



## ZF Showcases Automated Driving Functions for Greater Safety in Road Traffic

- **Automated emergency braking when turning meets future criteria of the Euro NCAP 2020**
- **Automated braking and maneuvering prevents collisions**
- **ZF supplies sensors, signal processing and actuators for automated driving**

**Friedrichshafen/Trappes. ZF showcased its current automated driving product developments at a customer and media event near Paris. These include enhanced emergency braking functions when turning in city traffic and automatic collision avoidance technology.**

“Safety is one of the most important fundamental principles for developing automated and autonomous driving functions,” explains Áine Denari, head of ZF Global Electronics ADAS. “Our product portfolio includes sensors, signal processors, central computing and actuators, such as braking and steering systems. Our unique portfolio allows us to deliver complete solutions incorporating both near-term safety and driver assist functions, in parallel with investing in highly automated systems and functions for the future.”

### **Looking around the corner**

In heavy city traffic, a car turns off the main road onto a bustling side street. A pedestrian is crossing the street right at a blind spot beyond an intersection and is not seen by the driver. But the automated emergency braking assistant does detect the pedestrian and safely brings the vehicle to a stop. For this function, ZF combines two lateral front radar units, a front camera and the braking system. With the combined camera and radar signals, the car can detect a pedestrian crossing the street even when turning. ZF’s braking system can then safely stop the car. This emergency braking function meets the criteria for Euro NCAP 2020.



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**No fear of traffic jams**

Everyone is familiar with this highway scenario: just around the curve, a long line of red brake lights with the tail end of the jam very close. If you react in time, you will collide with the last vehicle. ZF's "Automated Collision Avoidance" (ACA) driver assistance function can detect such hazardous situations and respond if the driver does not act. In contrast to conventional automatic emergency braking this system is also able to maneuver automatically to an open adjacent lane if there is not sufficient distance for an emergency braking inside the lane. With enough distance available, the ACA stops the car with conventional emergency braking.

The automated collision avoidance system is able to support the driver on highways up to speeds of 130 km/h. A front camera and a front facing radar can detect the situation and request braking and steering systems intervention accordingly. To protect vehicle occupants, the system is also equipped with an automated pre-tensioner seatbelt which warns the driver by vibrations and tightens the belt before braking or steering interventions.

Captions:

- 1) Automated emergency braking for Euro NCAP 2020: With the combined camera and radar signals, the car can detect a pedestrian crossing the street even when turning. ZF's braking system can then safely stop the car.
- 2) ZF's "Automated Collision Avoidance" driver assistance function can detect hazardous situations and is able to maneuver automatically to an open adjacent lane if there is not sufficient distance for an emergency braking inside the lane.

Images: ZF



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Press contacts:

**Mirko Gutemann**, Technology and Product Communications,  
Phone: +49 7541 77-960136, e-mail: [mirko.gutemann@zf.com](mailto:mirko.gutemann@zf.com)

**Robert Buchmeier**, head of Technology and  
Product Communications, Heritage Communications,  
Phone: +49 7541 77-2488, e-mail: [robert.buchmeier@zf.com](mailto:robert.buchmeier@zf.com)

**ZF Friedrichshafen AG**

ZF is a global leader in driveline and chassis technology as well as active and passive safety technology. The company has a global workforce of 146,000 with approximately 230 locations in some 40 countries. In 2017, ZF achieved sales of €36.4 billion and as such, is one of the largest automotive suppliers worldwide.

ZF enables vehicles to see, think and act. The company invests more than six percent of its sales in research and development annually – in particular for the development of efficient and electric drivelines and also in striving for a world without accidents. With its broad portfolio, ZF is advancing mobility and services for passenger cars, commercial vehicles and industrial technology applications.

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