

## **From Idea to Innovation – fka Presents the Future of Automotive Driving**

At this year's Aachen Colloquium Automobile and Engine Technology, fka shows what future driving can look like. Visitors can experience innovative control concepts, functions for automated driving plus new concepts for the interaction of driver and vehicle live at the fka booth.

Aachen, 10. October 2017

Increasing connectivity and growing levels of automation are main drivers for future developments. They substantially change both vehicles and the driving experience as part of future mobility. This also affects business models. fka's extensive and outstanding experience helps to meet future requirements with creative ideas and innovations. By combining our full vehicle competence with interdisciplinary partners, we provide holistic solutions.

This year, fka presents its competences in the field of HMI (human-machine interaction). Visitors can experience in a driving simulator at the fka booth, how innovative control concepts can enhance the interaction between driver and vehicle. fka's solutions aim at increasing the safety and joy of the interaction between driver and vehicle. The demonstrator shows how fka transforms an idea via simulations and computer-aided designs into prototypes, which can be experienced, evaluated and optimized.

The new control concept integrates more and more automated functionalities plus the vehicles connectivity with its environment in only two different modes. This makes the usage of these systems significantly more user-friendly. Focus is the user, who despite growing technical complexity shall interact safely and comfortably with the vehicle. The here presented solution combines input from various disciplines like design, psychology, computer sciences and of course vehicle engineering.

Besides, new driving experiences, future developments and new technologies will enable completely new vehicle concepts. Thanks to electrified drivetrains, for example revolutionary chassis and steering concepts can be implemented. One of fka's main research topics are innovative drivetrain systems. In order to electrify a drivetrain, the complete energy management has to be re-defined. Currently, all hybrid vehicles are mainly based on the same three basis structures – parallel, serial and power-split, while the drivetrains differ widely. Differently dimensioned drive components in combination with other vehicle parameter lead to a wide variety. In order to find the right solution, fka developed its own generic full vehicle energy management, which meets even complex requirements and can help to reduce development expenses to a large extent.

As a research service provider, fka also develops new technical concepts for customers and validates these with the help of extensive simulation and testing tools. In addition, the results of research and development projects can be turned into component or full vehicle prototypes at fka.

Furthermore, the revolutionary vehicle concept SpeedE proves the innovation and integration capabilities of Aachen's vehicle researchers. The electrically driven vehicle combines a steer-by-wire system facilitating up to 90° steering angle with an innovative control concept: the driver uses so-called side sticks instead of a steering wheel to direct the vehicle – an already established means of control in aviation. Thanks to its architecture and open interfaces, SpeedE forms an ideal platform to quickly integrate and test new developments also in the areas drivetrain, thermal management and automated driving. Visitors can experience SpeedE live during the Aachen Colloquium.

The vehicle concept SpeedE has the objective to allow experiencing the extensive innovation potential of electrically driven vehicles within the conflicting priorities of safety, efficiency and driving pleasure. It thus turns e-mobility into e-motion.

#### **About fka**

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For more than 35 years, fka has been an innovative engineering service provider for research and development tasks for the automotive industry and its suppliers. We are research facility, provider of creative ideas, and driver of innovation. Our holistic approach and unique infrastructure for simulation, testing and evaluation allows us to see the big picture and be your specialist for details at the same time. We deliver our worldwide customers with the full range of engineering services including conception and simulation, as well as design and engineering of prototypes, and their experimental testing. Working together in interdisciplinary teams is a key aspect of our success. We also cooperate closely with experts from vehicle design, electrical engineering and IT specialists and thanks to our subsidiary are present in Silicon Valley since 2015.

Following our motto "creating ideas & driving innovations" we create a safe, efficient and exciting future mobility for our customers.

[www.fka.de](http://www.fka.de)

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