

# TUM Sustainability Day 2024

Recap and Highlights





## **TUM SUSTAINABILITY DAY 2024**

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"There is a lot ahead of us: A lot of challenges to overcome, a lot of goals to achieve – but mostly, there are a lot of people to win for joining our common journey."

Isabella Hennessen, Student Representative

"This Sustainability Festival is a testament to our hard work and serves as a roadmap for our continued commitment to sustainable development."

Prof. Dr. Werner Lang, Vice President Sustainable Transformation



### **Spectacular Festival of Sustainability**

The TUM Sustainability Day 2024 was a powerful demonstration of a collective effort and sent out a clear message: **We aim to walk our talk!** Sustainability is not just a vision but a shared mission for TUM's future.

On June 12th, 2024, thousands of students, staff, researchers and partners gathered at the Garching campus to experience the diversity and potential of our university's sustainability topics and activities.

At the **Sustainability Fair**, our "**Market of Opportunities**", over 100 initiatives from the TUM community showcased their projects and research in ten themes: Education and research, health, entrepreneurship, life on land, biotechnology, built environment, energy, mobility, global engagement, and circular economy.

In addition, an **Impulse Program** with over **50 discussions, workshops, and lectures** covering ecological, social, and economic sustainability, participants offered numerous opportunities to engage.

A "Recap and Outlook" panel closed the day, where deans and school representatives outlined each school's commitment to sustainable research and education.

Our TUM Sustainability Day 2024 was a celebration and a clear **call to action**, emphasizing TUM's holistic approach to creating a sustainable future.



## Call for Participation — Join the TUM's Sustainable Transformation

With the TUM Sustainability Day, we activated the resources of our entire university community in sustainability because we can only achieve our sustainability goals together. This event demonstrated how deeply committed our TUM community is to creating impactful, sustainable change - now let's go further.

Building on the success of TUM Sustainability Day, we invite all members of the TUM community to help keep up the momentum and make sustainability a lasting part of our university culture. Each of us has a role in advancing the TUM Sustainable Futures Strategy and embedding sustainability in

every aspect of campus life. We invite all members of the TUM community to actively participate - whether through new research, student initiatives, innovative teaching methods, or campus-wide efforts, every action is a step forward.

Let's foster a culture where sustainability isn't just an ideal, but an integral part of who we are at TUM. Be a part of this transformation - bring your ideas, passion, and commitment to help create a lasting impact for our university and beyond.

5000 Visitors

100+ Initiatives

50+ Workshops

20+ Speakers

### We walk our talk

Since launching the TUM Sustainable Futures Strategy 2030, the university has been dedicated to embedding sustainability in its operations, research, and culture. While there is still much to achieve, the TUM Sustainability Day reflected this commitment, showcasing the community's dedication to making sustainability a living reality at TUM and beyond.

From student initiatives and research groups to deans and school representatives, Vice President and President, as well as valued partners – everyone was involved, and all schools were represented at the sustainability fair.

With an impressive turnout of 5,000 visitors, the event connected them to over 100 initiatives and speakers through engaging workshops, panels, and inspiring talks. These 50 impulse sessions provided a platform to inform, inspire, and foster connections while revealing TUM's vast resources and expertise.

The TUM Sustainability Day underscored the need to harness these resources to meet TUM's ambitious sustainability goals and drive impactful change through collaboration, innovation, and shared purpose.



## "The world needs our courage for change and our creative power more than ever!"

Prof. Thomas F. Hofmann, TUM President

### Introductory event with TUM President Prof. Thomas F. Hofmann

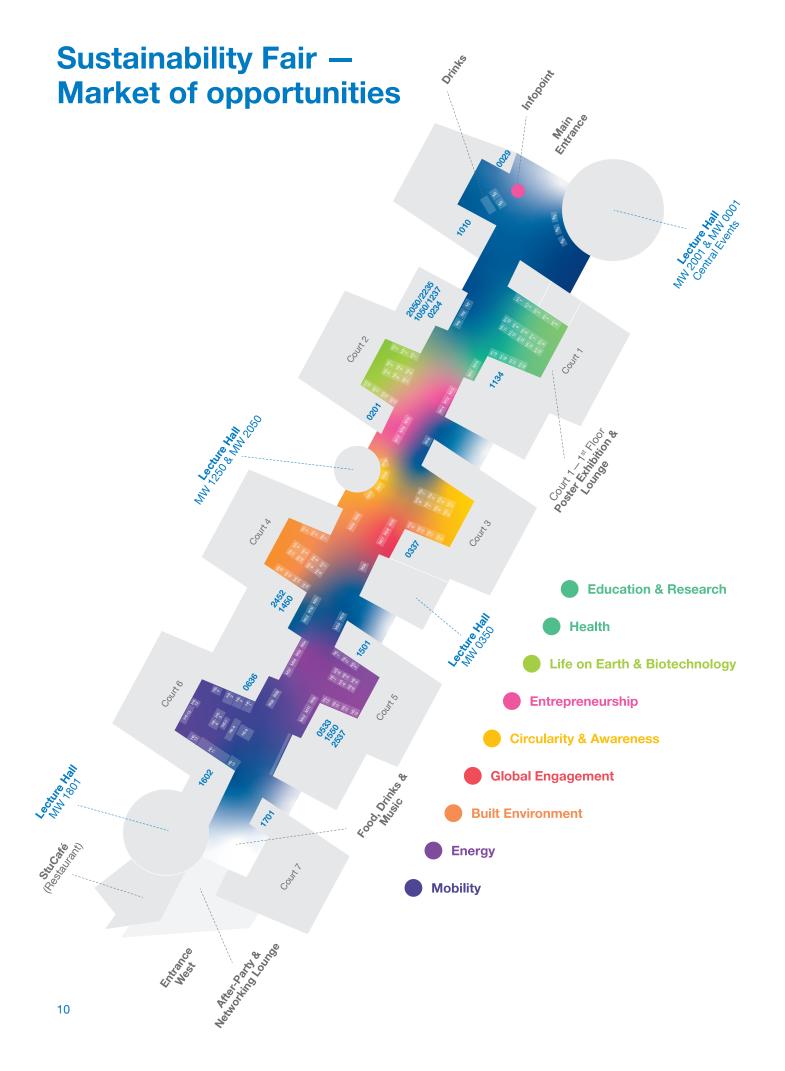
At the introductory event, TUM President Prof. Thomas F. Hofmann presented the status report of the sustainability transformation of our university and emphasized:

"Solving the climate crisis and the associated sustainability problems is a huge task. But when I see the many clever, courageous, and committed young people at TUM, I know that we can make a contribution."



## Sustainability Fair





### FAIR OF OPPORTUNITIES

## These initiatives were taking part at the TUM Sustainability Fair, demonstrating how sustainability can become a living reality.

Initiative	Website
TUM Sustainability Office	www.sustainability.tum.de/nachhaltigkeit/startseite/
Green Office Weihenstephan	www.ls.tum.de/en/ls/campus/green-office/
Green Office Straubing	www.cs.tum.de/studium/arbeitskreise-green-office/green-office/
Zentrum Hochschule & Nachhaltigkeit Bayern (Bayzen)	www.nachhaltigehochschule.de/english/
TUM Think Tank	https://www.hfp.tum.de/hfp/tum-think-tank/
TUM Junge Akademie	www.ja.tum.de/ja/start/
TUM Shop	www.shop.tum.de
Student Council for Mechanical Engineering	https://fsmb.de/
Student Council for Civil and Environmental Engineering	www.fs.bgu.tum.de/en/home/

"It was very inspiring to experience how naturally sustainability is practiced in various areas of everyday university life.

I was able to take away important ideas and suggestions for both BayZeN and OTH Amberg-Weiden."

Laura Völkl, BayZen



"My highlight was to discuss our research and projects of the network with the TUM President at our booth"

Tim Bernhard, CirculaTUM

### COURT 6 — MOBILITY



https://mcube-cluster.de/
www.unternehmertum.de/en/about/tum-venture-labs
www.unternehmertum.de/en/about/tum-venture-labs
https://umwelt.asta.tum.de/en/reparadtum/
https://tufast-eco.de/
www.impetussailing.de/

Initiative	Website
ENERGY	
Center for Combined Smart Energy Systems  Munich Institute of Integrated Materials, Energy and Process Engineering (MEP)	www.mep.tum.de/en/mep/coses/
Geothermie Allianz Bayern  Munich Institute of Integrated Materials, Energy and Process Engineering (MEP)	www.mep.tum.de/mep/energy-systems/gab/
TUM Venture Lab - ChemSpace TUM /UnternehmerTUM	www.tum-venture-labs.de/labs/chem-space/
TUM Venture Lab - Quantum TUM /UnternehmerTUM	www.tum-venture-labs.de/labs/quantum/
TUM School of Computation, Information and Technology	www.cit.tum.de/en/cit/home/
Chair of Computer Architecture and Parallel Systems (Informatics 10) TUM School of Computation, Information and Technology	www.ce.cit.tum.de/en/caps/homepage/
Chair of Hydrogeology TUM School of Engineering and Design	www.cee.ed.tum.de/en/hydro/home/
Chair of Energy Systems TUM School of Engineering and Design	www.epe.ed.tum.de/es/startseite/
Chair for Strategy and Organization TUM School of Management	www.msl.mgt.tum.de/en/strategy/home/
Experimental Semiconductor Physics TUM School of Natural Sciences	www.wsi.tum.de/views/groups.php?group=sharp
Chair of Environmental and Climate Policy, Munich School of Politics and Public Policy  TUM School of Social Science and Technology	www.hfp.tum.de/en/environmentalpolicy/home/
Exzellenzcluster e-conversion	www.e-conversion.de/
Munich Data Science Institute	www.mdsi.tum.de/en/mdsi/home/
Academic Energy Cooperative at TUM (AEC) Student Initiative	https://umwelt.asta.tum.de/en/academic-energy-cooperative/
PushQuantum Student Initiative	www.pushquantum.tech/
TUM Carbon Removal Initiative e.V. Student Initiative	www.tumcarbon.com/
TUM Green Tech Initiative Student Initiative	https://linktr.ee/tum_greentech

### COURT 5 — ENERGY



COURT 4 — BUILT ENVIRONMENT



COURT 4 — BUILT ENVIRONMENT





Initiative	Website
BUILT ENVIRONMENT	
Chair of Architectural Design and Participation TUM School of Engineering and Design	www.arc.ed.tum.de/ap/teaching/seminars/
Venture Lab Additive Manufacturing TUM/UnternehmerTUM	www.tum-venture-labs.de/labs/additive-manufacturing/
Venture Lab Built Environment TUM/UnternehmerTUM	www.tum-venture-labs.de/labs/built-environment/
Chair of Landscape Architecture and Public Space TUM School of Engineering and Design	www.arc.ed.tum.de/en/lao/home/
Professorship of Architecture and Design TUM School of Engineering and Design	www.arc.ed.tum.de/en/and/professorship/
Projektplattform Energie + Innovation TUM School of Engineering and Design	www.ed.tum.de/ppe/home/
Professorship for Green Technologies in Landscape Architecture TUM School of Engineering and Design	www.arc.ed.tum.de/en/gtla/professorship/
TUM Cluster Sustainable Real Estate (CSRE) TUM School of Engineering and Design	www.arc.ed.tum.de/csre/
Centre for Building Materials (cbm)  TUM School of Engineering and Design	www.mae.ed.tum.de/cbm/startseite/
Chair of Forest Growth and Yield Science TUM School of Life Sciences	www.waldwachstum.wzw.tum.de/en/
Research Training Group Urban Green Infrastructure (RTG-UGI) TUM School of Life Sciences, TUM Graduate School + Chair for Strategic Landscape Planning and Management	www.gs.tum.de/en/grk/urban-green-infrastructure/
Centre for Urban Ecology and Climate Adaptation (ZSK)	www.zsk.tum.de/zsk/startseite/

**COURT 3 - GLOBAL ENGAGEMENT** 



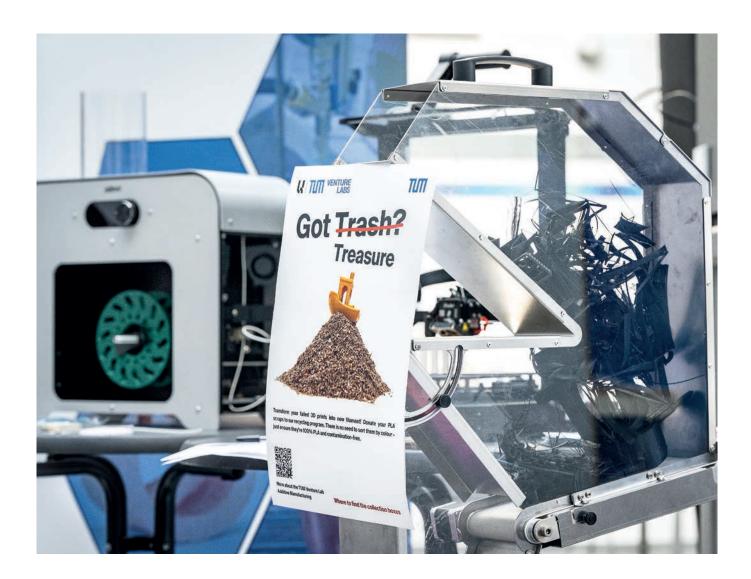
Initiative	Website
GLOBAL ENGAGEMENT	
TUM SEED Center	https://web.tum.de/seed/home/
TU eMpower Africa Student Initiative	www.tu-empower-africa.org/
Center for Energy Market TUM School of Management	www.mgt.tum.de/faculty-research/research-centers-partner-research-centers/research-centers/center-for-energy-markets

Initiative	Website
CIRCULARITY UND AWARENESS	
TUM Mission Network Circular Economy CirculaTUM	www.mission-networks.tum.de/en/circular-economy/home/
Chair of Circular Economy TUM Campus Straubing	https://cec.cs.tum.de/
Chair of Materials Handling, Material Flow, Logistics TUM School of Engineering & Design	www.mec.ed.tum.de/fml/startseite/
Institute for Machine Tools and Industrial Management TUM School of Engineering & Design	https://www.mec.ed.tum.de/en/iwb/homepage/
Chair of Environmental and Climate Policy, Munich School of Politics and Public Policy  TUM School of Social Science and Technology	www.mec.ed.tum.de/en/iwb/homepage/
TUM Gender Equality Office  Diversity units of TUM School of Engineering and Design; TUM School of Computation, Information and Technology; TUM School of Natural Sciences	www.zv.tum.de/diversity/gender-equality-office/
Chair of Sport and Health Management TUM School of Medicine and Health	www.hs.mh.tum.de/en/mgt/home/
Environmental Department of the Student Council Student Initiative	https://umwelt.asta.tum.de/en/home-en/
SRM Talks Student Initiative	www.instagram.com/srmtalks.tum/
Global Shapers Munich e. V. Student Initiative	https://globalshapersmunich.org/
Talente Spenden e.V. Student Initiative	www.tum.de/en/studies/fees-and-financial-aid/scholarships/tum-scholarships/deutschlandstipendium/initiatives
Nightline München Student Initiative	https://nightline-muc.de/de

COURT 3 — CIRCULARITY AND AWARENESS







Initiative Website

#### ENTREPRENEURSHIP

ENTREPRENEURSHIP	
TUM Venture Labs TUM/UnternehmerTUM	www.tum-venture-labs.de/
TUM Entrepreneurship Research Institute TUM School of Management	www.ie.mgt.tum.de/en/ent/home/
Enactus München e. V. Student Initiative	https://enactus-muenchen.de/
180 Degrees Consulting Munich Student Initiative	www.180dcmunich.org/
TUM Female Founders & Women Start-up by UnternehmerTUM TUM/UnternehmerTUM	www.tum.de/innovation/entrepreneurship/fuer-gruendungsinteressierte/tum-female-founders
Academy for Innovators TUM/UnternehmerTUM	https://academy.unternehmertum.de/

Initiative	Website
LIFE ON EARTH & BIOTECHNOLOGY	
Chair of Biogenic Functional Materials TUM Campus Straubing	www.cs.tum.de/forschung/professuren/
Chair of Biogenic Polymers TUM Campus Straubing	www.cs.tum.de/forschung/professuren/
Professorship Bioprocess Engineering TUM Campus Straubing	www.cs.tum.de/forschung/professuren/
Chair of Process Engineering TUM Campus Straubing	www.cs.tum.de/forschung/professuren/
Chair of Complex Networks TUM Campus Straubing	www.cs.tum.de/forschung/professuren/
Professorship Economics TUM Campus Straubing	www.cs.tum.de/forschung/professuren/
Professorship Electrobiotechnology  TUM Campus Straubing	www.cs.tum.de/forschung/professuren/
Chair of Supply and Value Chain Management TUM Campus Straubing	www.cs.tum.de/forschung/professuren/
Professorship Synthetic Biology TUM Campus Straubing	www.cs.tum.de/forschung/professuren/
Professorship of Urban Productive Ecosystems TUM School of Life Sciences	www.lss.ls.tum.de/en/upe/home/
Professorship of Plant Proteins & Nutrition TUM School of Life Sciences	www.lse.ls.tum.de/ppn/startseite/
Professorship of Cellular Agriculture TUM School of Life Sciences	www.lse.ls.tum.de/en/cellag/home/
TUM School of Life Sciences	www.ls.tum.de/ls/startseite/
Chair of Aquatic Systems Biology TUM School of Life Sciences	www.lss.ls.tum.de/aquasys/willkommen/
Chair of Health Informatics TUM School of Medicine & Health	https://www.kiinformatik.mri.tum.de/de/lehrstuhle/chair-health-informatics
Chair of Analytical Chemistry and Water Chemistry TUM School of Medicine & Health	www.ch.nat.tum.de/hydrochemistry/home/
TUM Water Cluster TUM School of Medicine & Health	www.wasser.tum.de/en/wasser/home/

COURT 2 — LIFE ON EARTH & BIOTECHNOLOGY



Initiative	Website
Venture Lab Food - Agro/Biotech TUM/UnternehmerTUM	www.tum-venture-labs.de/labs/food-agro-biotech/
Student Initiative of the TUM Junge Akademie Student Initiative	www.ja.tum.de/en/ja/home/
Plant a Seed Student Initiative	https://plantaseed.umwelt.asta.tum.de/

**FUSION DANCE CREW** 



YOGA FLASHMOB



TUM CHOIR



### **Flashmobs**

Our flashmobs—featuring dance, yoga, and choir performances—aimed to highlight the social dimension of sustainability. Each flashmob brought people together in shared movement and music, emphasizing connection, community, and well-being as essential parts of a sustainable future. Through these lively gatherings, we raised awareness about the importance of social cohesion in building a resilient, inclusive, and sustainable society.

Initiative	Website
HEALTH	
Chair of Circular Economy TUM Campus Straubing	www.cec.cs.tum.de/
Center for Global Health TUM School of Medicine and Health	www.med.tum.de.devweb.mwn.de/de/center-global-health
TUM4Health, Department of Health & Sport Sciences TUM School of Medicine & Health	www.hs.mh.tum.de/en/mh/home/
Health for Future TUM School of Medicine & Health	www.sv.tum.de/med/projekte/health-for-future/
AG Klimawandel, Klinik für Anästhesie und Intensivmedizin TUM School of Medicine & Health	https://anaesthesie.mri.tum.de/de/forschung/wissenschaftliche- arbeitsgruppen/arbeitsgruppe-klimawandel
MRI TUM School of Medicine & Health	www.mri.tum.de/tum-school-medicine-and-health
GreenLab MIH TUM School of Medicine & Health	https://mih.mh.tum.de/de
Institute for Medical Microbiology, Immunology and Hygiene TUM School of Medicine & Health	www.mri.tum.de/mikrobiologie
TUM Institute of LifeLong Learning	www.lll.tum.de/en/
TUM4Mind, Student Advising and Information Services	www.tum.de/en/studies/support-and-advice/wellbeing/tum4mind

Initiative	Website
EDUCATION & RESEARCH	
EuroTeQ Engineering University TUM Global & Alumni Office	www.international.tum.de/en/global/euroteq-course-catalogue/ www.ja.tum.de/en/ja/euroteq/
Erasmus TUM Global & Alumni Office	www.international.tum.de/en/global/thinking-green/
TUM Sprachenzentrum	www.sprachenzentrum.tum.de/en/sz/homepage/
TUM Center for Study and Teaching	www.tum.de/en/studies/tum-center-for-study- and-teaching
PRME Office TUM School of Management	www.mgt.tum.de/about/sustainability
100 Voices - One Planet Student Initiative	https://100vop.org/
IGSSE - International Graduate School of Science and Engineering	www.igsse.gs.tum.de/en/igsse/home/
TUM Office for Research and Innovation	www.forte.tum.de/en/forte/homepage/

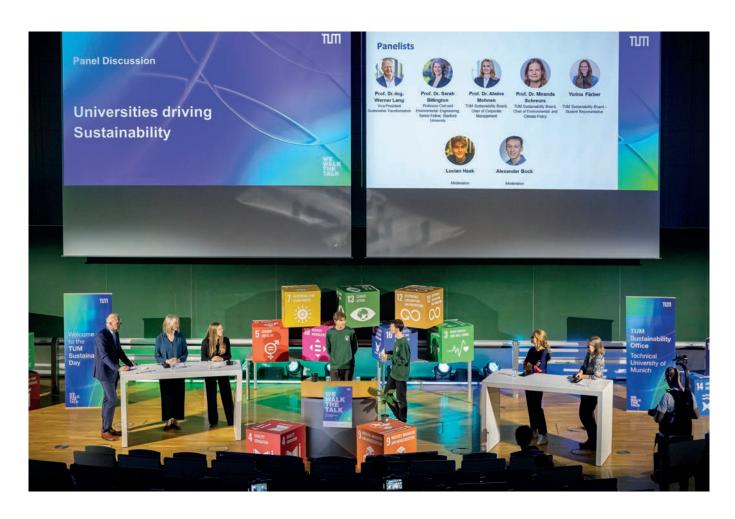
"Through events like the Sustainability Day, we were able to double the number of applications of TUM students for the EuroTeQ Course Catalogue."

Thomas Bergmann, TUM Global & Alumni Office

WE WALK THE TALK

## Impulses for Sustainability

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**IMPULSE PROGRAM** 

This part of the program combined an extensive and interactive program with over 50 workshops, panel discussions, and various lectures.

Here, participants could dive deeper into different sustainability topics and actively participate in the discussions.

## Panel Discussions around Sustainability at TUM

### Universities are the places where the leaders of the future are trained

Universities can lead in shaping a sustainable future, tackling scientific, economic, ecological, and social challenges. During the panel discussion "Universities driving Sustainability" members of the TUM Sustainability Board, Prof. Dr. Sarah Billington from Stanford University, and our student representatives underscored the essential role of universities in fostering sustainable development.

The panelists discussed how universities drive innovation, impact, and shape a sustainable future. The discussion emphasized that while much progress has been made, there remains a clear need for further action and innovative contributions. Achieving sustainability was presented as a shared vision for the university community, highlighting the importance of collective commitment and a united focus on long-term goals. Participants expressed that the current educational structures are often outdated and must adapt to meet today's urgent challenges.

They also stressed the value of consistency and skill development to empower future leaders in sustainability. The discussion reinforced that meaningful transformation can only happen when universities lead by example and act with a clear, ambitious vision.

### Participants of the Panel Discussion

- Prof. Dr. Werner Lang, Vice President Sustainable Transformation
- Prof. Dr. Sarah Billington, Professor Civil and Environmental Engineering, Senior Fellow, Stanford University
- Prof. Dr. Alwine Mohnen, TUM Sustainability Board, Chair of Corporate Management
- Prof. Dr. Miranda Schreurs, TUM Sustainability Board, Chair of Environmental and Climate Policy
- Yorina Färber, TUM Sustainability Board Student Representative
- Moderated by our students Lucian Haak and Alexander Bock



"We will not fulfill the SDGs if we do not move faster and with much more intensity and universities should be at the forefront here."

Prof. Dr. Miranda Schreurs, TUM Sustainability Board, Chair of Environmental and Climate Policy

## TUM's ambition to be a University of Excellence also relates to the campus development

The "TUM in Transformation" panel highlighted the urgency and collective commitment required to make TUM's campuses more sustainable and livable. Members of the Taskforce Campus Development, the TUM Sustainability Office, and our student representatives discussed the importance of sustainability in all dimensions of TUM, emphasizing that sustainability affects not just where we live but also where we work. Speakers stressed the need for clear, measurable targets and a culture that values sustainability beyond technology.

The panel underscored that achieving carbon neutrality is a marathon, with progress needed at every level. As diverse stakeholders, students have untapped potential and must be actively included and motivated to participate in sustainability efforts. Events like the TUM Sustainability Day are essential to raise awareness and foster collaboration across all university groups, reinforcing that a sustainable campus should be both people and nature-friendly.

The message was clear: sustainability is urgent, and every action, no matter how small, contributes to the larger goal.

### **Participants of the Panel Discussion**

- Prof. Dr. Ben Boucsein, Taskforce Sustainable Campus Development, Professorship Urban Design
- Prof. Dipl.-Ing. Thomas Auer, Taskforce Sustainable Campus Development, Professorship Building Technology and Climate Responsive Design
- Prof. Dr.-Ing. Stephan Pauleit, Taskforce Sustainable Campus Development, Professorship Strategy and Management of Landscape development
- Paul Bachmann, Taskforce Sustainable Campus Development, Student Representative
- Moderated by our students Lucian Haak and Alexander Bock

"It's not only where you live that you are affected by your environment, but also where you work."

Prof. Dr. Stephan Pauleit, Taskforce Sustainable Campus Development, Professorship Strategy and Management of Landscape Development

"Technology plays a role, but we should not believe in technology only – we need a culture towards sustainability."

Prof. Thomas Auer, Taskforce Sustainable Campus Development, Professorship Building Technology & Climate Responsive Design



## Cities as a decisive factor in the climate crisis

### Keynote Speaker Prof. Dr. Sarah Billington

In her speech, sustainability researcher **Prof. Dr. Sarah Billington from Stanford University** emphasized the importance of cities in the climate crisis. "Around 70 percent of all greenhouse gas emissions are produced in the world's cities" warned Billington. And the proportion of the population living in urban areas has been rising for decades and now almost accounts for two-thirds.

Measures that make cities more environmentally friendly and resource-efficient are therefore particularly effective.



### Focus brings success

### Nico Rosberg speaks at the TUM Speaker Series

The former Formula 1 world champion and current sustainability investor Nico Rosberg participated in the Sustainability Day as a guest speaker. As part of the TUM Speakers Series, he discussed the opportunities and challenges of founding companies with the students.

His most important advice is to entirely focus on your goal in crucial phases. He himself then completely isolates himself from current world events in the news and does not use social media.



## Hub for CleanTech Innovation

www.unternehmertum.de/en/landingpages/cleantech-hub-munich

At the TUM Sustainability Day, we launched the CleanTech Hub, where research and innovation are transfered into scalable solutions for climate action, resilience, and resource management.

Discover innovation and create impact for a sustainable future!

### Global Perspectives: CleanTech Research to Impact

During the panel discussion, participants were inspired by groundbreaking innovators shaping a sustainable future! The panel demonstrated how two pioneering research-based startups at TUM are making a sustainable impact, with insights from international experts from NTU Singapore, Imperial College London and Breakthrough Energy.

**IMPULSE PROGRAMM** 

## More Impulses for Sustainability

Depending on the target group, some impulses were offered in German.

Thus, these impulses are also listed in the original language to represent the program accurately.

Title

ARTIFICIAL INTELLIGENCE (AI)
TUM THINK TANK

Beyond the Hype: How can we use AI to work towards sustainability goals and what can we do to co-design more ecological and social technologies?

Description

Hopes are high for artificial intelligence in the fight against climate change and for a future worth living. There are already very promising technologies in areas such as renewable energies, agriculture and the mobility transition. However, Al itself comes with various sustainability challenges, such as high CO2 emissions of data centres, water consumption or e-waste on an ecological level or social challenges like algorithmic discrimination or the spread of misinformation.

In this panel discussion with experts from TUM, OECD, Microsoft and Stadtwerke München, we will shed light on the current potentials and challenges of AI technologies for sustainability goals and discuss approaches for an ecologically and socially more sustainable AI.

Panelists: Prof. Dr. Stephan Günnemann (Professor for Data Analytics and Machine Learning, TUM), Johannes Kirnberger (Policy Advisor Al & Sustainability, OECD), Lisa Klepper (IT-Architect, Stadtwerke München), Sean Jones (Chief Sustainability Officer, Microsoft)

Moderation: Helene von Schwichow

AWARENESS

TUM INSTITUTE FOR LIFELONG LEARNING

Promoting Sustainability Through Responsible Leadership

Keynote by Professor Dr. Claudia Peus Senior Vice President Talent Management & Diversity, Founding Director TUM Institute for LifeLong Learning. With reference to the concept of the Triple Bottom Line, Prof. Peus discussed how leaders can address the people side of sustainability - e.g. by taking basic human needs into consideration as well as considering the implications of technological advances.

Title Description

AWARENESS
PROFESSORSHIP OF URBAN
PRODUCTIVE ECOSYSTEMS

### **Envisioning Our Future - a journey** through time

Interactive workshop on our Garching Campus. How do we envision the future? What does a sustainable future for all mean? What does our mobility in the future look like? What do we eat? How do we work and how do we live? Not that easy, is it? Imagining the future comes up against hurdles. In order to find sustainable ideas and solutions for the major problems of the 21st century, we need to try out new things. In this workshop, we want to develop positive visions in a creative way that are concretely imaginable. We want to start a new story together, create images of a future that we do not yet know and that begins on today's TUM Sustainability Day. The workshop is aimed at anyone who likes to be outside and wants to try something new and shape the future of TUM together.

#### **AWARENESS**

TUM GLOBAL & ALUMNI OFFICE / ENVIRONMENTAL DEPARTMENT OF THE STUDENT REPRESENTATION

#### Green Language Café

Interested in sustainability? In this Green Language Café, we want to address the topic of "sustainability in different countries". Following a short input, you are invited to discuss your experiences and ideas in groups in your preferred language, just like in a normal language café! Our moderators are looking forward to providing you with questions or additional information! The event is organized in cooperation with the environmental department of the TUM Student Council (Referat für Umwelt der Studentischen Vertretung [TUM AstA]).

#### **AWARENESS**

**DEPARTMENT HEALTH AND SPORT SCIENCES** 

### Connect - Create - Move: towards a sustainable world

Stay connected with your Body-Mind-Soul. In this workshop, we dive into different methods that help you become aware of being a whole, interconnected human being on Earth. The Integration of Self, Identity and Belonging support you to make more conscious decisions for a sustainable life.

#### **AWARENESS**

CENTRE FOR URBAN ECOLOGY AND CLIMATE ADAPTATION

### **Climate Walk**

The Climate walk will combine a physical walk through a designated route with the use of portable measurement devices sensors to gather data on outdoor environmental conditions, including thermal comfort and air quality. This experimental approach is intended to make participants aware of the direct effects of microclimate variations in urban spaces on human well-being and comfort, with a particular focus on the significance of urban green infrastructure. The results from the walk will be depicted on a map, offering a visual interpretation of the data collected.

AWARENESS
IWB - ABTEILUNG
NACHHALTIGE PRODUKTION

### Green production - hype or hope?

This interactive workshop gives students the opportunity to explore sustainability from a practical point of view. Green - is it a hype or hope? With examples from industry, we will highlight challenges and solutions in the field of sustainability. In particular, we will deal with the trade-off between sustainability and costs over the entire life cycle. No prior knowledge needed, a creative mindset with the ability to think outside of the box is helpful, though.

Description

AWARENESS
TUM SCHOOL OF MANAGEMENT
INTERNATIONAL OFFICE

### Planet Managers: An Interactive Seminar on Economy and Environment

Join us for an interactive seminar, "Strategic Sustainability: A Resource Allocation Game", where participants will step into the roles of different countries or regions, tasked with managing their starting budgets to foster economic growth while addressing urgent social issues related to climate change. The game will span three rounds, simulating real-world economic and environmental decisions. Teams of four will face the challenge of investing wisely and responding to crises such as climate-induced humanitarian issues. Following the gameplay, we will facilitate a discussion on how these scenarios reflect the broader problems of climate inequality and what we can learn about sustainable development.

#### **AWARENESS**

TUM SCHOOL OF MANAGEMENT

### New Work in the School Office of TUM School of Management – A Contribution to Sustainability

"New Work" refers to an innovative approach to the world of work that aims to rethink traditional working models and adapt them to the changing needs of employees and organizations. It contributes to sustainability by better using existing space, IT-infrastructure, furniture and interior, as well as energy resources. Overall New Work creates a working environment that offers more freedom, self-determination, meaningfulness, flexibility and sustainability. In our presentation, we want to show why we addressed "New Work", with whose support we took up the topic, which best practices served as inspiration, how we developed the room concept and how we have implemented it in the meantime. We want to get into an inspirational discussion with the participants on the potentials of "New Work" at TUM.

### BUILT ENVIRONMENT CENTRE FOR URBAN ECOLOGY AND CLIMATE ADAPTATION

#### Play the Green City

Play the green city is an Interactive role playing game session. "Play the Green City" will be organized where visitors/participants can participate in "envisioning green city" for future.

#### What to expect

The game will include a physical model along with cards where each of the participants can play a certain role and can take decisions towards a sustainable future for the city. While the role playing game will help the participants to think like a stakeholder, the physical model will provide a tangible space for developing collective scenarios. Goal: "Play the green city" addresses the importance of urban green spaces for Munich's resilience and well-being of its inhabitants. Participants are inspired to think like a stakeholder in this process and understand the potential and trade-off when planning green spaces.

### BUILT ENVIRONMENT PROJEKTPLATTFORM ENERGIE + INNOVATION

Modifizierte Verfestigung mit Roadflex RF, eine neue Bauweise zur CO2 Einsparung, Ressourcenschonung und Nachhaltigkeit im Straßenbau Dipl.-Ing. Andreas Fuchs, Stoffstrommanager und F+E Beauftragter: Einblicke in neue Bauweisen zur CO2 Einsparung, Ressourcenschonung und Nachhaltigkeit im Straßenbau

Title Description BUILT ENVIRONMENT Elena Kühner (M.Sc.), Absolventin TUM Lehrstuhl ENPB: PROJEKTPLATTFORM ENERGIE + INNOVATION Einblicke in aktuelle Research Projekte Wohnraum innerhalb des verfügbaren deutschen Treibhausgasbudgets planen **BUILT ENVIRONMENT** Kathrin Theilig (M.Sc.), research assistant at TUM. Chair ENPB: PROJEKTPLATTFORM ENERGIE + INNOVATION Taking sustainable building further – insides into the research Taking sustainable building further projects: "ECO+: Toward positive environmental impacts of insides into the research projects "ECO+: neighborhoods" Toward positive environmental impacts of neighborhoods" Kathrin Theilig (M.Sc.), research assistant at TUM Chair ENPB: **BUILT ENVIRONMENT** PROJEKTPLATTFORM ENERGIE + INNOVATION "CircularFTmehrRaum – insides into the research project: Climate-positive and circular buildings, accompanying research CircularFTmehrRaum - Climate positive on the extension of the Ferdinand Tausendpfund GmbH" and circular buildings, accompanying research on the extension of the Ferdinand Tausendpfund GmbH Dr.-Ing. Patrik Wenzl, Leiter Abteilung Bautechnik **BUILT ENVIRONMENT** PROJEKTPLATTFORM ENERGIE + INNOVATION BAUER Spezialtiefbau GmbH "Die BAUER Energiewand" Die BAUER Energiewand Paul Metzger, graduate of the TUM Chair of Architectural Infor-**BUILT ENVIRONMENT** PROJEKTPLATTFORM ENERGIE + INNOVATION matics, founder of TUM BauAnalyse.com: "Idea to Design in under 5 Minutes: Automating Architecture with Algorithms and Al" Idea to Design in under 5 Minutes: **Automating Architecture with Algorithms** and Al Fabian Ritter, Leiter der Abteilung Innovation und Interimsleiter **BUILT ENVIRONMENT** PROJEKTPLATTFORM ENERGIE + INNOVATION der Abteilung Nachhaltigkeit, Wilhelm Geiger GmbH & Co. KG: "Innovation. Digitalisierung. Nachhaltigkeit. Geiger. - Wandel Innovation. Digitalisierung. Nachhaltigkeit. eines Mittelständischen Bauunternehmens im Zuge der Kreis-Geiger. - Wandel eines Mittelständischen laufwirtschaft." Bauunternehmens im Zuge der Kreislaufwirtschaft. The keynotes provide a tangible insight into the topic of Circular CIRCIII ARITV TUM MISSION NETWORK CIRCULAR Economy and how interdisciplinary projects work can contribute **ECONOMY - CIRCULATUM** to the transformation towards CE in an example industry. We Showcasing circular transformation projects bring together different stakeholders and provide insight into a in the automotive industry - TUM project selection of the most recent ongoing research projects of the initiatives network in automotive (Car2Car, FSCM, STEAM), as well as ongoing research initiatives. In our workshop you can learn more about the e-waste **CIRCULARITY CHAIR OF CIRCULAR ECONOMY** management in Ghana. E-waste in Ghana: blessing or burden?

Description

CIRCULARITY
TUM MISSION NETWORK CIRCULAR
ECONOMY - CIRCULATUM

The role of research, policy, and industry in fostering the transition towards Circular Economy

The CirculaTUM panel discussion follows the Key Notes "Showcase Circular transformation projects in the automotive industry – TUM project initiatives" and address the complexity, challenges, and opportunities of the Circular Economy. It will also investigate the role that TUM can play in the development and deployment of sustainable Circular Economy concepts. The Panel will provide an inter- and transdisciplinary perspective, covering the perspectives of research, industry, and politics as well as the perspectives of students, early career, senior researchers, and industry.

Panel Discussion with Dominik Reichert, Markus Seidel, Claudia Doblinger, Alina Iskander, Magnus Fröhling

Moderation: Jeanne Rubner

CIRCULARITY
TUM MISSION NETWORK CIRCULAR
ECONOMY - CIRCULATUM

Decoding Circularity through Interdisciplinary Work: A game-based Approach with "Make it Circular" The CirculaTUM x CIRCULAR REPUBLIC workshop on inter-disciplinary working is a playful approach to interdisciplinary collaboration in the Circular Economy at TUM. The workshop will be guided in collaboration with CIRCULAR REBUCLIC and provide participants with the knowledge and skills they need to collaborate effectively and to develop innovative solutions to the challenges of Circular Economy. The workshop is based on the strategy game "Make it Circular" developed by acatech and WWF that will help participants to learn about the principles of Circular Economy, understand the different stakeholder perspectives, and apply those principles to real-world problems.

CIRCULARITY
TUM SCHOOL OF MANAGEMENT, CHAIR OF
CORPORATE MANAGEMENT

Innovating for Sustainability: Pioneering the Circular Economy Through Entrepreneurship and Research

The first part of the impulse aims to teach students about the process of creating and scaling the world-leading Packaging-as-a-Service startup within the circular economy. It discusses both the rewarding experiences and challenges faced along this entrepreneurial path.

The second part showcases the successful collaboration between the TUM and Vytal, emphasizing the mutual benefits and the symbiotic relationship. This serves to illustrate how academic institutions and startups can work together to achieve significant advancements in sustainability.

DIVERSITY
TUM SCHOOL OF COMPUTATION,
INFORMATION AND TECHNOLOGY

Was hat Human Sustainability mit Vereinbarkeit zu tun?

Haben Sie sich schon einmal gefragt, wie wir als Individuen und Gesellschaft langfristig nachhaltig leben können, während wir gleichzeitig ein ausgewogenes und erfülltes Leben führen? In diesem interaktiven Impuls-Workshop werden wir untersuchen, wie die Förderung von Vereinbarkeit zwischen Arbeit und Privatleben einen entscheidenden Beitrag zur menschlichen Nachhaltigkeit leisten kann.

**EDUCATION** 

ASSISTANT PROFESSORSHIP OF ECONOMICS EDUCATION

Potentiale von Challenge-based Learning zur Lösung von Herausforderungen der nachhaltigen Entwicklung Wie kann Challenge-based Learning (CBL) genutzt werden, um reale Herausforderungen der nachhaltigen Entwicklung zu adressieren und Lernende zu befähigen ökologisch, sozial und wirtschaftlich nachhaltige Lösungen zu implementieren? Der Impuls zielt darauf ab das Potential von CBL als innovativen Ansatz der Bildung für eine nachhaltige Entwicklung anhand von praktischen Beispielen und Übungen erlebbar zu machen. Zudem sollen ausgewählte CBL Initiativen der TUM und aktuelle Trends der Forschung in diesem Bereich exploriert werden. Eigenes Ausprobieren von Ressourcen und Methoden im Kontext von CBL (z.B. Mikro-Challenges) runden den Impuls ab.

Title Description

EDUCATION ACADEMY FOR INNOVATORS

### TUM Clean Tech Innovation Sprint 2024 Award Ceremony

Unlock Innovation In Just Five Days! Final pitches & award ceremony of the five days Innovation Sprint with the focus on Clean Tech.

EDUCATION
PROFESSORSHIP FOR POLICY
ANALYSIS (TUM) & MUC.DAI (HM)

sustAlnability - Perspectives on Al and Sustainability: risks, opportunities and real world challenges Sustainability and artificial intelligence are the two significant social transformations of our time and thus at the centre of scientific and political debates. On the one hand, Al-supported technologies are creating a wide range of opportunities for sustainability, for example in the field of energy transition or agriculture. On the other hand, Al also poses many risks and challenges for the environment and society: Examples range from the high energy consumption and carbon footprint of machine learning systems to automated discrimination. In a joint project of Hochschule München University of Applied Sciences of Munich and Technical University of Munich, we are researching the opportunities and risks at the intersection of AI and sustainability and, together with an interdisciplinary group of students, develop solutions for real-world challenges in the field. In this interactive session we want to present our findings from the seminar and work on a selected case with the participants in a sprint format.

ENERGY
CENTER FOR COMBINED SMART ENERGY SYSTEMS (MEP)

### **Guided Tour through the Center for Combined Smart Energy Systems (MEP)**

Our Center for Combined Smart Energy Systems (CoSES) introduces itself at the second stand: The CoSES Research Center is a laboratory environment that replicates a small local energy system (microgrid) and is therefore a test environment with realistic conditions for the heating, cooling, traffic and subsystems creates electricity.

ENERGY TUM SEED CENTER

Vision 2030: Energies, Entrepreneurship, and Policy in Sustainable Development - A TUM SEED Center Collaborative Workshop In the upcoming workshop, we aim to collaboratively envision the future of the Seed Center by 2030, focusing on key disciplines: Policy, sustainable entrepreneurship, and sustainable energies.

ENERGY CHAIR OF HYDROGEOLOGY

**Energy transition in Munich now!** 

The workshop is planned as a panel discussion of experts from the Department for Climate Protection and Environment of the City of Munich (RKU), municipal services (SWM), and TUM with active participation of the audience.

The city of Munich aims to become climate neutral by 2035. The energy transition is one of the pillars for achieving the climate protection goals. For this reason, the municipal heating strategy (Kommunale Wärmeplanung) has recently been developed and published. This shows the preferred areas for certain heat supply technologies and activities in order to implement the heat transition. At the same time, the plan for the decarbonization of Munich's district heating has been developed by the Munich municipal services. In both geothermal energy (shallow and deep) plays an important role. How these interact, how the municipal heating transition is going to be implemented and how people in Munich will heat in the future, will be presented in this workshop and discussed with the audience.

Description

ENTREPRENEURSHIP
TUM FEMALE FOUNDERS & WOMEN
START-UP BY UNTERNEHMERTUM

### Entrepreneurship meets Sustainability - Investing in a better and more diverse future

Prof. C. Doblinger will give an impulse on how entrepreneurship can drive a green revolution. This will be followed by a panel discussion with Marlene Stechl (HopfON), Alina Friedrichs (guudcard), Felix Poernbacher (DeepDrive) and Jana Petry (UVC) moderated by Svenja Lassen (Female Investors Network). We want to illustrate start-ups at different points in the founding process, as well as discuss the problems that exist at the various stages (hardware vs. software, scaling), and examine sustainability from the perspective of investors. The discussion will focus on the topic of what investors look for when they invest in sustainability, as well as what the situation is for women compared to men, e.g. are there greater hurdles, can men provide support here if necessary (keyword allyship).

ENTREPRENEURSHIP
180 DEGREES CONSULTING MUNICH

**ESG: Crack the Case** 

Join us on Sustainability Day for an engaging workshop designed to deepen your understanding of sustainability through solving a case study. This event provides a unique opportunity to work alongside members of 180 Degrees Consulting Munich and Carmen Meixner, ESG Consultant and Founding Partner of Via Tomorrow, who will offer expert guidance throughout the session.

Participants will delve into a real-life case study, gaining handson experience in analyzing and applying ESG criteria. The
workshop will cover essential strategies for breaking down case
studies, tips for crafting compelling solutions, and techniques
for effective presentation. This workshop is ideal for individuals
preparing for interviews, those looking to enhance their analytical skills, and anyone interested in the field of sustainability.

Beyond the case study, this event is an excellent opportunity
to network with professionals and other students dedicated to
making a difference in sustainability.

Enhance your problem-solving capabilities and distinguish yourself in the field of sustainability. We look forward to welcoming you to an inspiring session of learning and collaboration.

ENTREPRENEURSHIP
TUM ENTREPRENEURSHIP RESEARCH INSTITUTE

### The Triple Bottom Line in Action

Taking responsibility as a company, an institution or an organization in 2024 means more than just being able to act economically. It also requires a social and ecological focus. In our workshop, we will give voice to the three pillars of the Triple Bottom Line by discussing a specific case study.

ENTREPRENEURSHIP ENACTUS MÜNCHEN E.V.

Sustainable Development Goals (SDGs) in Action: How Sustainable Entrepreneurship can Shape Our Future

In this engaging presentation, Enactus Munich will showcase hands-on examples of sustainable and social entrepreneurship projects that are driving progress towards the Sustainable Development Goals (SDGs). Discover inspiring stories of impactful projects, learn how innovative business models are creating positive change, and explore how you can take action to shape a sustainable future.

Description

#### **ENTREPRENEURSHIP**

CHAIR OF ENTREPRENEURIAL EDUCATION, CHAIR FOR DESIGN AND TRANSDISCIPLINARITY / CHAIR FOR DESIGN AND TRANSDISCIPLINARITY)

#### Let's become Change Makers!

We aim to spread the word about how we educate the Change Makers of tomorrow in our interdisciplinary course "Change Makers: Entrepreneurial and Design Competencies for Societal Transformation". Aside from sharing real-life impressions, we will take you on the journey of becoming a Change-Maker yourself. Stay curious to learn about four essential entrepreneurial and design competencies.

#### **GOVERNANCE & ENGAGEMENT**

TUM SCHOOL OF MANAGEMENT, PROFESSORSHIP OF ECONOMICS OF ENERGY MARKETS

### **Sustainability Dashboard for Mining Industries: Mining for Sustainability**

Focused on SDGs and the mining industry, supplying metals and minerals, such as copper and lithium, critical for supporting decarbonization, we shall agree on what economic, environmental, and social price we, as a global society, are ready to pay and ask for it. The goal is to debate about a publicly accessible dashboard reflecting objectives and interests of the key stakeholders to reveal the need for consensus in the implemented solutions.

#### GOVERNANCE & ENGAGEMENT ZENTRUM HOCHSCHULE UND NACHHALTIGKEIT BAYERN

### Making Future TOGETHER -Kooperationsmöglichkeiten für nachhaltige Hochschulen in Bayern

Wie setzen andere Hochschulen Nachhaltigkeit in ihrer Organisationsstruktur und mit Studierendeninitiativen um? Wie integrieren und fördern Kolleg:innen und Kommiliton:innen an bayr. Hochschulen Nachhaltigkeit in der Lehre, Forschung und Transfer? Welche hochschulübergreifenden Projekte, Partnerschaften und Ansprechpersonen laden zur Kooperation ein?

Wir geben Ihnen Einblicke in die bereits bestehende Vernetzungsarbeit und zeigen Ihnen Wege auf, wie Sie sich an der sozial-ökologischen Transformation der Hochschulen beteiligen können. Im Zentrum Hochschule und Nachhaltigkeit Bayern (BayZeN) haben sich alle bayerischen Hochschulen zusammengeschlossen, um gemeinsam Nachhaltigkeit und Klimaschutz in allen Handlungsfeldern der Hochschule voranzubringen. Darin liegt der zentrale Mehrwert des BayZeN: Hochschulangehörige können sich vernetzen, ihre Erfahrungen teilen und hochschulartübergreifend zusammenarbeiten.

### GOVERNANCE & ENGAGEMENT TUM RESEARCHER @ CAREER DESIGN

### Bridging Science and Society: Navigating Sustainability Challenges Together?

Join us as we explore the role of science in shaping solutions for current sustainability challenges. This panel fosters discussions among stakeholders to explore the multifaceted relationship between science and society and ways to reshape scientific and societal landscapes. We aim to dissect prevalent misunderstandings and elucidate how to communicate science to "walk the sustainability talk". Our panelists, representing diverse backgrounds including academia, journalism, and administration, will delve into pressing questions about the proximity of academics to the public and strategies for bridging the gap between science and stakeholders. Through interactive elements like audience surveys and visual aids, we will explore perceptions of science's role and envision collaborative pathways toward sustainability.

GOVERNANCE & ENGAGEMENT
ENVIRONMENTAL DEPARTMENT OF THE STUDENT
REPRESENTATION

#### **Transforming TUM: A participative Task**

In this workshop, we want to introduce the structures driving sustainability at TUM, the strategies set in place to guide the transformation, and ways to become active yourselves. Afterwards, we want to explore together how you envision a sustainable university and which measures you would like to see implemented. Our goal is to answer your questions regarding sustainability at TUM and give you the opportunity to express your opinions.

Description

HEALTH
TUM4MIND, STUDENT ADVISING AND
INFORMATION SERVICES

### Why your brain needs your feet for thinking

In this workshop the speaker will talk about the effect of a lack of physical exercise and movement on the brain. Why does exercise improve concentration? And how can you make sure you get enough exercise in a busy schedule? You will get answers to these and other questions. After the theoretical part, he also shows practical exercises and gives tips on how to integrate them into the student's everyday life. Speaker: Jürgen Maaßmann is a sports scientist and a former German basketball player. Today he works as a sports teacher, lecturer, sports therapist and coach.

HEALTH
NIGHTLINE MÜNCHEN

#### Ressourcen-Rendevouz

HEALTH
CENTER FOR GLOBAL HEALTH

### **Building Health Resilience in Times of Climate Change**

entdeckt eure persönlichen mental health-Ressourcen.

In diesem Workshop lernt ihr, was Psychohygiene ist und

Climate change already has a massive impact on human and animal health as well as on our ecosystems. Thus, we urgently need to build health resilience. This transformative change incorporates all sectors of society. In this impulse activity we have therefore invited representatives from disciplines beyond medicine and health to discuss their perspectives. Importantly we invite the audience to take part in the conversation and feel free to challenge the status quo.

Panelists: Prof. Alwine Mohnen (behavioural change), Prof. Ruth Müller (social sciences/science and technology studies), Prof. Miranda Schreurs (political studies), Prof. Clarissa Prazeres da Costa (medicine and health)

Moderators: Prof. Andrea Winkler, Laura Roth and Marrium Habib

HEALTH
TUM4MIND, STUDENT ADVISING AND
INFORMATION SERVICES

### Sustainability starts within: Nurturing mental health with SKY Breath Meditation

Breathing techniques have been a central part of the traditional knowledge of yoga. A time-tested, evidence-based breathing technique, Sudarshan Kriya Yoga (SKY) has also been found by numerous independent studies to be most effective in enhancing mindfulness, the feeling of connection, work efficiency, and the ability to concentrate, while reducing stress and enhancing overall wellbeing. In this practice session, you will get an introduction to the SKY Breath Meditation and have the opportunity to learn a few simple breathing techniques. To conclude the session there will be a short exchange on the experience and time for questions.

Workshop led by Prof. Dr. Mrinalini Kochupillai. She is a guest professor of ethics at TUM and a certified practitioner and trainer for the Art of Living Happiness Program.

Title Description

HEALTH
HEALTH FOR FUTURE MUNICH

Co-benefits: Warum Klimaschutz = Gesundheitsschutz ist

Vermittlung der Grundlagen zu den Auswirkungen der Klimakrise auf die menschliche Gesundheit; Vorstellung des Konzepts der "Co-benefits"; gemeinsames Erarbeiten von Maßnahmen, die sowohl unserer Gesundheit als auch der der Erde nutzen würden.

INTERNATIONAL AFFAIRS
TUM GLOBAL & ALUMNI OFFICE

Sustainable Global Engagement. A workshop on how to align sustainability and international strategies.

This workshop aims at developing ideas on how to more strongly align TUM's international priorities with the TUM Sustainable Futures Strategy. Through impulses and interactive discussions, the session will create awareness about the international dimension of the TUM Sustainable Futures Strategy, with participants actively tasked to share best practices (e.g. from school or department level) and contribute their thoughts to the formulation of a "sustainable global engagement agenda". This event is organized by the TUM Global & Alumni Office in cooperation with the Technical University of Denmark (DTU) and the EuroTech Universities Alliance.

POLITICS
CHAIR FOR CLIMATE AND
ENVIRONMENTAL POLICY

Geovania! A game for the geopolitics of renewable energy

Participants will find themselves in "Geovania." The hypothetical continent consists of four countries and is surrounded by water. The four countries have their own specialties, and each is a pillar in the island's economy. They are dependent on each other economically. The game is based around a digital interface that consists of a map of the four countries. The players will be provided with supplemental printed materials such as player manuals, country briefings, minister name badges, and materials to support negotiations and a general assembly.

The materials can be previewed on the project website: https://geovania.nettopuis.live/

RESEARCH FORSCHUNGS-NEUTRONENQUELLE HEINZ MAIER-LEIBNITZ (FRM II) Guided tour and presentation by Dr. Michael Schulz in the seminar room "Glaspalast" at FRM II.

Guided Tour and presentation: How can neutron research contribute to sustainability issues?

RESEARCH
TUM OFFICE FOR RESEARCH AND INNOVATION
(TUMFORTE)

**European Collaborative Funding for Sustainable Research** 

Join us for an enlightening session by experts from TUM ForTe and the National Contact Point Climate, Energy and Mobility (NCP KEM). Gain invaluable insights and strategies for developing successful collaborative EU proposals within the broad research area of sustainability. Our goal is to help you identify relevant research funding calls, understand eligibility and evaluation criteria, and predict future trends for 2025. Do not miss our exclusive panel discussion featuring testimonials from successful TUM-coordinated EU-projects, NCP experts on all aspects of participation in Horizon Europe, and our TUM Liaison Officer from Brussels, who will provide insights into the current political landscape.

One Afternoon. Endless Learning Opportunities:

# A SUSTAINABILITY DAY TALK SERIES

KEYNOTE PROF. DR. DAVID EGGER

### The Importance of New Materials for Sustainable Energy Conversion and Storage

I will discuss that discovery of new materials is a key opportunity to make energy conversion and storage technologies more sustainable. The focus of the talk will be on materials for solar cells and batteries and will highlight the impact of atomistic theoretical calculations on delivering new microscopic understanding for them.

KEYNOTE PROF. DR. MANUEL SPITSCHAN

### The right light at the right time: From the lab to the real world

Light exposure affects human physiology and behaviour through neurobiological pathways linking the eye to the brain, including our biological clock. In our environment, electric light is available 24/7 through room illumination and displays, which differ from daylight. How can we use light to optimize our health and well-being?

KEYNOTE PROF. DR.-ING. MARTIN MENSINGER

### Potential and Challenges of Direct Reuse of Steel Members

The presentation will address the potential for reducing the CO2 footprint of buildings through the direct reuse of steel components in structural frameworks. To realize this potential, it is necessary to address not only technical questions regarding material properties but also liability issues, and to establish a logistics chain that enables the economical reuse of steel components.

KEYNOTE
TUM VENTURE LABS

### **Entrepreneurship in ClimateTech**

Inspiring TED talk series on Entrepreneurship in ClimateTech with successful founders and an investor from our TUM Venture Lab ecosystem. Take the opportunity to gain personal insights into how to become a ClimateTech founder, how to scale such a company and what advantages the Munich ecosystem offers for founders in this field. Interact with our speakers and ask your most pressing questions.

**TUM VENTURE LABS** 

### Future Building – Building the Future: Technologies for Circular Building Materials

A compelling session at the intersection of sustainability and innovation in the building industry. This session features two talks from leading experts in circular building practices and bioregional design. Dive into the world of sustainable building. Discover how integrating sustainable practices in the construction industry can lead to more resilient and environmentally friendly buildings.

KEYNOTE TUM VENTURE LABS

## From Hype to Reality: Evaluating Sustainability Claims and Potentials of Additive Manufacturing.

Learn more about the sustainability claims of Additive Manufacturing (AM) and discover their real potential. We will examine past promises combined with current practices and provide a comprehensive reality check on the technology's environ-

mental impact and its role as a clean-tech enabler. Additionally, we will explore different perspectives on how AM will play a crucial role in shaping a more sustainable and better future.

KEYNOTE

PROF. DIPL-ING. JOSEF STERETZEDER

#### Circular economy in interior fittings

The understanding of a new circular economy must be promoted: The aim of the circular economy is to reduce the use of primary resources to a necessary minimum. Closing material cycles is a means to an end and must preserve the material value of products as far as possible. Lindner already has new business models for this.

KEYNOTE TUM VENTURE LABS

### SpaceTec for Sustainability

Sustainability solutions with SpaceTech either earth observation data, satcom, navigation, SatloT with a focus on tangible solutions

KEYNOTE PROF. DR. NIKLAS BOERS

#### **Tipping Points in the Earth System**

Theory and Paleoclimate evidence suggest that some components of the Earth system, such as the polar ice sheets, the Atlantic Overturning Circulation or the Amazon Rainforest, may respond abruptly to ongoing climate and land-use change. I will discuss how their stability has changed in the recent past and what the possible impacts of a collapse of any of these tipping elements could be.

KEYNOTE PROF. DR.-ING. JAKOB BURGER

### Capturing CO2 from the air – Crazy idea or key technology for a sustainable world?

While capturing CO2 from gases is a century old standard operation, the capturing of CO2 from the atmosphere – and thus reversing anthropogenic CO2 emissions – is a relatively novel technology. So far, it was too expensive to be taken serious. Technological developments and increasing market pull moved large-scale realization into reach. The talk gives an overview over the technology, highlight key challenges, shows TUM activities in the field, and helps the audience to build a critical perspective on the technology.

KEYNOTE

PROF. DR. STEFANIE KLUG

### **Sustainable Cancer Prevention Globally and Locally**

The talk on "Sustainable Cancer Prevention Globally and Locally" will present increasing cancer incidence and mortality rates, and the potentials of prevention to reduce cancer rates globally. It will point out unequal access to cancer prevention by factors such as region, ethnicity, sex and age. Lastly, it will envision sustainable access to cancer prevention.

KEYNOTE PROF. DR. CORDT ZOLLFRANK

### New Old Biopolymers. Why do we need bioplastics?

Numerous structural and functional materials in construction and other advanced fields of materials application are currently based on fossil resources. The use of fossil resources is intimately connected to severe environmental issues and they are subject to eventual depletion. Therefore, materials from renewable resources with improved structures and designed functionalities have gained an increased importance in various fields of advanced material applications. The talk will put a spotlight on the necessity, why biopolymers from renewable resources are ultimately needed for a sustainable future and to replace polymeric materials of fossil origin. The presentation will show how biogenic materials were already used a long time before the fossil area and how they can be adapted to current material applications. This will be highlighted in particular by looking at historical and archaeoinspired adhesives and the very first bioplastic Cottonid, which is made from the most abundant biopolymer on earth - cellulose.

KEYNOTE
ALEXANDER BLOEMER

### **Sustainability through Transparent Supply Chains**

Have you ever wondered who made the clothes you wear or manufactured the phone in your hand? How do companies treat these workers, and do they behave environmentally responsibly? In this talk, we explore the lack of transparency in supply chains, why this is so problematic for sustainability, and which approaches are available to address this.

KEYNOTE TUM VENTURE LABS

## An AgriFoodTech Innovation Ecosystem made in Munich & Weihenstephan: How companies and start-ups reach sustainable impact together

Discover the dynamic AgriFoodTech Innovation Ecosystem cultivated right in the heart of Munich and Weihenstephan! Gain insights inton a journey where companies and start-ups converge to drive sustainable impact in agriculture and food systems. From cutting-edge technologies to novel business models, we're cultivating innovation and sowing the seeds for a brighter, greener future.

KEYNOTE
PROF. DR. THOMAS KNOKE

## Agroforestry and alternative land-use practices to reconcile food production with the environment

Learn about the socio-economic and ecological potential and limitations of agroforestry systems. Examples of tropical Ecuador and Panama will show barriers and enablers for sustainable landuse practices and inform the research concept for a large-scale TUM agroforestry experiment. The planned multi-disciplinary initiative involves cutting-edge research and aims at excellent PhD qualification in agricultural, forest, ecological, landscape, digital, and socio-economic sciences.

WE WALK THE TALK

Outlook

3



## TUM Sustainability Day 2024 – Recap and Outlook

We concluded the TUM Sustainability Day 2024 with a panel discussion featuring the deans and representatives from the seven schools of the Technical University of Munich. Moderated by Prof. Dr. Werner Lang, Vice President of Sustainable Transformation, the session focused on each school's contributions to advancing sustainability in research and education.

Participants shared insights and key takeaways from the day, emphasizing the importance of interdisciplinary collaboration in addressing sustainability challenges. Reflecting on the vast array of activities held during Sustainability Day, they recognized the strong engagement from the TUM community as evidence of growing interest and commitment to sustainable practices.

Looking toward future goals and the implementation of the TUM Sustainable Futures Strategy 2030, the panelists outlined specific sustainability priorities for their respective schools. They expressed a commitment to achieving tangible progress

in embedding sustainability within academic programs and stressed the importance of fostering a university culture where sustainability is a collective responsibility shared by students, faculty, and staff.

The panelists' reflections and forward-looking objectives underscored the need for sustained interdisciplinary collaboration, setting a roadmap for future initiatives to deepen the integration of sustainable practices across TUM's academic and operational domains.

In summary, the panel provided a strong conclusion for Sustainability Day, reinforcing TUM's dedication to becoming a sustainability-focused education and research leader.

## **IMPRINT**

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#### Contact

TUM Sustainability Office Arcisstr. 21 80333 München

sustainability@tum.de https://tum.de/sustainability

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# WE WANT TO THANK OUR SUPPORTERS!

The TUM Sustainability Day was organized by the Sustainability Office in collaboration with the different Schools of TUM.





















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