



Technical University of Munich (TUM)

MIRMI Newsletter 2023 - May/June

Communi	ty	

01. June 2023

<u>Unlocking Opportunities and Inspiring Innovation: Why munich i</u> Should Be on Your Radar

Attending munich_i can offer you several benefits and opportunities. Here are some reasons why you should consider visiting this high-tech platform at automatica, one of the world's biggest trade fairs in robotics, automation, and Artificial Intelligence. Additionally, we bring a gift for our newsletter subscribers! Take the chance and get a 25% discount on your Hightech Summit ticket (incl. 4-day entry to the entire automatica fair) with the limited promotion code "summitspecial" here!! At the Hightech Summit, inspirational speakers from science and industry share their stories and experiences on the latest developments and upcoming technologies on June 28, 2023. Bavarian Minister President Dr. Markus Söder, patron of munich_i, will be part of the munich_i Opening Ceremony too!

25. May 2023

Sam Altman discusses ChatGPT at TUM

Few technological developments have triggered as much debate as the AI-based chatbot ChatGPT. Sam Altman, the mind behind ChatGPT and co-founder of OpenAI, visited TUM today. He explained what lies behind the success of ChatGPT, why it is not an open-source technology and how it might be regulated.

10. May 2023

Drones and air taxis: The key to the air traffic revolution

Increased use of air-space is essential in the mobility of the future – at least according to the major players in the drone industry. During an expert conference held at the Technical University of Munich (TUM), guests from science, business and politics discussed the steps which will be necessary to pave the way for wide-scale use of air taxis and unmanned aircraft. In addition to Daniel Wiegand, co-founder of the TUM spin-off Lilium, and Dirk Hoke, CEO of the air taxi start-up Volocopter, German Federal Minister for Digital and Transport Dr. Volker Wissing also took part in the conference, promising to improve basic prerequisites for this development.

04. May 2023

The new TUM Center TUM ELI: First AI experimentation room for automatic knowledge generation

The Science Council has recommended the construction of a new research building at the Technical University of Munich (TUM). The TUM Center for Embodied Laboratory Intelligence (TUM ELI) is to be funded with 51 million euros. The research building is scheduled to go into operation in 2028. Questions for the Director Start-ups & Infrastructure of the Munich Institute of Robotics and Machine Intelligence (MIRMI) Prof. Eckehard Steinbach.

04. May 2023

Spatial AI: how drones navigate

Researchers from Technische Universität München (TUM) are developing 'spatial artificial intelligence' to teach drones to navigate complex environments. Professor Stefan Leutenegger of TUM's Munich Institute of Robotics and Machine Intelligence is using computer vision and inertial sensors to give drones a coherent 3D representation of their environment. Neural networks and deep learning are then applied to give the drone the capability to distinguish between static and dynamic elements and recognize other actors. Applications for the technology include forestry mapping, ship inspection and construction robotics.

Events, Calls, and More

02. June 2023

ICRA Workshop: Geometric Representations - The Roles of Modern Screw Theory, Lie Algebra, and Geometric Algebra in Robotics

The Full Day Workshop on Geometric Representation 2023 is scheduled to occur in London, UK on June 2nd! This workshop aims to bring together researchers in various fields of robotics and geometers. The workshop will explore core robotics methodologies and their application in practical contexts. Additionally, for remote participants, the event will be live-streamed, and a platform will be provided to collect questions during the workshop here.

06. June 2023

Lecture on Geriatronics

On Tuesday, June 6th at 2:30 PM, Gerhard Donth will give a presentation at the Bürgertreff Karlsfeld, Rathausstr. 65, about a research project by LMU in Garmisch-Partenkirchen and a foundation regarding the future of elderly care. The project explores the use of information technology, mechanics, and electronics for seniors, termed "geriatronics."

12, 13, 14 June 2023

Join Our Focus Group Robotics in Healthcare: Shaping the Future of Responsible Robotics Together!

A series of focus groups is being organized in Munich and Garmisch-Partenkirchen on June 12, 13, and 14 to engage the broader public in discussions on Robotics in healthcare. In these focus groups, you will have the chance to discuss the use of robotics in healthcare and share your perspective: What opportunities, but also challenges do you see? What framework conditions must be ensured for the use of robotics? The results of the discussion will be anonymized so that they can no longer be attributed to you as an individual, and will be published in scientific journals and considered for further project progress. As a token of appreciation, participants will receive a €30 voucher for their participation.

Bioengineering Day: AI in medical applications

Artificial intelligence (Al) can be used in medicine to evaluate image data and assist doctors in making diagnoses. For which applications is Al already being used successfully today? How can risks be limited? Who will take responsibility for decisions based on Al? Experts from science, medicine and industry will discuss these and other questions at the Bioengineering Day on June 23rd at the Munich Institute of Biomedical Engineering (MIBE) in Garching.

27-30. June 2023

<u>Unleash Innovation and Forge Partnerships: Discover AI & Robotics at munich i</u>

Explore over 30 demos and startup showcases from the field of AI & robotics to witness innovative ideas and potentially find investment opportunities or partnerships at the Al.Society booth. The international exposure at munich_i provides a global atmosphere, fostering cross-cultural connections and offering insights into TUM's world-class research. Get a free day ticket to visit the Al.Society booth at the automatica fair. Use the promotion code "aisocietyauto23" here!!

Additionally, munich_i supports career development not only with exciting panels on our public i_space stage but also with the Robothon® – The Grand Challenge, a global robotics competition in advanced manipulation. This year's competition has been running for the past months and you will have the chance to meet the winners at the Robothon® Award Ceremony with State Minister Judith Gerlach on Thursday, June 29, 2023. Find all the munich_i program highlights you need to know to plan your visit here.

02-03. July 2023

Join the Geriatronics Summit 2023

The Second Geriatronics Summit, organized by the Munich Institute of Robotics and Machine Intelligence (MIRMI), aims to explore the role of AI and robotics in supporting care for older adults and people with disabilities. The event will foster discussions on the challenges of utilizing these technologies ethically and effectively in healthcare, while also improving the well-being of caregivers and the wider community. Best Paper Award Competition Award of 500 € Sponsored by Friends of Geriatronics e.V.

Recommended Readings, Videos, and Podcasts

How useful are company-owned prompt databases when using Al?

By Sebastian Halm / iBusiness (24. May 2023)

NANO from May 17, 2023: flat rates per case - what needs to change? - Video

By 3sat-Mediathek (17.May 2023)

How grandparent generation can live longer at home

By Werner Pöchinger / Kronen Zeitung (15. May 2023)

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Your feedback is important to us. Let us know if you have comments or recommendations at community@mirmi.tum.de

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