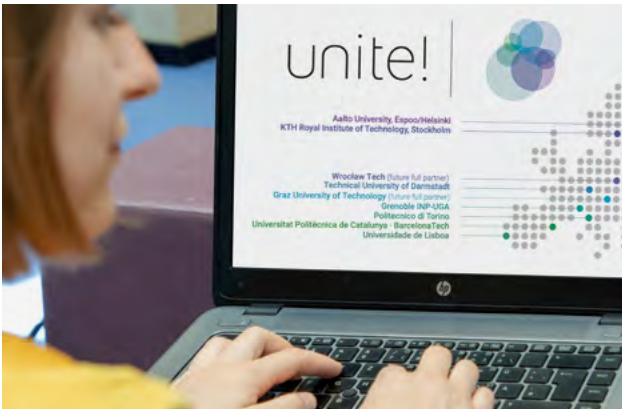


## TU Graz new member of Unite!

Unite! is a network of universities from currently seven European countries, promoted within the framework of the EU's European University Initiative. TU Graz has recently joined this high-profile alliance aiming at a new model of a trans-European inter-university campus.

**Barbara Gigler**

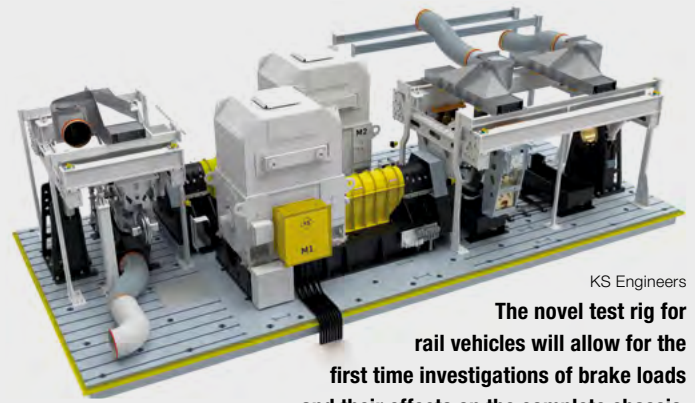
TU Graz has been a member of Unite!, the University Network for Innovation, Technology and Engineering, since the end of 2021. This network of renowned European universities will now have nine full members in as many European countries. In addition to TU Graz, these are: Aalto University, Barcelona Tech (UPC), Grenoble INP-UGA, KTH Royal Institute of Technology Stockholm, Politecnico di Torino, TU Darmstadt, Universidade de Lisboa and Wroclaw University of Science and Technology. Together, the nine universities have 200,000 students and more than 40,000 graduates annually.



**TU Graz becomes a member of Unite!, a European university network with the common goal of creating a new model for a trans-European inter-university campus for students, scientists and staff.**

Lunghammer – TU Graz

Unite! is a network of universities with the common goal of creating a new model for a trans-European inter-university campus for students, scientists and staff. At the intersection of science, innovation and technology, this alliance is working together to address the grand societal challenges of the future. And transforming European higher education through multidisciplinary, multicultural and multilingual education, research and innovation involving regions and businesses. ■



KS Engineers

**The novel test rig for rail vehicles will allow for the first time investigations of brake loads and their effects on the complete chassis.**

## Brake Test Rig for Rail Vehicles

From 2023, rail vehicle manufacturers will be able to have their braking systems tested and certified on the TU Graz campus.

**Christoph Pelzl**

At the new brake test rig, located at the Institute for Structural Durability and Rail Vehicle Technology, one of the world's few independent test centres for brake systems of rail vehicles will be realised on the market in the future. On average, waiting times for such approval inspections can currently be half a year to a year. We want to remedy this situation," says Martin Leitner, head of the institute. Leitner and his team, above all laboratory manager Peter Brunnhofer, have the accreditation according to ISO/IEC 17025 and the UIC certification as their goal. Regular testing operations are scheduled to start in 2023. In addition, a major focus of the planned investigations will be on research and development projects that go beyond standard applications.

The new brake test rig at TU Graz is based on an innovative concept. Instead of flywheels, a comparatively larger electric motor with 1.4 megawatts of power is used. This enables flexible test scenarios with rapidly changing loads to be carried out. Braking systems of high-speed trains with speeds of up to 500 km/h will also be tested. The innovative drive system opens up a wide range of new vehicle-specific tests – from braking to a complete standstill as well as parking brake and brake jolt tests. In addition, the test rig will have two test chambers, each with its own electric machine. One test chamber is available for standard tests of individual components, such as disc or pad brakes. The second test chamber additionally fulfils special functionalities for further test scenarios with larger space requirements.

The globally active technology company KS Engineers is responsible for the design and implementation of the test rig. The 600-strong company, with headquarters in Graz, is a leading international supplier of test rigs and testing technology for the automotive and engine industries. ■