

Mindshift

Impulses for change – TUM Campus Heilbronn



TUM Campus Heilbronn

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Electrical engineering

Departure

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The TUM Campus Heilbronn: link between research and practice



Dear Readers,

It made us proud, and there was also a bit of melancholy: in the summer of 2021, we said goodbye to the first class of graduates from the TUM Campus Heilbronn as they embarked on the next chapter of their lives. This is a milestone, marking three years since we welcomed the first students. Another milestone will follow with the start of the winter semester, when the first young people will begin their studies in information engineering.”

In an age of interdisciplinary thinking and digital transformation, we believe that many exciting challenges await our students at the intersection of economics and computer science. Read more about the plans and goals of the Faculty of Computer Science in this issue of Mindshift.

Three years after the founding of TUM Campus Heilbronn, we are well on our way. On the one hand, we are conducting cutting-edge research; on the other, we want to be a productive member of the regional community. The Automotive Initiative 25 is a good example of this: in this initiative, we aim to find concepts for the digital automobile plant of the future – together with SAP and Audi, among others – and to implement them at the Audi site in Neckarsulm. You can also read more about this in this issue. We find it no less exciting how the regional startup PUREGANIC manages to be commercially successful with products for healthy nutrition – and how we are helping them achieve this.

And finally, we are pleased to have hosted an exciting event this past summer: CIOmove – an event featuring an international association of IT decision-makers from major companies – made a stop at our campus. Speaking of which: in our lecture series “Managing the digital transformation in global and family-owned companies,” technology executives from DAX corporations and managers from other innovative companies provided our students with exciting insights. We also report on this in this issue of Mindshift.

We summarize the expanded TUM Campus Heilbronn with the phrase “Heilbronn 2.0.” This means that we are already working on “Heilbronn 3.0,” linked with other universities around the world. My colleague Daniel Gottschald and I elaborate on this in an interview in this issue.

We still have a lot of plans for TUM Campus Heilbronn. I hope you enjoy reading this issue of Mindshift.

Helmut Krcmar

Founding dean and representative of the president
for the TUM Campus Heilbronn





Working closely together:
Daniel Gottschald
and Prof. Helmut Krcmar

“We are a top university, but we are approachable”

Top research meets a grounded, down-to-earth quality: Prof. Helmut Krcmar and Daniel Gottschald are responsible for the development of the TUM Heilbronn Campus. In Mindshift, they talk about the new degree program, the next steps – and why collaboration with companies in the region is part of the campus DNA

There has been a lot of talk lately about “Heilbronn 2.0.” What does it mean?

Krcmar: We gave the name “Heilbronn 2.0” to the expansion of the campus around the information engineering degree program – with nine professorships. In it, we map the topic of “design through digital technologies” – from the fundamentals to the application, from the sensor to the business model.

So integrating computer science into the academic curriculum is the logical next step?

Krcmar: It makes our vision of the “Campus for the Digital Age” more complete. We can now link digital technologies and management, and the training comple-

ments the business studies program. At the same time, it is the harbinger of “Heilbronn 3.0,” our expansion phase planned for 2022, in which we will bring together management, technology, and computer science in an interdisciplinary “Heilbronn Data Science Center.” The Data Science Center will concern itself with research around the application of artificial intelligence and data science in the field of economics. Here, we also want to bundle cooperation with other top international universities. Right now, we are evaluating this together with the Oxford Institute for the Internet, the Hebrew University in Jerusalem, and with Stanford University, near Palo Alto. There is already a collaboration with HEC Paris, the *École des hautes études commerciales de Paris*.

“Bringing digital transformation to the region” – is that how you manage to combine excellence and a down-to-earth quality?

Krcmar: We are a top university, but we are approachable. And we are curious. For us, whether a topic is exciting doesn’t depend on how big a company is. Anyone who wants to talk to us can simply send us an e-mail. This exchange and the questions that are brought to us as a result are extremely exciting for us.

Gottschald: There is the concept of the “civic university.” It describes the university as a citizen of its city. That the idea applies to us can be seen at our educational campus, in the region, and in numerous areas where we are involved.

Krcmar: You can also see it in the fact that we’ve been involved in economic development successes of late – on the hydrogen network or AI education. We work together with the economic developers in the region; we are part of StartupCity. We’re doing our part as a civic university.

Do you feel that COVID-19 is a driver of digital transformation?

Krcmar: Never before have we learned so quickly to master at least one digital technology: videoconferencing. Now we have to put the new possibilities in order. We have already had intensive discussions in one company on this question: how does distributed working actually affect employee loyalty? After all, you no longer have to live near your job to do your job – you can also go to work virtually. The digital transformation has become clear in its necessity. But that doesn’t mean that everyone already knows exactly how they will implement it.

This also applies to family businesses, of which there are very many in the region ...

Krcmar: That’s why the Global Center for Family Enterprise is so important to us. Passing a business down through the generations is a family form of sustainability. There’s the German word *enkelfähig*, which literally means “grandchild-viable.” What it essentially means is, can I inspire my grandchildren to continue the company? Maybe yes, for now. But when it’s the grandkids’ turn, the company will look different. To be able to discuss these possibilities of permanent improvement with so many different companies is very relevant for us. And fortunately, there are really many interesting companies in the Heilbronn-Franconia region.

Our vision is a campus of free spaces – to try out one’s own abilities”

Daniel Gottschald, managing director

Mr. Gottschald, we have now talked a lot about scientific advancement. From an organizational perspective, what are the most exciting projects for the future?

Gottschald: I’ll name three. First of all, it’s about promoting the further development of the region. I know from my work in regional management how important and challenging it is to harmonize economic development, regional planning, and local development. We have launched a number of initiatives to this end. We want to contribute the appropriate instruments to serve the regional ecosystem.

The “Campus Living” project is also exemplary. Here we will offer support in all areas on campus that contribute to a new living and working culture. Offers for career planning, but also for the integration of family, leisure, the social environment, and personal development. Our vision is a campus of free spaces – to try out one’s own abilities.

The third example would be “Campus Nation.” Here we create opportunities to strengthen the participation of students and employees through virtual tools. We want to give everyone the chance to contribute their ideas and wishes – on a campus that opens up the metaverse from Heilbronn.

All these projects demonstrate once again that we are not only a teaching and research institution, but also a think tank that assumes social responsibility. We succeed in this because we represent the TUM’s criteria for excellence and have highly motivated employees in Heilbronn.

Prof. Helmut Krcmar is the founding dean and representative of the president of the Technical University of Munich for the TUM Campus Heilbronn. Krcmar and Daniel A. Gottschald are the managing directors of TUM Campus Heilbronn gGmbH. Together they are responsible for the further development of TUM in Heilbronn in scientific, organizational, and commercial terms. ●

Prof. Reinhold R. Geilsdörfer,
managing director of the Dieter
Schwarz Foundation

A strong partner

The Dieter Schwarz Foundation is committed to trying to become active where business and society make demands that government bodies cannot sufficiently meet

With the establishment of the TUM School of Management on the education campus in Heilbronn, the Dieter Schwarz Foundation has come a great deal closer to its goal of completing the education pyramid in the area of higher education and expanding the range of courses offered in Heilbronn. In addition to new bachelor's and master's degree programs, the opportunity to earn a doctorate perfectly rounds out the program portfolio at the campus. The outstanding teaching and research quality of the TUM School of Management is evidenced by the three most important international accreditations ("Triple Crown").

But research is also of crucial importance for the region. This is because the Global Center for Family Enterprise and the Center for Digital Transformation are driving development in the field of family businesses, which have a strong impact on the Heilbronn-Franconia region in particular. The medium-sized high-tech companies benefit from the research partnerships and can draw on excellent young

"Research is of crucial importance for the region"

Prof. Reinhold R. Geilsdörfer

talent. Furthermore, Heilbronn's national and international visibility has already improved. The plan is to steadily develop this visibility with the coming expansion stages.

With the second expansion stage, the first degree courses in the field of computer science will now be offered,



and another research center, the Center for Informatics, is coming to the educational campus in Heilbronn. With this funding, the Dieter Schwarz Foundation is pursuing the goal of supporting the transformation processes that are so important for companies. After all, the aim of the effort is to attract specialists and managers from Germany and abroad to the region and its diverse companies.

"We are at the beginning of an exciting collaboration"

Prof. Reinhold R. Geilsdörfer

In the future, research in the areas of artificial intelligence and data science in particular is to be expanded and the connection with the locations in Munich intensified. To this end, further international research professorships will be established, which will also radiate into the Heilbronn region. The partnership between the TU Munich and the Dieter Schwarz Foundation, which is characterized by mutual understanding, is already having a recognizable effect in the region. We are at the beginning of an exciting collaboration and hope that further projects of significance for the region will emerge. ●

Looking ahead unites real and digital

Prof. Florian Matthes explains the new bachelor's degree program in information engineering at the TUM Campus Heilbronn

With the new bachelor's degree program in information engineering, the academic administration at TUM Campus Heilbronn is addressing the major opportunities of the digital transformation. In this Mindshift interview, Prof. Florian Matthes reveals how the IT leaders of tomorrow are being trained here and provides insights into possible exciting bridges between research and practice.

What distinguishes an information engineer from a classic computer scientist?

The idea is that the information engineer fills the niche between classic IT, business informatics, and business development. In this way, we also address the future requirements of the professional field and prepare our students to bundle various essential competencies as hybrid experts – such as the ability to develop digital twins. Because the IT specialist of the future will be confronted more than ever with the need to also think economically, strategically, and conceptually, and the need to co-develop new business models and to create the transfer to the physical world in order to stay ahead in the race to ever-shorter innovation cycles.

What makes the future of IT particularly exciting, in your view?

At the moment, we are observing an ever-stronger interconnection of the real world with the digital world – keyword Industry 4.0. Physical objects, such as buildings, warehouses, or entire cities, are translated into the digital world for model calculations in order to gain insights, forecast development successes, find errors, or make solutions more tangible. Digital twins of this kind are extremely exciting and will decisively shape the work of IT experts in the coming years.

For prospective students, the degree program offers plenty of opportunities not only to secure a future-proof, well-paid job, but also to actively help shape our digital future. Especially in a country like Germany, where many hidden champions are confronted with their own transformation and the development of smart products, well-trained information engineers are desperately needed.

In conclusion: why is the course of study so well suited to the TUM Campus Heilbronn in particular?

The region is characterized by numerous globally active medium-sized companies and world market leaders. At TUM Campus Heilbronn, we rely on close scientific and economic exchange with these companies in order to master the challenges of digitalization step by step, together. Accordingly, our students not only receive the necessary skills for their professional life, but also are optimally prepared for the international market within the framework of internships, practical-training periods, and research projects. Our campus reflects this aspiration, as a large proportion of our students come to us from abroad.

For prospective doctoral candidates, the Heilbronn location offers great opportunities for research cooperation with regional players from industry. After all, all the signs here are pointing to the dawn of a new era. There are plenty of promising corporate partners for opening up new business fields in the IT sector. And it should be exciting to see how we drive transformation in the region through collaboration between research and practice. ●

Prof. Florian Matthes provides insights into the information engineering course of study in an interview





Risk management that takes climate into account: a must for banks, says Prof. Sebastian Müller

How do banks hedge against climate risks?

Anyone who wants to act sustainably and socially in finance must take ESG criteria into account. Methods that could be used for this are currently also being developed at the TUM Campus Heilbronn

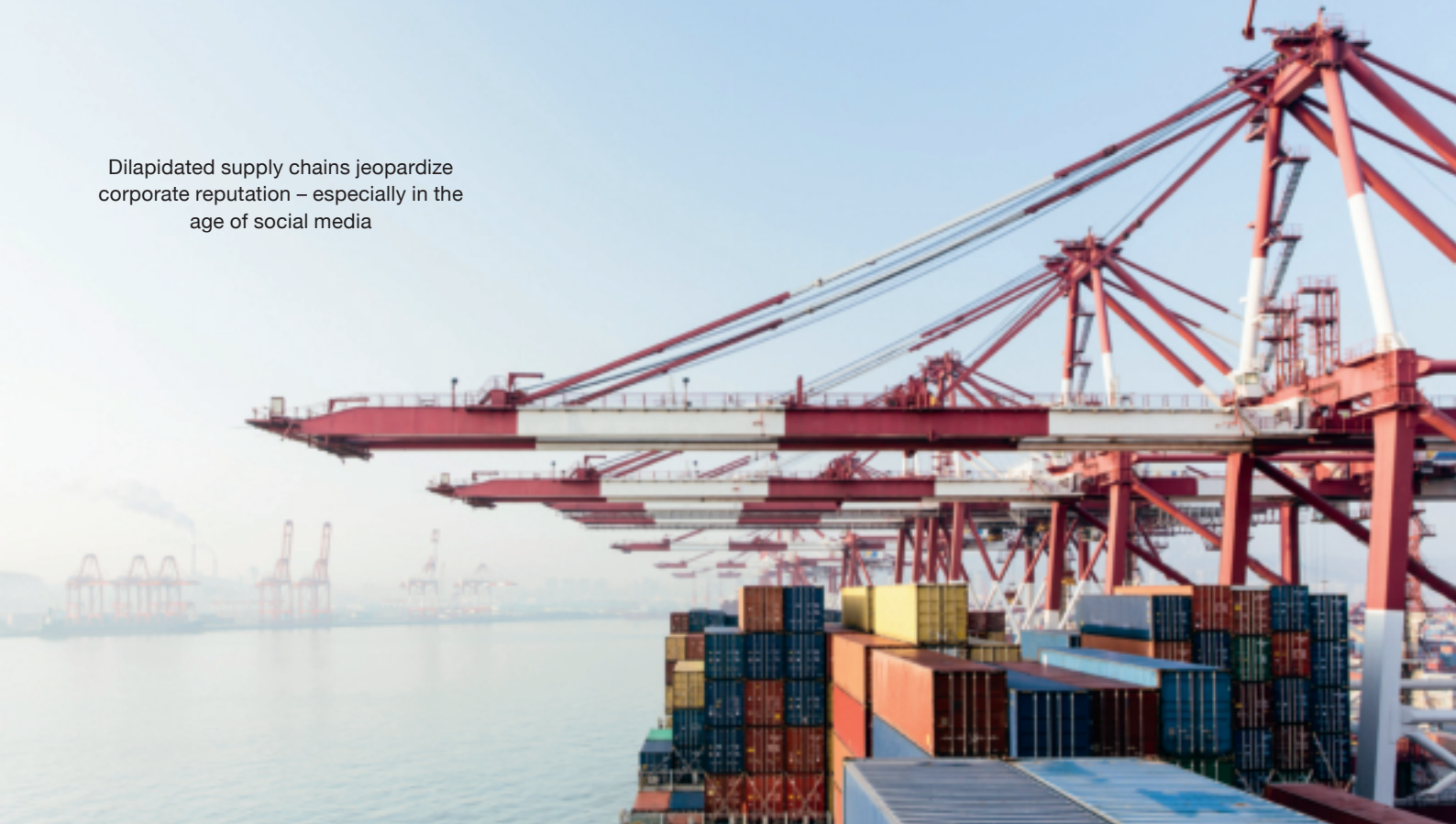
How can climate risks and the requirements of environmentally friendly and social corporate governance – the ESG criteria – be integrated into the risk management and capital adequacy of banks? Prof. Sebastian Müller, holder of the chair of accounting at the TUM Campus Heilbronn, has been investigating this question in recent months – on behalf of the Frankfurt Institute for Risk Management and Regulation (FIRM) and together with Prof. Gunther Friedl, dean of the TUM School of Management. Among other things, the task was to find methods to integrate such risks

into calculation models, to take them into account in stress tests, and to incorporate the medium- and long-term transitory risks of climate change into banks' shorter-term planning horizons. "Our studies show a clear impact of transitory climate risks on company valuations, especially for sectors that are particularly affected," said Müller at a presentation of initial results. "For both the financial industry and the real economy, it is therefore imperative that climate risks be integrated into risk management and corporate governance." ●

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Dilapidated supply chains jeopardize corporate reputation – especially in the age of social media



How supply chains and Twitter relate to the stock market

The research results of Prof. David Wuttke, holder of the chair of supply chain management at the TUM Campus Heilbronn, make it clear: they have a lot to do with each other!

The iPhone X was a prominent example: in 2017, Apple had to postpone the delivery of the latest generation of its popular smartphone – and reaped fierce reactions from disappointed customers on Twitter.

It was interesting to note that, as a result, the company's valuation on the stock exchange also suffered from the negative comments on social media. Prof. David Wuttke, holder of the chair of supply chain management at the TUM Campus Heilbronn, took this as an opportunity to research whether problems in the supply chain generally provoke such negative reactions on Twitter – and whether these in turn have an influence on the stock market price

of the company concerned. Together with colleagues from the United States and Switzerland, Wuttke analyzed around 2 billion tweets on 213 supply chain mishaps and was able to confirm the connection. Conclusion: in times of social media and sudden, violent controversy, even more attention should be paid to supply chain risk management. And companies can mitigate the impact of such delivery mishaps if they themselves communicate pre-emptively via social media and thus establish proximity to the customer. Public relations should therefore always be involved in such cases. ●



TUM Talk: departure instead of resting

Succession and sustainability, tradition and innovation: family businesses have to manage all kinds of tasks in parallel in order to remain competitive in the long term. An intensive exchange helps to master this challenge. Company representatives discussed with scientists how traditional businesses can become “enkelfähig” at the TUM Talk at the educational campus in Heilbronn

A

A company’s own history goes back a long way – but the focus must be on the future: this is the balancing act that family businesses have to master if they want to set up their operations sustainably. “It is clear to us that we have to redefine tradition if it is to survive into the future,” says Sarna Röser. She is the designated heiress of pipe specialist Karl Röser & Sohn from Mundelsheim and is to lead the company in the fourth generation going forward.

Other family businesses, many of them with decades of history, are facing comparable challenges. They all have to steer their operations through the digital transformation and modernize business models for this purpose. At the same time, they all face the growing pressure to also focus more on the issue of sustainability. In addition, of course, they can’t forget about the search for a successor. What is required is a reinterpretation of the core competencies that are often attributed to family entrepreneurs: creativity, initiative, and a high capacity for innovation. Those who can achieve this have first-class chances of transferring tradition and success into the digital age. “On the other hand, those who rest on the inventiveness of their predecessors have lost the future,” said host Prof. Thomas F. Hofmann, president of the Technical University of Munich, at the TUM Talk on October 20, 2021.

Exchange between family entrepreneurs and researchers at the TUM Talk in Heilbronn

The message in the run-up to the event: to master this feat of strength, a lot of exchange is needed. Between generations, between companies – but also between science and business. The perfect stage for this was provided by the second edition of our networking format, which brought together both regional company representatives and researchers from the Technical University of Munich at the Heilbronn Education Campus. The high level of interest in the discussion round was not unexpected. After all, the Heilbronn-Franconia region is home to numerous family-run companies that are feeling the increasing pressure.

One thing is clear: family businesses must find a new balance between tradition and innovation. Gone are the days of quiet tinkering in secret. Instead, innovation in



Prof. Thomas F. Hofmann also took on the role of host at the second TUM Talk



Enkelfähigkeit: the topic of succession in family businesses was widely discussed at TUM Talk

working methods and business models can nowadays come about, for example, through collaborations with startups. “You have to be inspired,” says Wolf Michael Nietzer, who works with many companies as a lawyer. “That’s how you can bring the enthusiasm of young companies into family businesses.”

Professor Miriam Bird also promotes a togetherness of different generations. With the Global Center for Family Enterprise, she has created an interdisciplinary research focus at the TUM Campus Heilbronn. At the interface of economics, law, psychology, and sociology, scientific answers to questions of entrepreneurial practice are being worked on here. “The new generation can bring a breath of fresh air – but it also needs the understanding of its predecessors,” Bird said at the TUM Talk.

Curiosity about sustainability helps

Of course, there are also family businesses that are ahead of their time. For example, when it comes to sustainability: Kirsten Hirschmann, managing partner of Hirschmann Laborgeräte, referred to a solar-powered device from her company – which was launched on the market as early as 2000. Economy and ecology could be combined in the pioneering product. “It has a high sustainability aspect, but above all a high customer benefit,” said Hirschmann. Self-determined action instead of hectic reaction – pretty much everyone would like to focus on this. But not all companies manage to take the steps necessary for this on their own initiative. “I still see many family businesses more as being driven by external pressure,” said industry observer Nietzer. The reason is obvious: high immediate costs. But family businesses in particular, whose perspective extends over generations

rather than quarters, should take a long-term view, says the expert: “The transformation toward greater sustainability will cost me returns in the short term, but it is an investment in the future,” said Nietzer.

Commitment to grandchildren’s capability

All efforts not only pay off in terms of the economic future viability of the company – but also in terms of what is known as *Enkelfähigkeit* (literally “grandchild-viability”) – the idea that a company should keep surviving and thriving at least until the grandchildren of the current owners can take over. Family businesses must increasingly strive to be attractive to the next generation in the first place. Every year, tens of thousands of businesses are looking for successors. And this process is not a matter of months: “Entrepreneurs have to think about the handover earlier and earlier in order to prepare the organization for the change,” warned Professor Helmut Krcmar, founding dean of the TUM Campus Heilbronn. In addition, there are hundreds of thousands of vacant positions in companies, many of which are located far from major metropolitan areas. Family businesses will have to find increasingly creative ways to attract experts to their companies. Great hopes are also pinned on the universities: TUM Campus Heilbronn now has 440 students enrolled in four degree programs. “In close cooperation between campus, science and companies, the task for the next few years will be to keep these talents in the region,” said Hofmann. Departure instead of resting: this mantra brought the participants together for the second TUM Talk – and will continue to define the exchange between practice and research at the networking event in the future. The next TUM Talk will take place on Thursday, April 28, 2022. ●



On supply chain sustainability

Improving the environmental and social footprint of supply chains is one of the key objectives of supply chain finance. To find new ideas and incentives, the second Supply Chain Finance Hub focused on the topic of sustainability

Seven international experts reported from their companies at the virtual event Supply Chain Finance Hub and discussed the following thesis under the leadership of Prof. David Wuttke: “Those who produce more sustainably benefit from better payment terms.” Among other things, participants noted that optimizing sustainable supply chains requires a holistic approach. “Sustainable supply chain finance needs sensitive management so that suppliers follow the path and there are no undesirable effects,” explained Prof. Wuttke. In this context, he said, it is also important to create global perspectives and to include suppliers from developing countries in the sustainability processes. Excluding suppliers from such regions if they

cannot demonstrate appropriate supply or procurement conditions is not a solution, he said, because this entails social consequences. The sustainability of supply chains should therefore always be assessed according to the ESG (environmental, social, and governance) criteria. A possible solution would also be “reverse factoring” as an incentive for suppliers to design their processes with climate protection in mind – in line with the principle, “Those who produce more sustainably get paid sooner.” At least the outcome of the discussion is encouraging: sustainability, working capital, and risk management in supply chains do not have to be at odds at all, but can also reinforce each other. ●

Knowledge exchange surrounded by vineyards

The CIOmove event brought together IT decision-makers from global companies for an exchange and a group walk. Representatives from Mercedes-Benz, Siemens, Bosch, and others discussed the topic “cloud and platform strategies using the example of German car manufacturers.” The conference also focused on the TUM Campus Heilbronn



Walk with tech greats: the CIOmove event brought movement and discourse together

The concept of the CIOmove is simple in principle: the format brings together well-known IT decision-makers from global corporations in the open air instead of under one roof, to talk – and to walk. The journey is the destination. This year’s conference also took representatives from Siemens, Salesforce, Bosch, Daimler, and Mercedes-Benz to the TUM Campus in Heilbronn over two days. Along the botanical orchard, over the vineyards, to the Wartberg mountain with a view over Heilbronn, the global players engaged in discourse in peer groups and enjoyed the remarkable landscape.

To give the walk of the tech greats a thematic direction as well, TUM students at the Heilbronn Campus prepared lectures together with the CIOs and IT providers on the topic of “cloud and platform strategies using the example of German car manufacturers,” with titles such as “Quantum Computing” or “Cookie-less Future.” For the first time, the topic of sustainability was also on the agenda. In his opening speech, Jan Brecht, CIO of Daimler, announced his intention to convert Daimler IT to CO₂-neutral within four years. And at Siemens, too, all signs point to sustain-

ability. CIO Hanna Hennig referred to various initiatives that have, for example, extended the life cycle of around 80 percent of the company’s own IT equipment.

Other exciting presentations were given by Alexander Buresch, CIO of BMW, Stephan Brand, CDO of Bosch Mobility Solutions, and Jürgen Sturm, CIO of ZF.

TUM Professor Jens Förderer, who works in the field of innovation and digitalization at the Heilbronn Campus, also spoke about digital platforms in competition with companies such as Apple.

The Dieter Schwarz Foundation, which makes our research work on the Heilbronn Campus possible in the first place, also accompanied the program. Professor Reinhold R. Geilsdörfer, for example, spoke together with Prof. Helmut Krcmar, founding dean and business information scientist as well as initiator of the CIOmove, about regional development through educational ecosystems. Students from the TUM Master in Management & Innovation program also took this special opportunity to engage in personal discourse with the CIOs and presented future topics that they believe digital pioneers should have on their radar. ●

RegioWIN 2030: funding for innovation and sustainability

Innovation and sustainability are not only the focus at TUM Campus Heilbronn – the surrounding area is also committed to a green and progressive future

The Heilbronn-Franconia region received its first award for its initiatives, projects, and regional competitiveness as part of the state competition RegioWIN 2030.

At the online award ceremony on April 14, 2021, there was great approval for the development concept titled “Heilbronn-Franconia on the way to the future – transformation in a rural region.” And regional research projects, such as the Hydrogen Hub HN-F, which was developed jointly with institutions from the TUM Campus Heilbronn, also received funding. Conceived as a testing, application, and transfer center for gaseous and liquid hydrogen – something that is unique in Europe – the Hydrogen Hub will, in the future, support small and medium-sized compa-

nies in the development and testing of hydrogen technologies and promote innovative solutions, from idea to market maturity. Companies and municipalities will benefit directly from application-oriented, scientific development and transfer activities as well as project-related consulting in order to advance the regional energetic structural change on different levels.

The total funding amount is made up of funds from the European Regional Development Fund (ERDF) and funds from the state of Baden-Württemberg and totals around 21.5 million euros. “Lead partner” and coordinator of the competition entry is Wirtschaftsregion Heilbronn-Franken GmbH. ●



Continuing education that works

Two innovation drivers take stock of the part-time continuing education program “Business Design and Innovation” at TUM Campus Heilbronn

Yvonne Kruger, Munich Airport:

“The topic of business design and innovation is part of my range of duties as vice president for corporate development – and a central element in shaping the future of our company in a sustainable way. As part of the continuing education program of the same name at the TUM Campus Heilbronn, I was able to learn useful tools, methods, and best-practice solutions that help me today to apply what I have learned to my corporate reality and to tap new business potential. On top of that, the exchange with ‘kindred spirits’ was extremely helpful in thinking outside the proverbial box.”

Miriam Lassernig, Landbell Group:

“Continuous adaptation and innovation is a must for any economic player. But in order to find truly sustainable alternatives for business models that are threatening to expire or whose premises are developing unfavorably, you need ideas and approaches that are suitable for the company and have real market potential. That is why it was a very valuable experience to use the business design methodology practically in our practice case. The discovery and design phase was the most challenging and exciting part for me. Because here it became clear how important it is to constantly question one’s own world of thought, including its prejudices and assessments, or to leave it behind altogether.”

Innovation management and other key topics for the future are essential as part of lifelong learning. The TUM at the Heilbronn Education Campus offers suitable training formats through continuing education, and not just for companies. Further information on our course offerings:

Caroline Hoffmann
Division Director Continuing Education
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TUM and HEC Paris hosted their first joint Summer School on startup entrepreneurship and industrial transformation

What skills, digital tools, and methods are needed to turn a good idea into a successful startup? The Summer School, a joint project of TUM with the HEC Paris business school and the TUM Institute for LifeLong Learning, was held for the first time in 2021. It provided exciting answers to this question, among others. Bachelor’s students, graduates, and young professionals from all disciplines learned the basics of

digital entrepreneurship during the two-week summer program titled “Entrepreneurship & Digital Innovation.” Examples of digital transformation and technological innovation in industries such as healthcare and retail were discussed and analyzed. As a result, the participants gained insights into digital transformation and why it fosters startup entrepreneurship. ●

Lifelong learning: how and why?

Why do we want to keep learning throughout our lives? And how can we achieve this in the first place? Guests of the digital panel “Learning for the digital transformation” at the Human Resources Management Congress 2021 may have come a little closer to finding the answers



Every new piece of knowledge opens new doors – especially in times of crisis. Prof. Helmut Krcmar also believes this, and in his keynote speech he advocated learning and actively shaping change not in spite of the pandemic, but with it (“con Covid”). In conjunction with the central topics of sustainability and climate change, he said, this results in an “exciting mixed situation.” As the founding dean of the TUM Campus Heilbronn, he participated as one of five experts in this year’s Human Resources Management Congress, which was organized and held in cooperation with the TUM Institute for LifeLong Learning. Claudia Paul-Helten, director of networking at TUM Campus Heilbronn, took on the role of moderator and skillfully guided the participants through the virtual event.

The fact that the “new normal” requires a great deal of willingness to learn and adapt was already a tacit consensus among the participants. And so the question of what this new reality actually means and what opportuni-

ties arise from it proved to be particularly exciting. “‘New normal’ also means that people’s productivity time is expanding due to longer working lives. Today, everyone can have more, and more contrasting, careers, and change jobs up to 12 times – and always have to learn something new,” said Prof. Krcmar. Accordingly, it is important to take advantage of the opportunities offered by digital transformation, build trust in new technologies, keep trying out new things, and enjoy self-transformation. In order to establish such a mindset, he believes that employers in particular have a responsibility. After all, the effort must be noticeably worthwhile and result in new and meaningful responsibilities.

In this context, Olivia Pita-Gonzalez from Santander Bank also highlighted the ethical issue of the professional future of many employees, whose jobs will be transformed by the practice of platform economics in banking, for example. “It is a challenge to prepare people for this,” she

If you really want to be a lifelong learner, you have to enjoy your own self-transformation



said. This requires good communication and exchange among all involved. Birgit Oßendorf-Will, who represented the Ströer company on the panel, sees this process already in full swing at her company. Employees at Ströer, which specializes in online and outdoor advertising, no longer just put stickers on advertising pillars, but are now concerned, for example, with laying lines for digital advertising media. “We can use them to disseminate a wide variety of information at lightning speed, even crisis news if necessary,” says Oßendorf-Will.

Jessica Richter from Infineon Technologies also emphasized that such disruptive transformation processes require an open error culture and a new level of creativity in implementation and further development. Her company has had good experiences with one-hour classes on specific topics – according to the motto: “What you need to know now about hybrid leadership.” Moreover, the impulses from the various faculties and locations at TUM

were perceived as important inspiration by all panel participants in the context of learning for digital transformation. “Our talents benefit from contact with science and research,” says Oßendorf-Will. At Infineon, scientific input from TUM is woven into leadership development, for example in the creation of a questionnaire, added Jessica Richter. Olivia Pita-Gonzalez appreciates TUM’s solutions and ideas, which have enabled many new digital formats at Santander Bank.

All participants agreed that the implementation of digital technologies in everyday professional life still holds some hurdles. The “new normal” still needs to gain structure, for example in the design of digital encounters. How much privacy is allowed in video calls? In what way can hybrid conferences be designed so that everyone feels equally included? Individual answers must be found for these questions. But here, too, the regular exchange between science and business should help in the future. ●



More than education: TUM Campus Heilbronn is becoming more and more livable

“Campus Living” at TUM Campus Heilbronn

How we make our campus unique –
a guest article by Daniel A. Gottschald

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The start of the winter semester 2021/22 is a double kick-off for TUM in Heilbronn: with the expansion of teaching and research to include the bachelor’s program in information engineering, we are continuing to follow our “Heilbronn mission” of researching management and technology, and digital change and its significance, especially for family businesses, where the heart of Germany’s medium-sized businesses beats. With the new semester, this is finally possible again with people physically present on campus. Real progress needs real togetherness. That is why we will make the TUM Campus Heilbronn a pilot location for creative-productive campus life. TUM in Heilbronn is predestined for this in a number of ways:

One of the most international university locations in Germany

The TUM as a whole already has an exemplary high quota of international students, at 40 percent – at the TUM location in Heilbronn, however, 80 percent of the students

come from abroad, making it one of the most international university locations in Germany. In our degree programs, highly motivated young academics from all over the world meet and become a community of internationally networked young talents. For them, we are not merely a learning factory or a training ground, but an alma mater – a place for the development of highly talented personalities. With new formats such as a digitally supported “Campus Nation” platform, but above all through everyday dialogue at fireside evenings and joint projects for the city and region, we help our students to experience TUM in Heilbronn as a place of empowerment and a guidepost for their life’s journey.

Responsibility for the region of world market leaders

With the dynamic growth and internationality of our students, we fit well in a region with the highest density of world market leaders in Germany. As a civic university – a university with responsibility for its surroundings – we seek an even stronger exchange with Heilbronn’s companies, which exemplify the strength, innovative power, and durability of Germany’s SME sector, but also face all its challenges: climate change and the consequences of

pandemics, the search for greater sustainability and resilience in an advancing but crisis-prone globalization, the demands of digitalization, and an acute, severe shortage of skilled workers and managers. These crises are accelerating the trend toward new forms of working and a profound transformation of traditional employment backgrounds. Transitions between entrepreneurial entrepreneurship and the desire for secure employment have become fluid and can be reshaped at different stages of life. Entrepreneurial spirit and creative drive must also be fostered among the majority of young talents who want a predictable career path in a traditional corporate structure, where diligence and inspiration contribute to a greater whole. Finally, studying at TUM also means a vocation to scientific thinking and working, and opening up scientific career paths is also part of TUM's work mission in Heilbronn.

For employers in the region, the same questions apply in mirror image: how do I benefit from the exchange with startups? How do I integrate "new work" into an organically grown, locally rooted organization and become attractive to a new generation of employees who can no longer be enticed with regular working hours and company pension plans? However, answering these questions alone will not solve the problems of the shortage of young employees, especially since the offers of traditional employment relationships still fit many student lifestyles. This may be particularly true for students whose home country is not characterized by security and prosperity and for whom "Made in Germany" is associated with virtues that have led them to study in Heilbronn in particular.

At the TUM Campus Heilbronn, we are therefore creating an ecosystem in which different career ideas and different company needs are allowed to meet. To this end, we will implement a bundle of measures together with Germany's Federal Employment Agency, the business development agencies, and employers from the city and region to make students fit for a career in Heilbronn, the region, and Germany – but conversely also to make companies fit for employing a new generation of talent from all over the world. Graduates who return abroad should also be ambassadors, network partners, and perhaps employees of Heilbronn companies on the world markets.

Social responsibility and sense of purpose

The Heilbronn campus is also the living space of an academic community for which we assume social responsibility. Our "Campus Living" team takes care of

kindergarten placements and organizes vaccination appointments, excursions, or club memberships. The central "Service Point" as a contact point for every concern is the heart of our support services on campus. The mission statement behind it means empowering students to find meaning and lead fulfilling lives. We already demonstrate the compatibility of career and family on campus. Through a range of activities, we encourage students to pursue self-determined careers off the beaten path. Above all, we provide space for student initiatives, take them seriously, and carry them into the region. In a very personal exchange, a democratic, tolerant, and people-oriented value system is thus created that can accompany our graduates throughout their lives and that always leads them back – to TUM Campus Heilbronn. ●



The Service Point team: Vanesa González Taboada, Nicole Jäger, Beate Polap (from left)

The investors of tomorrow

In cooperation with the German Association for Financial Analysis and Asset Management (DVFA), TUM launched the continuing education format “Sustainable Investing” at the Heilbronn Campus. The focus was on the opportunities and risks of sustainable investments



Investing green? Prof. Friedl (TUM) and Prof. Bannier (DVFA Academy) explained how this works

The future is green. And accordingly, more and more people are choosing their investment strategies for shares, green bonds, or incentive loans with a view to ecological added value. Sustainable investing has become one of the strongest trends in the financial sector – promoted by social developments and supported by political measures at the European and national level. Parts of this are set out in the European Green Deal, others in the EU Action Plan 2018. No question – green investment options offer investors plenty of opportunities. But in order to be able to focus on environmental as well as social and governance-related aspects with a clear conscience, an understanding of how to evaluate operational structures in companies is a must. To impart this knowledge, TUM put an exciting new continuing education format into practice at the Heilbronn Campus in the winter semester of 2021. In retro-

spect, the success of the seminar was due not least to the exceptionally strong professional cooperation with the DVFA in Frankfurt.

What does the Sustainable Investment Professional certification at TUM offer?

Financial, investment, and retail advisors, analysts, and corporate finance staff learned about the scientific background and practical methods for analyzing and evaluating sustainable investments as part of the seminar series. They created investment strategies tailored to sustainability, managed risks, and learned how to advise clients on the characteristics of their investments. ●

StartupCity



At two virtual events, ambitious founders were provided with tips, tricks, and startup assistance

“Ten ideas that should really be realized” and “Digital business models – which are suitable for startups?” – course titles can hardly be much more concrete

In two virtual events during the summer semester, two experts from TUM Campus Heilbronn, Dr. Katharina Willis and Prof. Helmut Krcmar, explained to founders and interested parties what they should know and what questions they should ask themselves in order to be successful with a new company: where do I get ideas for a startup? How do I refine them? How can I structure the business models of the successful big players, and what can I learn from them? How do you position yourself vis-à-vis customers and the market itself? The two lectures were part of the “StartupCity X Experts” series of the Startup City Heilbronn platform, which – supported by many players from science, administration, and business – aims to

pave the way for startups and those interested in founding a company in the region. With their expertise, the TUM researchers at the Heilbronn Campus aim to contribute to the development of the region and equip those willing to start companies with the necessary skill set. “Anyone who knows a few things and takes them to heart can increase their chances very significantly,” they conclude. Evidence of this can be found in abundance, as the examples presented show. The series of events is to be continued in the winter semester. ●



Focus on founders:
Felix Buyer (l.) and Max Barthel
proudly present their granola





PUREGANIC: **a startup shares its insights**

PUREGANIC founder and TUM student Felix Buyer (26) wanted to develop natural, sustainable, and nutrient-rich products for every budget, even as a young competitive athlete. This idea turned into a startup. Today, he produces his own granola and dietary supplements, together with school friend Max Barthel (26) and nutrition experts. In this Mindshift interview, he explains how his part-time master's degree in management is helping him develop the business, what connects him to Heilbronn, and how he even got his own newcomer brand accepted by Edeka

TUM in the region

Mr. Buyer, considering your big goals with PUREGANIC, why are you still studying at TUM Campus Heilbronn in addition to working in your own startup?

The TUM Master in Management had been in the back of my mind for quite a while. In fact, it's the only management program in Germany that's aimed at engineers and other career-changers – apart from MBAs and other continuing education programs. When I found out that the program was also offered at the new campus in Heilbronn, where our company is based anyway, I simply had to apply.

What are your expectations for the courses?

Above all, I want to build up all the important management skills that are needed for the strategic and economic management of a company, even now in our startup phase. Because as soon as our sales figures start to skyrocket and we employ more people, these skills will be crucial. My studies should help me to deepen everything I know about management so far and equip me for my future tasks. Apart from that, the networking aspect also appeals to me, of course.

Have your expectations been fulfilled so far?

I am still at the beginning of my master's program and would like to describe my first impression. The academic level is pleasingly high, just as I had expected. My hope of meeting interesting people from all over the world in the courses and on campus has also been confirmed from the first day. The small course sizes make it easier to interact with fellow students and faculty; you have a close, personal connection and can always get answers to your questions. Of course, we can only really judge how life, learning, and networking on campus itself will be when the pandemic allows regular operations to resume. I am very much looking forward to that.

“Continuous, critical self-reflection is key, especially in the startup phase.”

Felix Buyer

All of PUREGANIC's granola creations are sustainable and sugar-free



Pure nutrients: PUREGANIC's granola varieties can be created on demand



Above all, TUM Campus Heilbronn should also be a place for exchange. What input has particularly stuck with you?

During a lecture event with Carsten Maschmeyer at the campus, I received a tip that really helped us. Namely, I was advised to focus more on the topics of B2B and sales, especially in the initial phase when we were heavily involved in product and business development, in order to convince more investors. In this way, accompanying marketing measures can be financed better. This has proved invaluable – if only because stable sales bring a great deal of security and peace of mind to further business development.

What sales successes have you achieved so far?

We have now placed our products in a number of Edeka stores in the region and are generating ever-better sales there. Of course, we are just as pleased about this as the store operators are. We are now part of the standard product range. In addition, more and more people are becoming aware of us on the internet and ordering our granolas via our website.

“Nutrition has always been my passion”

Felix Buyer

What advice would you give to others who want to start their own companies?

The most important tip I can give is this: be honest with yourself! Because if you believe for too long in an idea that doesn't work, you deprive yourself of the opportunity to draw conclusions in time and change course. Continuous, critical self-reflection is the be-all and end-all, especially in the startup phase.

Finally, a question about the future of PUREGANIC: what are your expansion plans?

Currently, our focus is strongly on the online area and we are trying to make our brand known beyond the region. In a second step, we want to open up the food retail sales channel on a supra-regional and ultimately national level. At the same time, we are fine-tuning the further development of our product portfolio and making our offerings even better. ●

What will the car factory of the future look like?



**The Automotive Initiative 25 is working on digital production,
and the results are flowing directly into practice at Audi's Neckarsulm plant.
The TUM Campus Heilbronn is significantly involved**

What could it look like, the digital automotive factory? And what does it actually mean? These are the questions addressed by the Automotive Initiative 2025, or #AI25 for short, which began its work this year.

Its members are the TUM Campus Heilbronn, Audi, Capgemini, SAP, Amazon Web Services, and the Fraunhofer Institute for Industrial Engineering. Together, they have the goal of defining the car factory of the future with the Audi plant in Neckarsulm as a real-life laboratory. It's no coincidence that the "AI" in the project name also stands for "Artificial Intelligence."

"Audi has concrete questions. Some project partners can supply the technology, others can implement it. And we provide scientific support for the process," says Leonard Przybilla from the TUM Faculty of Computer Science, describing the procedure.

Important topics are quality control, documentation, communication, and the efficient organization of supply chains. "It's a big whole, but at the same time a puzzle comprising many pieces," says Przybilla, who is notice-

ably enjoying the challenge. "And it's not in a plant that's being built from scratch on a greenfield site, but in an existing facility. Moreover, for a group that has around 120 production sites and could imagine rolling out the new system everywhere." The year 2025 from the title of the initiative marks the end date of the project, but results are to be permanently worked out and implemented and tested in Neckarsulm. At the moment, the stock-taking is happening, as the first step. But one thing is already clear: "A plant is a socio-technical system, and when changes are made, you have to involve the workforce," says Przybilla. "And continuing education is a very big issue."

The scientists at TUM Campus Heilbronn are open to projects of this kind. #AI25 is an ideal blueprint for similar types of collaborative projects between science and industry and other partners. Przybilla, the person at TUM responsible for the project, describes it this way: "Many points that we are currently addressing are likely to play a fundamental role in industry. We are very excited about further inquiries from the region." ●

The logic behind Amazon, Facebook, etc.

Prof. Jens Förderer conducts research on digital platforms at the TUM Campus Heilbronn. The concept offers great opportunities – and even conservatively positioned companies are finding it increasingly difficult to avoid them

Product was yesterday, and today it's all about platforms? That would be a bit of an exaggeration. But in recent years – and fueled by the triumph of digitalization – this new kind of business model has become increasingly important.

Platforms serve as intermediaries between different parties. They broker products to customers, like Amazon does. Social interactions, like Facebook. Ride-sharing, like Uber. Or small programs to smartphone users, like the Google Play Store.

Since the platform business model is comparatively young, there is still a lot waiting to be explored or analyzed in this context. One person who has dedicated himself to this topic is Prof. Jens Förderer, 32, who researches and teaches at the TUM Campus Heilbronn. "Platforms are all the more attractive to us the more other users are active there – that's what we call the network effect," he explains.

Research on the topic is important on the one hand because the concept offers great economic opportunities. On the other hand, even traditional companies are increasingly interacting with platforms – if only because they have no other choice: if you want to manufacture and sell products, you can hardly get around Amazon. Those who accommodate guests generally use Airbnb, booking.com or hrs.de – and must see to it that their own interests are safeguarded in the cooperation with the digital intermediary. "We are happy to provide advice and are very interested in exchanging ideas with companies that are



In his research, Prof. Förderer relies on the exchange with companies in the region

still unsure – for example, whether they want to set up a platform themselves or participate," explains Förderer. In addition to valuable tips, a website (see QR code below) documents the research of Förderer and his TUM colleagues who are also working on the topic.

One thing is certain: for those who master all the challenges as platform founders, occupy niches, and thus create real added value, the opportunities for growth are limitless. But a platform that doesn't have a critical mass of users active at the outset is quickly perceived as unattractive by those who try it out. "To this end, we have developed a whole catalog of measures that we can give companies to help them successfully establish new models on the market," says Förderer. It is considered an outstanding success that the German Research Foundation is supporting one of Förderer's projects that deals with such relationships, using app stores as an example. "Competition with the platform owner: an empirical-quantitative investigation of mobile app platforms" is its title, and it runs until 2024. ●



The transpare

Networking and openness define our identity. Even in times of a pandemic. For the exchange between students and researchers, as well as business stakeholders from the Heilbronn-Franconia region, we have created new formats together with our partners that also create digital connections



Studying in Heilbronn – international and familiar at the same time

Lectures and seminars in English? You have to see this as an opportunity, says Prof. Helmut Krcmar in an interview with science YouTuber Jacob Beauteemps. “We don’t expect perfection from anyone, but we offer courses where you can practice the language” – and English just opens up the opportunity to study in an international environment. The talk between professor and influencer was part of the Heilbronn universities’ study information day in June 2021. The event, which was organized jointly with the Wissensstadt Heilbronn e.V. association, could only take place virtually due to the coronavirus pandemic. Beauteemps – who is himself currently working on his doctoral thesis – took all interested parties on tours of the education campus, library, and cafeteria. Students presented their favorite places in the city. It became clear that living here is just as good as learning. For 2022, the Wissensstadt Heilbronn association hopes that prospective students will once again be able to be convinced of the advantages of the location on-site. But because that is difficult to predict in these times, the association is working on a hybrid concept that combines virtual and personal encounters.

The first “Masters in Management” have graduated

TUM Campus Heilbronn has its first graduates. Eleven students were able to receive their certificates as Masters in Management on July 22. They are among the first to have started at the TUM School of Management in the winter semester 2018. In keeping with COVID-related precautions, the ceremony took place with only a few people present: relatives, friends, and family were able to follow the ceremony via streaming. But this did not dampen the joy. Prof. Sebastian Müller, the program director of the study program, compared the first graduates to earlier pioneers in history. He thanked them for their confidence in the then-new degree program – whose success is reflected in ever-increasing numbers of applicants.



nt University



Digital Transformation – Top Managers at TUM

Learning from lecturers who belong to the spearhead of industry – students had this opportunity in the past summer semester. As part of the lecture series “Management of the Digital Transformation in Global and Family Companies” of the Chair of Prof. Gunther Friedl, the greats of business shared insights and experiences. For example, Dr.-Ing. Christian Bruch, Dr.-Ing. Leonhard Birnbaum and Johannes Pruchnow, the CEOs of Siemens Energy AG, E.ON AG and gabo Systemtechnik GmbH, reported on the opportunities and risks of digitalization in their industries. Prof. Sabina Jeschke, Chief Technology Officer of Deutsche Bahn, spoke about how mobile communications and quantum computing could take AI to the next level. BASF executive Saori Dubourg made a plea for curiosity. And Daimler Chief Human Resources Officer Wilfried Porth spoke about products, people, processes, and production. In this way, the students learned first-hand about the challenges and opportunities of transformation as well as helpful best-practice approaches – and there was time for discussion as well.

Learning in virtual reality

Students at TUM Heilbronn can now experience lectures and exercises in virtual reality. VR headsets make this possible. The technology allows an unprecedented level of hands-on learning. “For example, in the area of production and logistics,” describes David Wuttke, professor of supply chain management. “Students can visit a virtual factory via simulation, where they also have to make decisions.” The Extended Reality Lab at TUM Heilbronn has already been exploring the possibilities of virtual reality since 2019 – with the teaching offers, the technology has arrived in practice. With the help of controllers, students can move around in virtual worlds and interact with each other’s avatars. “You can better form an opinion, analyze, make suggestions for improvement,” explains Prof. Wuttke. And he sees another advantage, related to the fact that in normal lectures, people glance at their mobile phones from time to time. “Distractions are eliminated in VR because you can’t do anything else at the same time,” says Wuttke. Those who learn in the simulation are always completely in the virtual here and now. ●



Where better to discuss innovation than in virtual space?

Arguments and avatars

In a virtual space, researchers exchange ideas on innovation in operations management – and use digital twins to do so

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How should sensors communicate with each other? Does the use of a blockchain lead to better financing of supply chains? And can augmented reality systematically improve the launch of new manufacturing processes? Anyone who wants to find answers to questions like these needs not only plenty of expertise and innovative spirit, but also an exchange among like-minded people. And that is precisely why researchers from all over the world came together virtually on June 23–24 as part of an exciting digital TUM workshop. The goal: under the organizational leadership of Prof. David Wuttke and Prof. Gudrun Kiesmüller, the latest scientific findings on the use of digital innovations in operations management were to be discussed and solution approaches validated.

“It’s simply exciting to see how digital technologies are changing the way companies work and what new challenges, but also opportunities, are emerging as a result,” said Prof. Kiesmüller, who oversees the topic of operations management at the TUM Center for Digital Transformation in Heilbronn. “Rapid ROI is not always guaranteed, and not all potential is fully exploited. As researchers, we naturally want to make a contribution to actively and profitably shaping these changes.”

To create the perfect “growing conditions” for this and at the same time make the topic of digital transformation as tangible as possible, virtual reality was also used as part of the workshop. For two interactive industry talks,



the 30 workshop participants used their VR headsets to meet and exchange ideas online – visually represented by their digital avatars.

The first talk focused on the topic of autonomous driving. In addition to the legal aspects (who is responsible in the event of an accident?), the points of marketing (does the customer even want this?) and the corporate perspective (are companies ready for this?) were the basis for lively discussions.

In the second roundtable discussion, everything revolved around virtual and augmented reality – and these questions: can technologies such as VR and AR be used profitably in research and teaching? What weaknesses still need to be overcome? And what do TUM students report who have been working with it since the beginning of the summer semester? Coorganizer Prof. Wuttke was able to contribute valuable observations here: “During the coronavirus pandemic, virtual reality helps us get closer together, at least virtually, and to make teaching more interactive.” Of course, according to Prof. Wuttke, who is an expert in supply-chain financing, interesting fields of application are also conceivable beyond the pandemic. At the same time, he says, it is clear to all participants that “no matter how good the technology already is, it cannot (yet) replace a face-to-face meeting. Accordingly, the next Workshop on Digital Technologies in Operations Management will take place on site if possible.” ●

Excellent!

Prof. Helmut Krcmar, Founding Dean and president's representative at TUM Campus Heilbronn, has received the Order of Merit of the Federal Republic of Germany

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“Great respect!” This is what Dr. Florian Herrmann, the head of the Bavarian State Chancellery, noted in a handwritten addendum to his congratulatory letter. Addressee: Prof. Helmut Krcmar. On June 16, Prof. Krcmar was awarded the Cross of the Order of Merit of the Federal Republic of Germany (or Federal Cross of Merit, for short). He received the award for his lifetime achievements in the field of research and teaching – and specifically for his decades of work in the field of digital transformation.

“Prof. Krcmar is a key developer of our digital future,” said Bavarian Science Minister Bernd Sibler in his laudatory speech. Krcmar recognized early on, Sibler went on to say, that digitalization had the potential to fundamentally change the economy and society.

Soon after graduating, Krcmar had sought to bridge the gap between computer science, engineering, and economics. He worked and conducted research in this field as a postdoctoral fellow at the IBM Los Angeles Scientific Center and as an assistant professor of information systems in New York. Back in Germany, he became the youngest grade-C4 professor of business administration in Germany, at age 32, in Hohenheim. He then moved to the Technical University of Munich in 2002 – and since 2018, he has been working to establish the new location of the Technical University of Munich in Heilbronn as its founding dean.

Krcmar's work has always been characterized by regional roots and close proximity to practice. In the Heilbronn-Franconia region, companies are happy to use the results of Heilbronn research fields such as platform economy, digital transformation, or e-government for their own further development. The special focus on the needs of family businesses is demonstrated by the globally unique Global Center for Family Enterprise at the Heilbronn Campus, which Krcmar co-initiated. However, it was not only the scientist Helmut Krcmar who was honored with the award. As a university lecturer, Krcmar, now 66, has supervised more than 100 dissertations during his

university career. His book “Information Management” became a standard work for students of business information systems.

“With our students, we emphasize entrepreneurial skills by training them to be responsible business leaders,” he explains. “We want them not only to put what they learn into practice, but also to ask the right questions in their professional lives so that they can meet the challenges of tomorrow in a solution-oriented manner.”

In the more than 30 years of Krcmar's work on digital transformation, the topic has continued to add new facets, and change has become a constant. But the challenges are at the same time opportunities for those who know how to use them – especially in the family-oriented corporate culture of the Heilbronn-Franconia region.

“For this to succeed, we need bright minds today and in the future to accompany this process,” said Science Minister Sibler in his laudation.

These minds are being trained at the Heilbronn Education Campus. Thanks in part to the commitment and expertise of Prof. Helmut Krcmar – who was awarded the Federal Cross of Merit for his efforts. ●



Something to smile about:
Prof. Krcmar proudly shows his
Federal Cross of Merit

Briefly noted

On our campus, it's not just life that's diverse. Numerous live events and networking formats shape the exchange among like-minded people and connect our students with the economic players in the region. On these two special-issue pages, we've compiled for you what other important things are happening



Virtual Girls' Day provides insights into lessons of the future

Girls love technology, too – as demonstrated on Girls' Day, the nationwide day of action for career orientation. Right from the sofa, the schoolgirls were able to experience, among other things, a sample lecture on the subject of virtual reality. With the help of the EngageVR application, they learned about virtual learning environments such as digital classrooms or a dinosaur and received answers to questions such as “Where does Wi-Fi come from?” and “Can business administration save the planet?” In the process, the young academics got a first impression of our bachelor's program in Management & Technology and of the TUM campus, and entered into an exchange with TUM students. A day that showed what teaching and female students of the future might look like.

“QS World University Rankings by Subject”: TUM voted among the best 50 universities ten times

The Technical University of Munich gets top ranking! According to the new edition of “QS World University Rankings by Subject” by the British higher education service provider QS Quacquarelli Symonds, TUM ranks among the best 50 universities worldwide in both engineering and natural sciences – and even takes the top spot in Germany. The ranking is based on surveys in science and business on the quality of universities. It also records how often scientific studies are cited. In last year’s “QS World University Ranking,” which evaluates universities as a whole, the TUM was named the best university in the European Union.



TUM Connect 2021

Before continuing the regular event series in 2022, an event was held at the Heilbronn Education Campus on Wednesday, November 10, 2021. The focus was on the participants and their companies. The reason for the meeting was the serious pandemic-related changes of the past months. And so the evening was dedicated to a direct exchange about current issues, topics, and challenges.

In addition, the main topics for future TUM Connect events were defined during the event.

Our experts from the fields of innovation, digital transformation, family enterprise, and sustainability were waiting for the participants at various stations to enter into discourse.

The principle was that the stage belonged to every concern and every person on

this evening.

“Technological progress is the solution”

In an interview with Mindshift, Prof. Michael Stich talks about the tension between digital transformation and sustainability and the importance of sustainability information

How are the global megatrends “digital transformation” and “sustainability” related?

Digital technologies are opening up previously undreamed-of possibilities. This is impressively demonstrated every day by companies in various industries – from global IT service providers to vaccine developers. However, “sustainability” is a multi-dimensional concept. Environmental, social, and economic aspects must be weighed holistically. In this respect, opportunities are usually offset by risks that cannot be disregarded. Trade-offs between these dimensions can be observed in many innovations. For example, more-closely-meshed recording of material flows can conserve resources, but at the same time it can also make the employees involved more “transparent.” Digital transformation must not be an end in itself. Rather, it must open up innovative ways of doing business sustainably.

Machines can improve business processes. Where are humans irreplaceable?

Many activities will no longer exist in the future. The digital transformation is already leading to a for-and-against relationship between humans and machines, one that is not without conflict. The extent to which machines can actually be “artificially intelligent” remains to be seen. In any case, these developments touch the very foundations of our image of humanity. In particular, tasks with a high degree of standardization, such as accounting tasks, will be able to be performed more efficiently by machines in the future. In contrast, people will continue to be irreplaceable in healthcare and social services, as well as in crafts and creative activities.



Prof. Michael Stich pleads for entrepreneurial courage, optimism, and holistic management of opportunity and risk

What opportunities and risks does digitalization create in the field of accounting?

In addition to the rapidly growing volumes of data, accountants face the challenge of dealing efficiently with a wide variety of information. I see the biggest opportunity in holistic information management, which is not just about finances but also about a company’s entire “footprint” on the planet and society. The risks are many, ranging from a “blind faith” in the infallibility of technology to legal concerns.

Is it time for governments to “legislate” sustainable business practices?

This is one of the key questions to which neither politicians nor scientists have yet found a universally valid answer. What is indisputable is that some business models will no longer be allowed to exist in the future if we want to pass on a livable planet and a healthy society to our children. Commandments and prohibitions alone will certainly not be enough. In addition to a holistic awareness of the problem, we particularly need well-educated young people who will drive innovations forward with courage – because technological progress is the solution! However, this requires legally defined rules of the game. I am optimistic about the future, as both government initiatives and the entrepreneurial will to see global developments as a challenge and to actively help shape them have gained encouraging momentum in recent years. ●

“Can you think effectively about sustainability if two-thirds of global value creation is excluded in the process?”

Prof. Michael Stich

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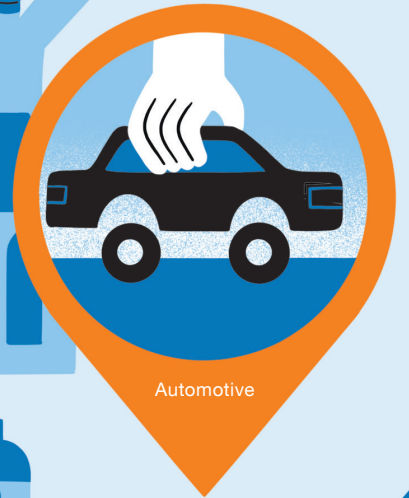




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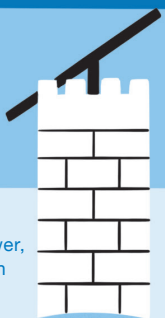
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