

17 – 19 June
Rheingoldhalle, Mainz Congress Centre, Germany



EuroBrake Student and Young Engineers Opportunities Programme 2024

We are happy to announce that the EuroBrake Student and Young Engineers Opportunities Programme initiative is returning, and the top 20 students / young engineers will be offered the opportunity to receive a sponsored complimentary pass to EuroBrake 2024 on the 17 – 19 June in Mainz Germany. The aim of the Programme is to provide students / young engineers a unique chance to learn about the international mobility and braking industry, as well as participate in activities with peers and experts.

Please note, successful candidates' accommodation costs will be covered, however candidates will be required to cover the cost of their travel to EuroBrake.

Programme activities

In addition to attending the EuroBrake conference and social programme, there will be a dedicated EuroBrake Student and Young Engineers Opportunities Programme of activities which will include:

- **Introductory lecture on braking technologies**
- **Meet the Industry Experts**
- **CV and career advice**
- **Dedicated support from a member of the EuroBrake Student and Young Engineers Opportunities Programme Working Group**

In addition, students (and young engineers) studying on a course which includes study or a project involving braking technology will be required to present a poster at EuroBrake.

Who can apply

Students who have either recently completed or currently studying on any of the below engineering-based university course:

- **Bachelors**
- **Masters**
- **PhD**

Or young engineers who are in their first work placement following university.

Application criteria

- All students are required to complete the application form and provide a copy of their CV and proof of student status.
- Students (and young engineers) studying on a course which includes consideration of braking technology are encouraged to prepare a poster presentation, on any of the subjects detailed overleaf, for display at EuroBrake. All posters will then be automatically entered in the EuroBrake poster competition*.
- All young engineers must be under the age of 28 and are required to complete the application form and provide a copy of their CV and proof of age.

*Each year at EuroBrake, a poster competition is held and monetary prizes are given to the top 3 posters.

All applications for the programme need to be sent to [Emma Georgiades](#), FISITA Head of Events, by **Monday 11th March 2024**.



EuroBrake 2024 Poster Competition topics

Brake Systems

- **Intelligent braking and braking control**
- **Environmentally friendly braking systems**
- **Digital Twins – link between modelling, simulation and testing**
- **Challenges of ADAS requirements**
- **Autonomous vehicles and brake system health monitoring**
- **Braking systems for automated vehicles**
- **Braking systems in the Integrated Chassis Control scenario**
- **Safety and redundancy for brake-by-wire systems and automated driving**
- **Regulatory aspects for brake-by-wire systems**

Commercial vehicles

- **Outlook on brake particle emissions of LCV and HDV**
- **Challenges of electrified LCV and HDV for truck/trailer brake balance**
- **Brake-by-wire for Commercial vehicles**

Components and materials

- **Fundamentals of brakes**
- **Materials and design**
- **Friction material testing & requirements for EVs / BEVs**
- **Future coating materials development**
- **Brake rotors**
- **Lightweight design of disc brake system**

Environmentally friendly approaches

- **Sustainability (logistics, manufacturing processes, manufacturing concepts, testing efforts, material selection, environmental impact, recycling)**
- **Green / zero emission manufacturing**
- **GTR / regulation related topics**
- **Emissions and abrasion from brake and tyre interaction**
- **Emissions from electric drives and batteries**
- **Environmental effects on brake emissions**

Modelling and Simulation

- **Brake wear and emissions - simulation**
- **NVH - simulation**
- **Artificial intelligence**
- **New simulation techniques and data driven methods**

Railway braking

- **Technological measures to reduce non-exhaust emissions from rail e.g coated rotors**
- **Wheel-rail contact, wheel slide protection, braking distance**
- **Rail brake tribology: NVH and emissions**
- **Innovations in rail braking systems e.g. “brake-by-wire” (EMB)**

Technologies

- **Regenerative braking**
- **Brake-by-wire**
- **New developments in braking**
- **Systems engineering**
- **The future of braking**
- **Electromechanical braking**
- **Multi-Actuator control for vehicle motion management**
- **The software defined vehicle and its impacts and potentials for braking systems**
- **Ecosystem for seamless software and system Integration**

Testing

- **Brake wear and emissions - testing**
- **NVH – testing**
- **Testing and standardisation**
- **Simulation, testing, innovative development processes**