundamental question behind it: has the computer changed Architecture, and if so, how?

TUM'S MUSEUM OF ARCHITECTURE

The history of TUM's Museum of Architecture goes back to 1868 – at that time it was still a teaching collection for architectural education at the New Polytechnic College. In the first half of the 20th century, the field of Architecture changed and so the historical model collection was transformed into an archive, which since 1975 has gradually taken on the functions of a museum. Under TUM Professor Winfried Nerdinger, who was appointed the first Director of the TUM Museum of Architecture in 1988, the museum gained international recognition. After Prof. Nerdinger's retirement in 2012, Andres Lepik was appointed Professor of Architectural History and Curatorial Practice at TUM and is the new Director of the Museum of Architecture.

Read the alumni story of TUM Emeritus of Excellence Winfried Nerdinger at:
www.150.alumni.tum.de/en/winfried-nerdinger-en

DATES
The Architecture Machine
Extended until Sun. 06.06.2021
All day

Taiwan acts!
Wed. 08.07.2021 – Sun. 03.10.2021
All day

PLACE
Architekturmuseum der TUM
in der Pinakothek der Moderne,
Barer Straße 40, München

REGISTRATION/INFO
Open event without registration, free of charge
www.architekturmuseum.de/en/aktuell

TUM CAMPUS RUN

Ready, Set, Go!

Following last year's virtual editions, the TUM Campus Run this summer semester will be a hybrid event – meaning virtual and in person. All TUM members with a TUM ID can take part. As usual, there will be two routes of different lengths, one of 5.5 and one of 11 kilometers. Runners will start at the same time on campus or at their homes (and then track their times with their running app); the start will be live-streamed on the TUM Junge Akademie YouTube channel.

You have forgotten your TUM ID? Contact us: alumniundcareer@tum.de

RUNNERS ALL OVER THE WORLD

For eight years now, hundreds of TUM students, alumni and employees have been gathering at Campus Garching to participate in the TUM Campus Run. Due to the coronavirus pandemic, the run was converted into a 'home run' in the summer semester of 2020: The 730 participants completed the course for which they were registered independently on the 25th and 26th of June, 2020, thus making the virtual edition of the Campus Run, held in a total of 22 countries on a total of four continents, a resounding success.



DATES
Fri. – Sat. 25. – 26.06.2021
In the afternoon

PLACE
Online and at TUM Campus Garching

REGISTRATION/INFO
www.ja.tum.de/en/campusrun

#virtualTUMrun

UNIVERSITY ORIENTATION

Ran an die TUM

Auch Ihr Nachwuchs interessiert sich für ein Studium an der TUM? Dann ist die Veranstaltungsreihe „Ran an die TUM: Perspektive Studium“ genau das Richtige. Wöchentlich im Wechsel werden – im Sommersemester wieder online – die Studienbereiche der TUM vorgestellt: Warum macht Sport gesund und glücklich, was kann man als Ingenieur alles machen, und wie sieht eigentlich ein Studium der Chemie aus? Immer donnerstags werden andere Fragen beantwortet. Kommen Sie dazu!

DATES
Thur. 29.04.2021,
06.05.2021, 17.06.2021
From 5.30 pm – 7 pm

PLACE
Online

REGISTRATION/INFO
www.explore.tum.de/ran/



RECORDINGS

TUM AT HOME
WITH YOU



You missed the Covid-19 Lectures or the Munich Talks with RKI President Prof. Lothar Wieler? No problem. Due to the pandemic, many events at TUM have switched from face-to-face to online mode – with the advantage that many lectures were recorded and are now also available afterwards.

LECTURE SERIES

Covid-19 Lectures

The pandemic has shown how essential Science is for many parts of society: researchers acquire new knowledge about the virus, they develop vaccines and possible treatments, and they advise policy-makers and industry. In this online lecture series, leading scientists from TUM and TUM's university hospital Klinikum rechts der Isar provide insights into their current research on the pandemic – and in doing so shed light on various scientific disciplines.

All lectures can be found at wiki.tum.de/display/COVID19Lectures



THE LECTURES

- **Prof. Dr. Percy Knolle**
How does the Human Body manage the Corona Virus? (Englisch)
- **Prof. Dr. Ulrike Protzer**
SARS-CoV2: From Discovery to Vaccination (English)
- **Prof. Dr. Alena Buyx**
Distributive Justice in the Pandemic: ICU Triage and Vaccine Allocation (German)
- **Prof. Dr. Peter Henningsen**
Dimensions of Psychological Distress in the Pandemic (German)
- **Prof. Dr. Isabell Welp**
Effects of the Pandemic on Companies and the Way We Work (German)
- **Prof. Dirk Heckmann**
The Fundamental Right to Life and Health. Legal and Ethical Reasons for Restrictions on Freedom in the Pandemic (German)

TUM Professor Ulrike Protzer is Director of the Institute of Virology at TUM and a member of the Bavarian Expert Council on the corona crisis.

LECTURE SERIES

Wissenschaft
für jedermann

Erfahren Sie, wie der Hyperloop funktioniert und wie Roboter unsere Welt verändern werden. Bei der Vortragsreihe, die gewöhnlich im Deutschen Museum stattfindet, waren im Wintersemester die TUM Alumni Prof. Dr. Agnes Jocher und Prof. Dr. Sami Haddadin sowie viele andere Forschende aus der TUM eingeladen, um Wissenschaft für alle zu erklären. Schauen Sie rein.

INFO

Prof. Dr. Sami Haddadin:
Robotics and Artificial Intelligence
and many more lectures

Available on the YouTube channel
of Deutsches Museum, Playlist
“Wissenschaft für jedermann“

LECTURE SERIES

Munich Talks

Under the motto of „Bringing Politics and Technology Together“, the Hochschule für Politik München / TUM School of Governance examines the interactions among politics, the economy, society, and technology, seeking a multi- and transdisciplinary social scientific understanding of these interactions. The signature event Munich Talks was established to breathe life into this approach. Amongst the guests were José Manuel Barroso, Martha Nussbaum and, most recently, Lothar Wieler, president of the RKI.

INFO

Available at www.munich-talks.de

Munich Talk with RKI President
Lothar H. Wieler: go.tum.de/865564

ANNUAL ACADEMIC CELEBRATION

Dies Academicus 2020

TUM President Prof. Thomas F. Hofmann invites you to look back on the year 2020 and will give an outlook on how TUM will maintain its successful course in the future. In order to reach as many people as possible while adhering to the required hygiene and social distancing rules, the Dies Academicus 2020 took place online for the first time in the university's history.

INFO

Presidential speech, academic honors,
round table discussion on the Bavarian
University Reform, TUM Startup pitches

Watch at [www.tum.de/en/about-tum/
news/events/dies-academicus](https://www.tum.de/en/about-tum/news/events/dies-academicus)

LECTURE SERIES

TUM Speakers Series

Bill Gates, Tony Blair, Ban-ki Moon or Kofi Annan: prominent public figures share first-hand information and discuss current issues as well. They give often valuable insights. All lectures were recorded and are available online.

Watch the TUM Speakers Series' YouTube Channel via speakersseries.de



Dr. Hans-Jörg Bauer (Diploma Mathematics 1995, Doctorate 1999) is the new Director at Zentrum für Informations- und Medienverarbeitung at Bergische Universität Wuppertal. Previously, he was Deputy Director of the Regional Computing Centre (RRZK) at the University of Cologne. ■ **Alina Boldt (Bachelor Health and Health Care Science 2011, Master 2016)** has been the new Principal of RoMed Berufsfachschule für Pflege in Wasserburg am Inn since May 2020. Previously, she was employed as a teacher for vocational education at the school. ■ **Dr. Rahime Gök-Manay (Doctorate Medicine 1998)** has been the new Senior Physician of the Geriatrics Department at Parcelsus-Klinik Bad Ems since October 2020. Most recently, she was a Chief Physician for Geriatrics at St. Marien Hospital in Cologne for eight years. ■ Since February 2021, **Gunthard Goresch (State Examination Medicine 2009)** has been the new Chief Physician of the Interdisciplinary Emergency Department at LAKUMED Clinics. Most recently, he was Senior Physician of the Medical Clinics with a focus on the Emergency Department and Intensive Care Unit at the same hospital. ■ In February 2021, **Dr. Michael Gürtner (Diploma Electrical and Computer Engineering 2000, Doctorate 2004)** took over the management of the divisions Development & IT at Turck Holding. In his last position as CTO at Sixt, Gürtner was in charge of the digital transformation of the company and its business processes. ■ **Michael Hartmann (Master Electrical and Computer Engineering 2013)** was awarded a full scholarship by the German Scholar Organization. The scholarship is granted to exceptional academics who are willing to take on responsibility now and in the future. ■ **Andreas Hecke (Diploma Civil Engineering 1998)** has been Director of the State Building Authority in Würzburg since December 2020. He has been with the Road Construction Division in Würzburg since 2002. ■ **Dr. Hans-Jürgen Heidebrecht (Diploma Food Technology and Biotechnology 2012, Master Brewing 2012, Doctorate Food and Bioprocess Engineering 2019)** was awarded the Deutscher Studienpreis of Körber-Stiftung. He is a research associate at TUM and founder of the company Heidebrecht Byotec. ■ Since January 2021, **Maria Katharina Heiden (Diploma Mathematics 2007)** has been responsible for the asset management of Eulenburg Family Office. Previously, she worked for five years at zeb, a strategy and management consultancy specializing in the European financial sector. ■ Since October 2020, **Christian Heindl (Diploma Informatics 2010)** is Technical Managing Director of infomax web-solutions GmbH. He comes with over ten years of professional and management experience: After his studies, he ran his own business as a full-stack developer. ■ **Martin Honsberg (Bachelor Environmental Engineering 2010, Master 2011)** is the new Head of the Environmental Technology Business Unit at TÜV SÜD Industrie Service GmbH. He has been with TÜV SÜD since 2017 and was most recently in charge of Abteilung Umwelt Service at the Nuremberg branch. ■ Munich-based battery researcher and entrepreneur **Dr. Peter Keil (Diploma Mechanical Engineering 2010, Doctorate Electrical and Computer Engineering 2017)** has been awarded the Bayerischer Energiepreis 2020 in the category „Energieforschung – Nachwuchsförderpreis“. The award is in recognition of his doctoral thesis on the aging of lithium-ion batteries. ■ **Volker Kirchgeorg (Diploma Mechanical Engineering and Management 1992)** took over the management of Siemens Digital Logistics GmbH in March 2021. As Senior Vice President at SAP, he was most recently responsible for company-wide quality management and, among other things, oversaw all software development processes as well as technical partner management. ■ The Chairman of the Presiding Board of Deutsches Verkehrsforum, **Prof. Dr. Raimund Klinkner (Diploma Mechanical Engineering 1991)**, was awarded the Cross of the Order of Merit of the Federal Republic of Germany at the suggestion of the Bavarian Minister President, Dr. Markus Söder. In his professional career, he held leading positions at companies such as Porsche AG and DMB Mori AG, and was Chairman of the Executive Board at Knorr-Bremse AG. ■ **Bernhard Kohl (Diploma Architecture 1996)** has taken over as Head of the Structural Engineering Department of the Government of Lower Bavaria as of February 2021. Previously, he had been Head of Division 1 at the State Building Authority in Munich since 2007. ■ **Prof. Dr. Christian Koletzko (Diploma Mechanical Engineering 2002, Doctorate 2008)** is the new Dean of the Faculty of Mechanical Engineering at Hochschule Landshut. Before his university career, he worked in chassis development at BMW for 16 years. ■ **Clara Kronberger (Doctorate Information Technology 2011)** will take over the management of the city's swimming pools at Stadtwerke München together with Nicole Gargitter as of April 2021. The two women have worked together as a dual leadership team before, and most recently headed the division Strategy and Group Management at Stadtwerke. ■ **Dr. Christian Lau (Doctorate Mechanical Engineering 2010)** is Executive Vice President Manufacturing at Multivac. In this position, he also serves as Managing Director of the subsidiaries Multivac Lechaschau and Multivac Bulgaria Production, as well as Chairman of the Board of Multivac Taicang in China. ■ **Pascal Luginger (Bachelor Bioprocess Engineering 2015, Master Environmental Planning and Ecological Engineering 2018)** is the new Climate Protection Officer of the City of Germering since November 2020. Previously, he worked at the Competence Center for Nutrition of the Bavarian Regional Office for Agriculture. ■ **Jakob Maier (Diploma Agricultural Sciences 1991)** is the new Head of the Institute for Plant Protection at the Bavarian State Research Center for Agriculture (LfL) in Freising. He had been Head of the Working Group on Principles of Plant Protection since 2009 and also Head of the Official Testing Department at the LfL Institute for Plant Protection since 2013. ■ The Munich-based patent and law firm Weickmann & Weickmann has appointed **Manuel Millahn (Diploma Mechanical Engineering 2006)** a partner as of January 2021. The graduate engineer and patent attorney is active in the firm's technology sector, in particular in patenting and enforcing intellectual property rights for technical patents and developments in industry as well as in medicine. ■ **Dr. Philipp**

Minzlaff (State Examination Medicine 2005, Doctorate 2007) has been in charge of the new Sports Orthopedics Department at Krankenhaus Agatharied since October 2020. Previously, he was the Leading Senior Physician and Deputy Chief Physician of the Department of Sports Orthopedics at Chirurgisches Klinikum München-Süd. ■ Since March 2021 **Prof. Dr. Alexander Neu-meier (Diploma Physics 2012, Doctorate 2015)** is the new Professor for „Electrical Measurement and Electrical Engineering“ at the Faculty of Electrical and Industrial Engineering at Hochschule Landshut. Previously, he worked as a development engineer for medical LED products at Schott. ■ **Dr. Thomas Plitz (Diploma Biology 1968, Doctorate 1999)** is Chief Executive Officer of Chord Therapeutics SA. He has more than two decades of experience in pharmaceutical research and development, and previously served as Chief Scientific Officer at Wilson Therapeutics. ■ In the beginning of 2021, **Dr. Stephanie Rapp-Fiegle (Diploma Civil Engineering 2000, Diploma Management & Technology postgraduate course 2003)** has taken over the management of the Association of Wastewater Treatment Starnberger See. She has been with the Wastewater Association since 2017, most recently as Head of the Sewer System Department. ■ **Prof. Dr. Dr. Andrea Rau (Doctorate Dentistry 2011)** has been the new Director of the Clinic and Polyclinic for Oral and Maxillofacial Surgery and Plastic Surgery at Universitätsmedizin Greifswald since January 2021. She is coming from FAU Erlangen-Nuremberg, where she was Leading Senior Physician and Deputy Chief of Staff of the Clinic for Oral and Maxillofacial Surgery. ■ **Leonhard Rill (Diploma Surveying and Mapping 1984)** has taken over the position of Head of the Bavarian Administration for Rural Development at the Bavarian Ministry of Food, Agriculture and Forestry as of February 2021. Since 2006 he had been heading the unit for Village Renewal here. ■ **Prof. Dr. Jürgen Ruland (Habilitation Internal Medicine 2005)** from TUM's Klinikum rechts der Isar has received the Gottfried Wilhelm Leibniz Prize 2021. The full professor of Clinical Chemistry is being honored for his outstanding scientific work in the field of Immunology, which has led to a fundamentally new understanding of signal transduction pathways in immune and cancer cells. The most important German research prize is endowed with 2.5 million euros. ■ **Dr. Mark Schneeberger (Diploma Brewing and Beverage Technology 2001, Doctorate 2006)** has taken over as Head of Application Development for Beverage and Brewing Technology at GEA in Kitzingen as of October 2020. He started as a Project Manager at GEA in 2014 and was later responsible for brewery projects in South Korea and the Philippines in his capacity as Director. ■ **Prof. Dr. Helmut Schühlen (Habilitation Medicine 1999)** has taken over as Director of Clinical Research and Academic Teaching at Vivantes in February 2021. He was most recently Chief Physician of the Clinic for Internal Medicine – Cardiology, Diabetology and Conservative Intensive Care Medicine at Vivantes Auguste-Viktoria-Klinikum. ■ Stephan Sedlmayer (Diploma Agricultural Sciences 1991) has been President of the Regional Office for Agriculture since November 2020. He previously served as Office Manager to Minister of Agriculture Michaela Kaniber. ■ The Board of VDMA Productronic has elected **Dr. Christian Strahberger (Doctorate Physics 2002)** as its new Chairman. He has been a member of the Executive Board/Chief Operating Officer at Singulus Technologies AG since 2019. ■ Since January 2021, **Christine Taglieber (Master Civil Engineering 2015)** has been a member of the Board of Directors in the family-owned company Taglieber Holzbau and is responsible for the areas of Marketing and Sales. She has been with the company since 2015 and was previously Deputy Sales Manager. ■ **Dr. Michael Unzicker (State Examination Medicine 2006)** has been the new Chief Physician in the Cardiology Unit at Eichsfeld Klinikum since the beginning of the year. In his last position as Leading Senior Physician in Schweinfurt, he was in charge of the cardiac catheter laboratory. ■ **Markus Würstl (Master Forestry and Wood Science 2015)** has been the new deputy Operations Manager of forestry operation Bodenmais since February 2021. He has been employed at Bayerische Staatsforsten since 2017. ■ **Uwe Zickert (Diploma Mechanical Engineering 1996)** has moved up to the Executive Board of MVV Umwelt GmbH as of October 2020. He has been with the company since 2003 and was involved in, among other things, building up the environmental energy business in the UK.

TUM Senior Excellence Faculty

Every year, TUM honors outstanding and dedicated retired professors with the honorary title “TUM Emeriti of Excellence” and involves them in the university's tasks as members of the TUM Senior Excellence Faculty. **Prof. Dr. Dr. h.c. mult. Wolfgang A. Herrmann (Diploma Chemistry 1971), President Emeritus of TUM**, was awarded the title of TUM Emeritus of Excellence by TUM President Thomas F. Hofmann in December 2020. TUM Emeriti of Excellence are primarily volunteering their time and expertise in organizing, coordinating, and representing Science. Get to know the members of the TUM Senior Excellence Faculty and find out more about their exciting research at:

www.150.alumni.tum.de/en/category/tum-emeriti-of-excellence-en

IMPRINT

KontakTUM is self-published twice a year
Auflage: 61.000

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Schultze-Rhonhof, Dr. Christine Stenzer, Simone Wenig, Isabel Werdin

EDITORIAL REVIEW
Petra Holzmann

ENGLISH TRANSLATION
Lilli Hantke

- PHOTOS AND GRAPHIC ART**
- 1 stock.adobe.com/rszarvas(title)
 - 2 ediundsepp Gestaltungsgesellschaft mbH
 - 3 Magdalena Jooß/TUM (Schmöller/Eisele), stock.adobe.com/Abundzu (unicorn)
 - 4 VDI/Catrin Moritz (Kefer), Magdalena Jooß (van Delden, Ramirez, Haddadin), TUM Hyperloop Team (Kapsel), Astrid Eckert/TUM (Garmi)
 - 5 Ohad Herches, Weizmann Institute of Science (Schuldiner), Astrid Eckert/TUM (Presidents), Andreas Heddergott/TUM (HORYZN), Astrid Eckert und Andreas Heddergott/TUM (simulator)
 - 6/7 Magdalena Jooß/TUM
 - 8 Magdalena Jooß/TUM
 - 9 Magdalena Jooß/TUM (Ramirez, Haddadin), VDI/Catrin Moritz (Kefer)
 - 10 Magdalena Jooß/TUM
 - 11 Magdalena Jooß/TUM
 - 12/13 Magdalena Jooß/TUM
 - 15 Magdalena Jooß (van Delden, President), VDI/Catrin Moritz (Kefer)
 - 16 VDI /Catrin Moritz (Kefer), Magdalena Jooß/TUM
 - 19 Magdalena Jooß/TUM
 - 20/21 Andreas Heddergott/TUM
 - 22 istockphoto.com/miriam-doerr (robot assistant), Uli Benz/TUM (Müller, Bengler), stock.adobe.com/chesky (autonomous driving), Astrid Eckert/TUM (Garmi, Haddadin)
 - 23 Astrid Eckert/TUM (President), stock.adobe.com/Herr Loeffler (autonomous bus), stock.adobe.com/Naypong Studio (electric car)
 - 24 Andreas Battenberg/TUM
 - 25 stock.adobe.com/Prostock-studio (puzzle pieces), stock.adobe.com/Gorodenkoff (team), stock.adobe.com/BullRun (student)
 - 26 stock.adobe.com/evening_tao (scaffolding), stock.adobe.com/SciePro (spine), Lilium Aviation (air taxi)
 - 27 Gerhard Schubert/TUM (Built Environment), Astrid Eckert/TUM (workshop, students)
 - 28 Astrid Eckert/TUM

- 29 Andreas Heddergott/TUM (female engineer), Vibeke Hempler (DTU), Bart van Overbeeke Photography (TU/e), Alain Herzog (EPFL), J. Baranda (École polytechnique), Technion – Israel Institute for Technology, Albert Scharger/TUM
- 30 Fabian Vogl/TUM (Hyperloop group photo)
- 31 TUM Hyperloop Team (pod)
- 32 TUM Hyperloop Team (workshop, Hyperloop train)
- 33 Fabian Vogl/TUM (Söder)
- 34 TUM Hyperloop Team (tunnel with pod)
- 35 Andreas Heddergott/TUM (group), TUM Hyperloop Team (Musk), TUM Boring (boring machine)
- 36/37 Astrid Eckert/TUM
- 38/39 Andreas Heddergott/TUM
- 38/39 Astrid Eckert und Andreas Heddergott/TUM
- 41 stock.adobe.com/dusanpetkovic1 (man), stock.adobe.com/metamorworks (woman)
- 43 Stuttgart-Marketing GmbH, Werner Dietrich (Stuttgart), Privat (Leonhard, Dammenhain), Uli Benz/TUM (Felix Haas)
- 44 Privat (Großkurth), stock.adobe.com/wealthy99 (diploma)
- 46 stock.adobe.com/sdecoret (rocket)
- 47 TUM-Shop
- 48/49 Astrid Eckert/TUM
- 50 Johannes Stoll
- 51 Daniel Schwartz/Architekturmuseum der TUM
- 52/53 Ohad Herches, Weizmann Institute of Science (lab), Privat (family)
- 55 stock.adobe.com/Rawpixel.com (women), Privat (Bordoloi), Astrid Eckert/TUM (Talk)
- 56/57 Astrid Eckert und Andreas Heddergott/TUM
- 58 stock.adobe.com/fotogestoeber (wooden cubes),
- 59 stock.adobe.com/lily (wind turbines)
- 61 Andreas Heddergott/TUM, stock.adobe.com/Milos Tasic (sneakers)
- 62 Kurt Bauer/TUM (Protzer)
- 63 stock.adobe.com/Jacob Lund (man), Andreas Heddergott/TUM (Tony Blair)
- 67 Andreas Heddergott/TUM

GRAPHIC DESIGN
dietrabanten, www.dietrabanten.de

PRODUCTION
Drescher Druck, www.drescherdruck.de

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Pursuant to Article 3 (2) of Germany’s Basic Law, men and women have equal rights. All persons and descriptions of functions in KontakTUM refer in equal measure to men and women. The use of the masculine form alone in some places only serves the text’s readability.
As of: March 2021.

ISSN 1868-4084

**Deutschland
STIPENDIUM**
Wir sind dabei



GABRIELE SEMINO
RECIPIENT OF ‘DEUTSCHLANDSTIPENDIUM’ SCHOLARSHIP, MASTER PHYSICS 2019

“The Deutschlandstipendium enabled me to study free of financial constraints. This allowed me to work on the TUM Hyperloop project and thus on the future of mobility alongside my studies.”

www.tum.de/deutschlandstipendium

Find out more about the TUM Hyperloop project in this issue starting on page 30.

Amadeus, moving travel forward

Travel broadens horizons, creates connections and builds economies. Travel powers progress. And Amadeus powers travel.

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amadeus

What our employees say

"My adventure started almost 10 years ago as a Software Development Intern. At the time, I knew little about the travel industry, except that I loved to travel. What makes a career at Amadeus really special is the diversity. In every team, you'll find great, committed and fun people from all over the world. I've also had the chance to work in a variety of areas, working in London and Sydney to my current role in Munich."

Pierre-Luc Noel,
Service Reliability Engineer - Senior Manager, Germany

"It's thrilling to work at Amadeus. There are so many exciting projects to work on, so many interesting people meet. You're constantly learning."

Celine Giorla,
Technical Solution Management - Director, Dallas

"It's wonderful to work for Amadeus. I'm an avid traveller, so interacting with people all over the globe and working in a domain that's so close to my heart is really rewarding".

Garima Jain,
Associate Product Manager, India

"People, because I'm constantly surrounded by talented people from all around the world with fantastic backgrounds and stories. Trust because every leader I've worked with has given me opportunities to make a difference and contribute to critical projects from Day 1. "

Antoine Ligier,
Air Content Sourcing Strategy Management, USA

