



***LRZ newsletter February 2023: a prospect of the year, an interview about modelling and a wonderful young career***

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## **NEWS**

**2023 at the LRZ: new technic, more services**

The Leibniz Supercomputing Centre (LRZ) will change in 2023. And this will even be visible from the outside: photovoltaic moduls will be installed on its office buildings over the course of the year, which will supply up to 400,000 terawatt hours of energy per year and thus, apart from the operation of the supercomputers, are expected to cover the entire electricity demand of the data centre. "This will enable the LRZ to significantly improve its environmental and CO2 balance," Professor Dieter Kranzlmüller, director of the LRZ, is pleased to say. "We already run our computers on 100 per cent renewable energy, cool them in the meantime in an environmentally friendly way with water without adding antifreeze, and also use the waste heat to air-condition the offices. In the near future, we will also produce our own electricity." However, current supply problems in the area of technology could slow down the LRZ's plans. This applies not only to the planned solar plant, but also to new computer technology. Nevertheless, the LRZ's users can expect many improved services in 2023 - which ones shows [the LRZ's website](#).



## The art of modelling is to separate the wheat from the chaff”

Happy birthday: Hans-Joachim Bungartz, mathematician and computer scientist with a doctorate, holder of the [Chair of Scientific Computing](#) at the [TUM School of Computation, Information and Technology](#) (CIT) and one of the directors of the Leibniz Supercomputing Centre (LRZ), has just turned 60. A good occasion to talk to the specialist for codes and equations about simulations and developments in numerics. In the interview, [Bungartz explains in a relaxed, understandable and profound way](#) why artificial intelligence and data science are bringing more attention to his subject and complementing and expanding modelling.



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## Unlocking Europe’s data treasures

Data drives science and research: EXA4MIND, Extreme Analytics for Mining Data Spaces, is the name of a new European research project from the Horizon Europe programme (funding number 101092944), which is building a platform for the use, analysis and exchange of Big or better: Extreme Data by the end of 2025. The Leibniz Supercomputing Centre (LRZ) is involved in EXA4MIND. [Read how EXA4MIND makes work easier](#) for researchers on the LRZ website.

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## Person2Watch: Johannes Halemba - IT knowledge worker

Everything has its time: Johannes Halemba only became successful with learning after school. After his secondary school leaving certificate, he started training at the Leibniz Supercomputing Centre (LRZ) to become an IT specialist for system integration, after which he obtained his entrance qualification for higher education while working and studied business informatics up to a Master's degree. "The LRZ was a great playground, I was able to try out a wide variety of tasks and areas of application and realised that learning can be a lot of fun," says Halemba. Researching and developing new practical tools and future-oriented services for the LRZ: [The personal career story](#) on the LRZ website tells how this works. Discover opportunities.



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## Hybrid quantum computing as a step to usable systems

Quantum computing will not replace classical computing: The Leibniz Supercomputing Centre (LRZ) shares this assessment with the Japanese [RIKEN Supercomputing and Research Centre](#) in Wako (picture below). RIKEN operates the supercomputer "Fugaku" and has been working for about three years on integrating quantum processors into High Performance Computing (HPC) and developing workflows and software for hybrid computing. Prof. Dr. Mitsuhsa Suto, head of the RIKEN Center for Computational Science (R-CCS), and Miwako Tsuji, who holds a doctorate in computer science, [presented the renowned research institute and its plans](#) for future technology in January 2023.



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## IT and quantum computing: Girl’s Day 2023 at LRZ

Taking a PC apart and getting to know the technology of the future: It is a woman's job and therefore also a topic of Girl's Day 2023. After two years, it will finally take place again at the Leibniz Computer Centre in Boltzmannstr. 1, Garching. Girls who are interested in the future of computers and IT technology should register quickly. More information on [the LRZ website](#) and [here](#).



## WORKSHOPS & EVENTS

**CSE 2023:** How Computer Science and Engineering support research, industry and push the quantum computing. International conference of Society for Industrial and Applied Mathematics. Amsterdam, 26. Februar until March, 3, 2023. [Information](#)

**Programming parallel HPC computer architectures** Implementation of algorithms and software on HPC systems. March 7. to 9., 2023. [Information and registration](#)

**Quantum Computing, pplications, ideas:** Meet the Bavarian quantum enthusiasts at BQCX online or at the LRZ. March, 8, 2023. [Registration](#)

**Linux-Days Chemnitz:** All about Linux and its challenges. March, 11 and 12, 2023. [Information](#)

**Introduction in the Computational Fluid Dynamics with ANSYS,** March, 16, to April, 27, 2023. [Information and registration](#)

**Secure IT and robust systems:** Spring conference of the Benutzergruppe Netzwerke (bgnw) at LRZ, March, 23 and 24, 2023. [Information and registration](#)

**Introduction into artificial intelligence:** AI training series – first orientation, April, 11 and 12, 2023. [Registration](#)

**Artificial Intelligence for science and research:** EuroCC Bootcamp, April, 17 and 18, 2023. [Information and registration](#)

**Introduction into the LRZ's HPC systems, focus: CFD.** April, 19, 2023 [Information and registration](#)

**Container technology and AI applications at LRZ:** AI training series, April 26, 2023. [Information and registration](#)

**Quantencomputer und PC kennenlernen:** Girl's day am LRZ, April 27, 2023. [Information](#)

**ANSYS and CADFEM:** Simulation day at LRZ, April, 26, 2023. [Information and registration](#)

**Introduction into the LRZ AI Systems:** AI training series, May, 3, 2023. [Registration](#)

**SuperMUC-NG Status and Results Workshop:** Science with SuperMUC-NG and an overview on LRZ systems and Phase 2. Information and registration

**N-Ways and GPU programming:** EuroCC bootcamp, May, 15 and 16, 2023. [Information and registration](#)

**Introduction into the LRZ's HPC systems, focus: CFD.** July, 19, 2023. [Information and registration](#)

**Super-, Quantum computing an new technologies:** International Supercomputing (ISC) 2023, conference and fair in Hamburg, May, 21 until 25, 2023. [Information](#)

**GreenIT, Energy efficiency, informations systems for environment and earth datas:** 37. Interdisciplinary conference EnviroInfo at LRZ, October, 11 until 13, 2023. Actual: Call of Papers. [Information and registration](#)

**Introduction into the LRZ's HPC systems, focus: CFD.** October, 18, 2023. [Information and registration](#)

**Supercomputing, trends and new technics:** SC2023, conference and fair in Denver, November, 12 until 17, 2023. [Information](#)

**Introduction into the LRZ's HPC systems, focus: CFD.** December, 13, 2023. [Information und registration](#)

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## USED THINGS FOR FURTHER SERVICE

The LRZ is always getting rid of used hardware and furniture - a constantly updated list of things we want to give away can be found [online](#). Here you can also read where to direct your interest. The equipment and furniture are free of charge for institutes, chairs and other research institutions.

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## JOB OFFERS

You will find an international and diverse team in Garching, which is constantly growing. If you don't find a suitable job profile below, please visit the [career page](#) of the Leibniz Supercomputing Centre or send an [unsolicited application](#). We are LRZ - and curious about you!

[Senior Site Reliability Engineer Storage Services](#)

[Research Associate / IT specialist for Atlassian Confluence](#)

[IT Specialist for Multi Factor Authentication](#)

[Employee for Managed Security Services](#)

[IT specialist for client management MAC/Mobile Device Management](#)

[HPC Systems Software Senior Researcher for HPC-Quantum Hybrid Software Stack](#)

[Software Engineer Storage Services / Portal](#)

[EU Project Manager / Science Manager](#)

[Technical employee for communication nets](#)  
[Employees technical support for facility management](#)  
[Installation mechanic for facility management](#)  
[Electronic technician for energy and facility technic](#)

[Administration staff for reception and more](#)  
[Consultant for the tax department](#)

[Student Assistant Service-Desk](#)  
[Student Assistant for ITSM software development](#)

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## READ ON

Here you will find links to latest information from the german-european supercomputing community and our cooperation partners

- The [newsletter](#) of the Bavarian Academy for Science and Humanities
  - [Publications](#) of the Gauss Centre for Supercomputing (GCS): GCS-News und Inside
  - [Infoletters](#) of the Gauß-Alliance
  - Publications of PRACE: [PRACE Digest, Jahresbericht](#)
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## INFORMATION & IMPRINT

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- Current information about the LRZ and about courses and events can also be found on [Twitter](#) and [LinkedIn](#).



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