EMERGENCY STEER ASSIST – ADVANCED DRIVER ASSISTANCE SYSTEM FOR EMERGENCY LANE CHANGE MANEUVERS

Eckert, Alfred*, Hartmann, Bernd, Rieth Dr. , Peter E.
Continental - Chassis & Safety Division – Systems & Technology – Advanced Engineering

KEYWORDS – Emergency Steer Assist, Advanced Driver Assistance System, Collision Avoidance, Evading Manoeuvre, Emergency Situation

ABSTRACT - Advanced Driver Assistance Systems support the driver in the driving task, alert prior to a hazard or assist to overcome a hazardous situation. In doing so these systems target the increase of road safety and driving comfort, the improvement of traffic efficiency and the decrease of environmental impact. Within this paper, Continental presents an Advanced Driver Assistance System which directly targets the increase of road safety, for collision avoidance by evasive manoeuvres in emergency situations. Emergency Steer Assist, a so-called “Safety ADAS” (Advanced Driver Assistance System) demonstrates the lateral supplement of the Emergency Brake Assist EBA. The functional networking and for the first time the foresighted and situation dependent adaptation of electrically controllable chassis components such as EPS (Electric Power Steering), ESC (Electronic Stability Control) and optional the rear wheel steering system ARK (Active Rear Axle Kinematics) with surrounding sensor systems opens a new dimension for the global optimization of driving safety in the area of conflict between driving comfort and pleasure.