

Technical University of Munich (TUM)

MIRMI Newsletter 2023 - April

Community

24. April 2023

[Cobots: How tactile robots make human-robot collaboration \(HRC\) safe](#)

They are called LWR iisy, LWR iiwa, Yu+, UR 5e or simply "Robot": Everything in Robin Kirschner's lab in Garching-Hochbrück revolves around robot arms, including those from Kuka, Yuanda Robotics, Universal Robotics or Franka Emika. "I don't know of any lab that tests more robotic arms than we do," says Robin Kirschner, lab-manager of the Robot Performance and Safety lab and PhD student at the Munich Institute of Robotics and Machine Intelligence (MIRMI). Their topic: making sure robots can safely interact with people.

24. April 2023

[Improving the lives of MS patients](#)

In the new Center for Multiple Sclerosis and Neuroscience at the Technical University of Munich, set to open in 2025, researchers aim to better understand multiple sclerosis and improve the quality of life for patients. The center will examine the disease, treat patients, and provide support services, all under one roof. The scientists will also collaborate with those researching other nervous system diseases such as Alzheimer's and stroke. The center plans to develop biomarkers that can identify the most effective medications for patients in the early stages of the disease, by analyzing a large number of patient data.

20. April 2023

[Making robots learn to smell](#)

Achim Lilienthal, a professor at the Technical University of Munich, is developing robots with a sense of smell that can detect dangerous gases to prevent accidents. His research covers three topics: the sense of smell of robots, mobile robots' safe and efficient navigation, and artificial intelligence. Lilienthal uses machine learning and algorithms to enable robots with olfactory capacity to identify gases like methane, carbon monoxide, and other hazardous gases. His goal is to establish a "Robot Olfaction CERN" in Munich, a high-tech lab for robotic olfaction.

19. April 2023

[New generative AI task force](#)

The TUM Think Tank has established a task force to guide and advise various sectors on managing generative artificial intelligence (AI). Comprising researchers from Technical University of Munich (TUM), the group will develop regulatory proposals and facilitate discussions on practical concerns. The task force aims to leverage the potential of generative AI while responsibly addressing associated risks. It also intends to raise awareness of

emerging AI developments and engage citizens through participatory initiatives. The task force includes experts from diverse fields, such as ethics, law, technology, and health, and collaborates with international partners.

03. April 2023

"A freeze in training artificial intelligence won't help"

A letter signed by around 3,000 tech and science experts calls for a pause in developing advanced AI systems until effective safety rules are put in place. Prof. Urs Gasser, an expert in digital governance, supports the need for safety measures but argues that an outright moratorium on AI development is impractical and unlikely to succeed. Instead, he believes that existing ethical principles, technical standards, and best practices can guide the development and use of AI. He suggests that the focus should be on implementing and enforcing these guidelines, rather than calling for a pause in research.

30. March 2023

The Design Generator: Building Products Like ChatGPT Writes Texts

Luca Sacchetto wants to let artificial intelligence build sofas, chairs and, for example, robot heads. Based on an open-source transformer similar to the Generative Pretrained Transformer (GPT), the doctoral student at the Technical University of Munich (TUM) does not create texts like ChatGPT, but design proposals. That is the idea.

29. March 2023

Robotics Award: Ribin Balachandran wins George Giralt Phd Award

Two MIRMI doctoral theses made it into the top 4 at the George Giralt Phd Award 2023. Ribin Balachandran shares first prize with Antonio Andreilla from the Universitat Politècnica de Catalunya (UPC) in Barcelona. Balachandran was awarded for his research on "adaptive shared control of robots". Nico Mansfeld also reached the final round of the last four.

Events, Calls, and More

28. March 2023

Invitation for 03/28/23: Here.We.Go Industry Forum

The Technical University of Munich (TUM) invites media representatives to the industry forum "Here.We.Go" of the German-French Academy for the Industry of the Future (GFA). In addition to opening speeches by Bavarian Minister of European Affairs Melanie Huml and French Consul General Corinne Pereira, industry representatives and experts from TUM and Institut Mines-Télécom will discuss the digitization of processes, the transition from Industry 4.0 to Industry 5.0, and the increased collaboration between France and Germany in these fields.

Recommended Readings, Videos, and Podcasts

[Heart surgery on the heart valve: Top doctor explains the advantages of robots - "Like eating sushi"](#)

By Andreas Beez / Merkur.de (11. April 2023)

[ChatGPT vs. data protection: Can the chatbot also be banned in Germany?](#)

By Alexandra Iliina / INGENIEUR.de (ING) (03 April 2023)

[Shortage of skilled workers: Care robots from Bavaria could help - video](#)

By AFP (01. April 2023)

[AI stop now: AI development must pause!](#)

By Dominic Holzer / Bayerischer Rundfunk 24 (BR24) (30. March 2023)

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