

fka presents pioneering mobility solutions at the 33rd Aachen Colloquium

Aachen, October 2024 – true to the motto "creating ideas & driving innovations", fka GmbH presents various innovative technologies and concepts that will shape the mobility of the future at the 33rd Aachen Colloquium on Sustainable Mobility. Dr Jens Kotte, Managing Director of fka GmbH, emphasises: "Future mobility must be a positive experience, safe and sustainable - with people always at the centre of our developments."

Visitors to the exhibition stand can expect an interactive experience with five stations that deal with important mobility issues.

Driver Monitoring Demonstrator

One highlight is the demonstrator on driver safety, which illustrates how distractions can influence the driving task. The fka driving simulation and UX team will demonstrate how driver monitoring systems contribute to safer driving.

The new General Safety Regulation (GSR), which defines measures aimed at reducing driver distraction and thus reducing the number of accidents, shows just how important this topic is.

LiDAR Adverse Conditions Demonstrator

Another focal point is the LiDAR demonstrator, which shows the performance of LiDAR sensors under adverse conditions. LiDAR (Light Detection and Ranging) sensors enable precise measurements and the ability to create three-dimensional scans of the vehicle's surroundings. This technology is crucial for the transition from SAE Level 3 to higher autonomy. Together with the "Driving Vision News" network, fka has established a strong consortium to develop a test methodology for the performance evaluation of LiDAR sensors.

The consortium's project looks at three main areas that can affect LiDAR performance under unfavourable conditions:

- Adverse weather: Weather conditions such as rain and fog affect the measuring accuracy of the sensors.

- Contamination: Restriction of the sensor view due to dirt or splash water, which reduces the effectiveness of the sensors.
- Interference: Influence on the sensors by other sensors or cameras, which can interfere with the measurement signal.

In this context, fka and its partners have already published the DIN SAE Specification 91471. This provides a basis for evaluating the performance of LiDAR sensors under ideal conditions. The new project aims to develop generally accepted test methods by the end of 2024 that also consider the sensors' performance under unfavourable conditions. To demonstrate the test systems, the influence of fog on the LiDAR sensor can be experienced live at the fka stand.

levelXData by fka presents the latest development in toolchain

LevelXData by fka presents its latest feature with a demonstrator - the simple search of high-quality, naturalistic traffic and scenario data in the database. This makes it even easier to work with LevelXData by fka, so that the development and validation process of ADAS and AD systems can be supported even better. With this feature, the developer can extract customised data sets from a large database of high-quality, naturalistic traffic and scenario data worldwide.

The high accuracy and completeness of the data are ensured by comprehensive quality management. The data sets cover various scenarios, including urban areas, motorways and construction sites. In addition, digital maps are provided that allow the trajectories to be interpreted in the context of the infrastructure. These maps are available in ASAM OpenDRIVE and Lanelet2 formats and support the integration of the data into common simulation tools.

Understanding sustainability as an opportunity

An ESG quiz rounds off the programme and raises visitors' awareness of environmental, social and governance issues. At a time when companies are increasingly being held accountable for their sustainability strategies and are subject to comprehensive reporting obligations, fka shows how important a strong ESG strategy is to strengthen the trust of customers and investors. The quiz enables visitors to actively engage with these topics, while a film continuously presents the relevance and challenges of these topics concerning products for sustainable mobility. The focus here is on seeing the topic as an opportunity to better position oneself in competition through innovation and transformation. The fka supports its customers here with new advisory services.

Integrated steering and drive concept

In the centre of the stand is a revolutionary corner module from our cooperation partner ika, which integrates the drive and steering in one module. This module offers many advantages,

especially for skateboard architectures. In a film next to the module, the entire development cycle of innovative products at fka is vividly presented, starting with the original idea, through detailed planning to the prototype. It also illustrates the importance of a comprehensive safety concept and how fka can provide support.

All projects and exhibits exemplify the high level of innovation and integration at Steinbachstraße 7. fka supports its customers from the initial idea to conceptualisation and simulation, prototype implementation and final testing. In addition to an extensive infrastructure, it has all the necessary tools at its disposal to develop ideas virtually, implement them in real life, integrate them into vehicles and evaluate them on test benches and in road tests. "I am very pleased that we will once again be able to present many innovations to our customers this year. fka stands for generating and developing new ideas, advising our customers and efficient prototype implementation of innovations," says Dr Jens Kotte, Managing Director of fka GmbH.

About fka

For 40 years, fka has been internationally known as an innovative engineering service for the mobility industry. Driving the world by developing ideas and creating innovations is the mission statement that fka's 160-strong team is committed to.

The team is inspired by a passion for efficient, safe and fascinating mobility. As one of the first companies on the Aachen campus, the spin-off of the Institute for Automotive Engineering of the RWTH Aachen University demonstrated entrepreneurial foresight.

Interdisciplinary expertise in all aspects of mobility and technological visions, combined with the advantages of the inspiringly creative location, are fka's fuel. Ideas, innovations and unique methodological expertise are shaped into well-founded and secured solutions that give fka's customers the necessary edge in a wide range of issues.

A complete spectrum of services, ranging from consulting and conception to simulation and design, prototype construction and experimental testing, forms the basis for this.

With the credo "creating ideas & driving innovations", the team constantly has the mobility of the future in mind.

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