www.leopoldina.org

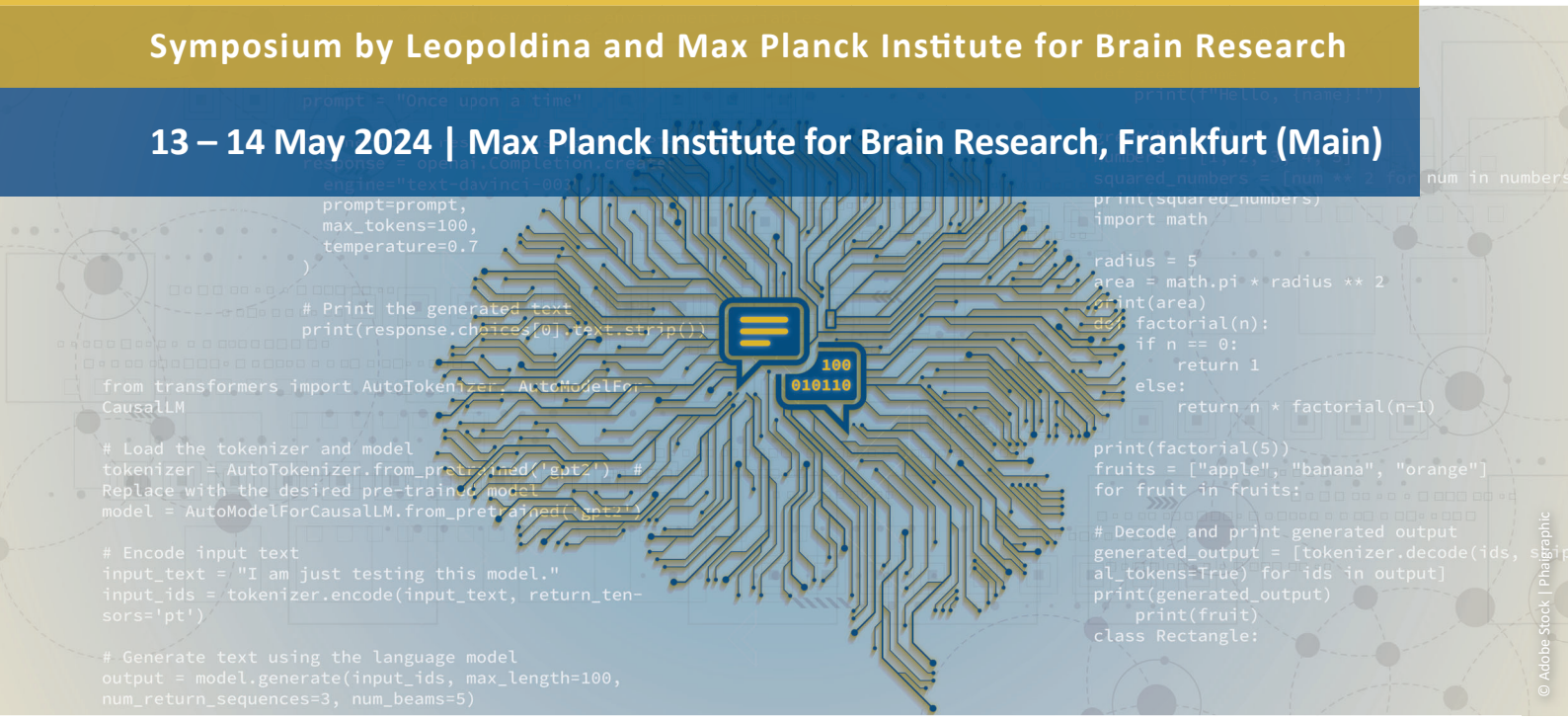
mpibrain research

Leopoldina
Nationale Akademie
der Wissenschaften

Brain Science and Large Language Models: has a quantum leap occurred?

Symposium by Leopoldina and Max Planck Institute for Brain Research

13 – 14 May 2024 | Max Planck Institute for Brain Research, Frankfurt (Main)



Recent advances in artificial intelligence (AI) have spurred both enthusiasm about the capabilities of the latest large language models (LLMs) and warnings about their ability to match or even surpass human intelligence. But do comparisons to the human brain hold when addressed from the perspective of neuroscience?

This symposium co-hosted by Leopoldina and MPI for Brain Research will bring together experts from computer science and neuroscience to discuss what has and has not been achieved with latest advances in AI. What are and how can we judge the capabilities of artificial systems compared to human intelligence? Which aspects of LLMs are similar and decisively dissimilar from the way the human brain works? By which tools can we inspect, measure and analyze the representation and capabilities of LLMs? Have LLMs learned a representation of language that shows similarities to the one generated by our human brains? How can LLMs inspire advances in brain science? Conversely, what aspects might be missing and could be used to improve current LLMs (and what does "improve" mean, in the first place)?

Symposium

Confirmed speakers

- Alison Gopnik, *Berkeley*
- Iryna Gurevych, *Technical University of Darmstadt*
- Melanie Mitchell, *Santa Fe Institute*
- Uri Hasson, *Princeton University*
- Thomas Hofmann, *ETH Zurich*
- Björn Ommer, *Ludwig Maximilian University of Munich*
- Haim Sompolinsky, *Hebrew University/ Harvard University*
- Mariya Toneva, *Max Planck Institute for Software Systems*

The detailed agenda will follow soon.
Please register by 26 April 2024

www.leopoldina.org/en/brain-research-and-language-models

Location

Max Planck Institute for Brain Research
Max-von-Laue-Str. 4
60438 Frankfurt (Main)

Contact

German National Academy of Sciences Leopoldina
Jägerberg 1 | 06108 Halle (Saale)
E-Mail: politikberatung@leopoldina.org