

# Mechatronics of Vehicles and Construction Machinery

*Speciality*

Vehicle Mechatronics

*Speciality supervisor*

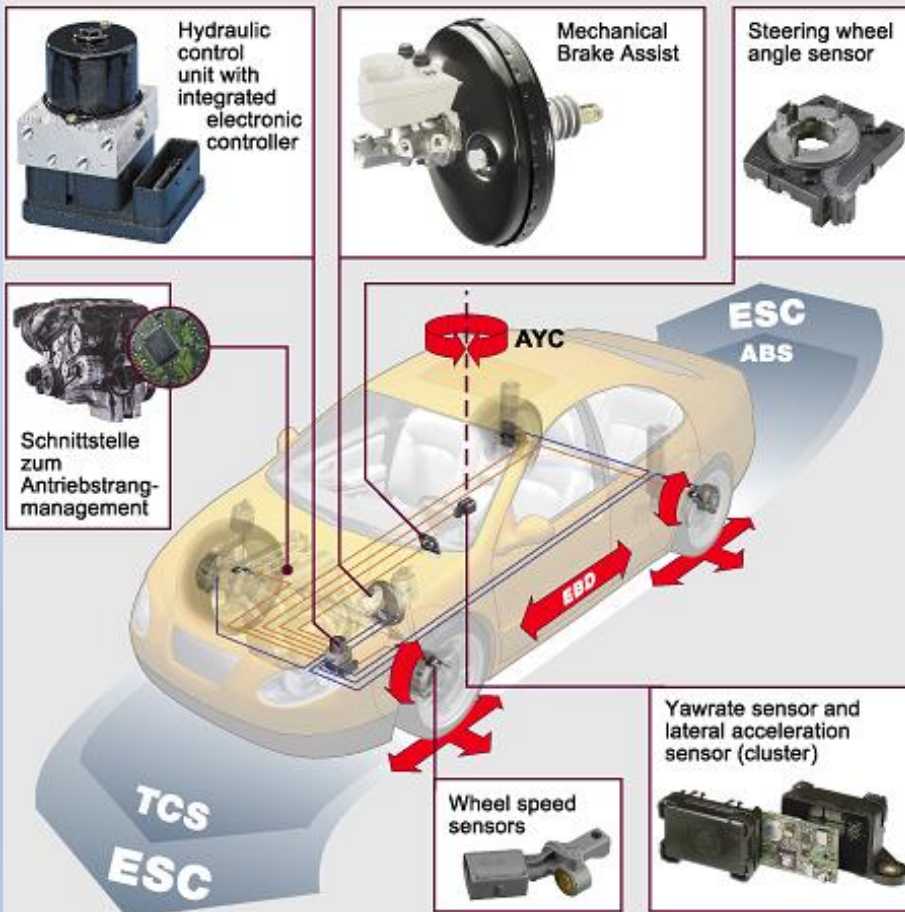
PhD, Eng. Marcin Jasiński

# Vehicle Mechatronics

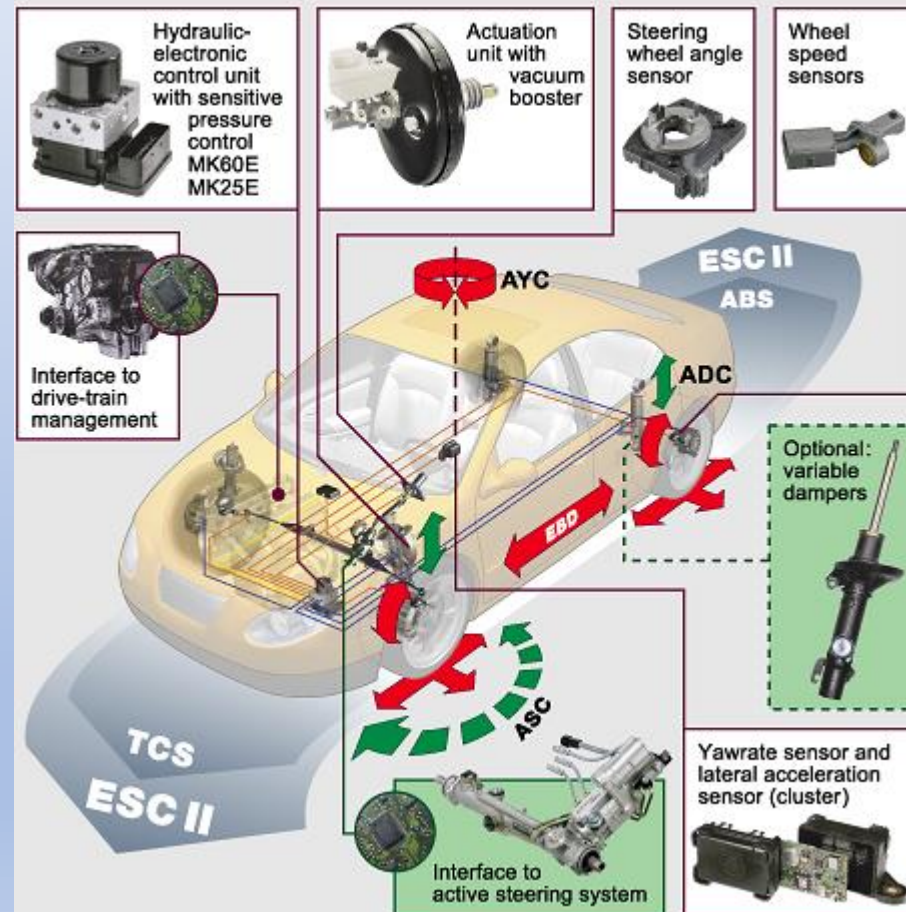
No.	Sem.	Module Title	Lecturer
1	6	<b>Vehicle mechatronics (30 h Lecture, 15 h Laboratory)</b>	PhD Eng. M. Jasiński
2	6	<b>Vehicle power trains (30 h Lecture, 15 h Laboratory)</b>	Prof. A. Wąsiewski
3	6	<b>On-board diagnostics of vehicles (30 h Lecture, 15 h Laboratory)</b>	PhD Eng. Marcin Wojs
5	7	Autonomous Vehicles (30 h Lecture)	PhD Eng. Przemysław Szulim
6	7	Information Systems in Vehicles (15 h Lecture, 15 h Laboratory)	PhD Eng. K. Szczurowski
7	7	Vehicles Acoustics (15 h Lecture, 15 h Laboratory)	PhD Eng. M. Jasiński

# Vehicle mechatronics

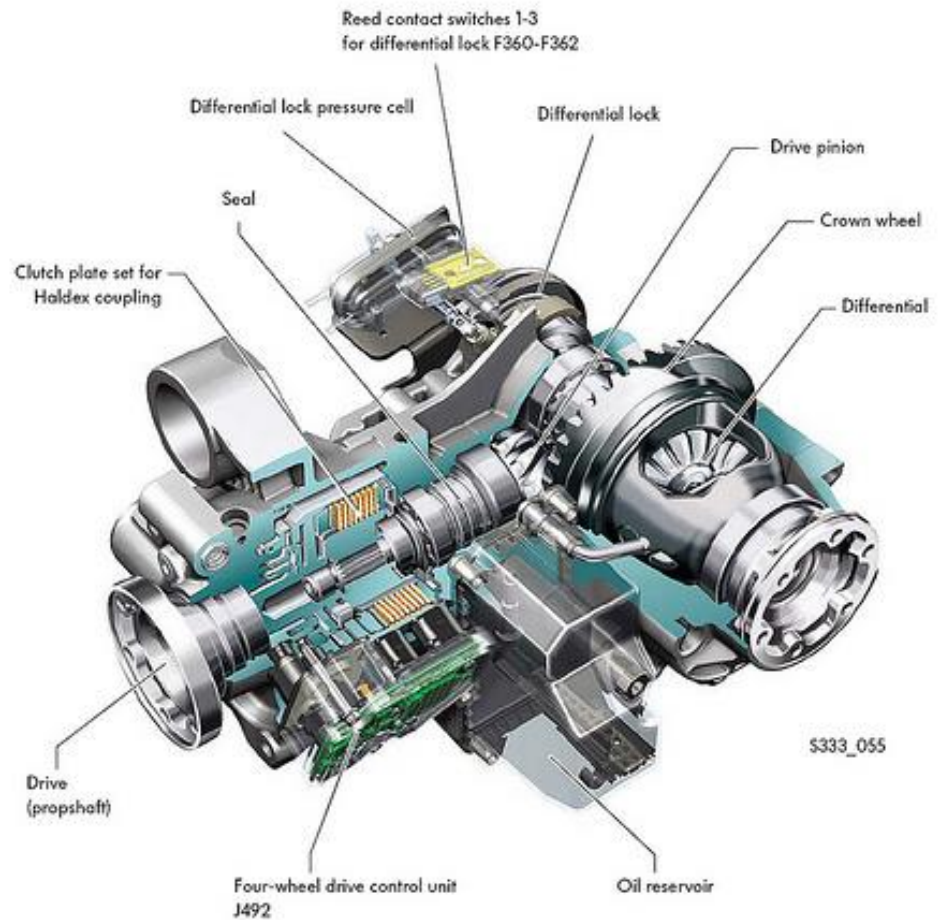
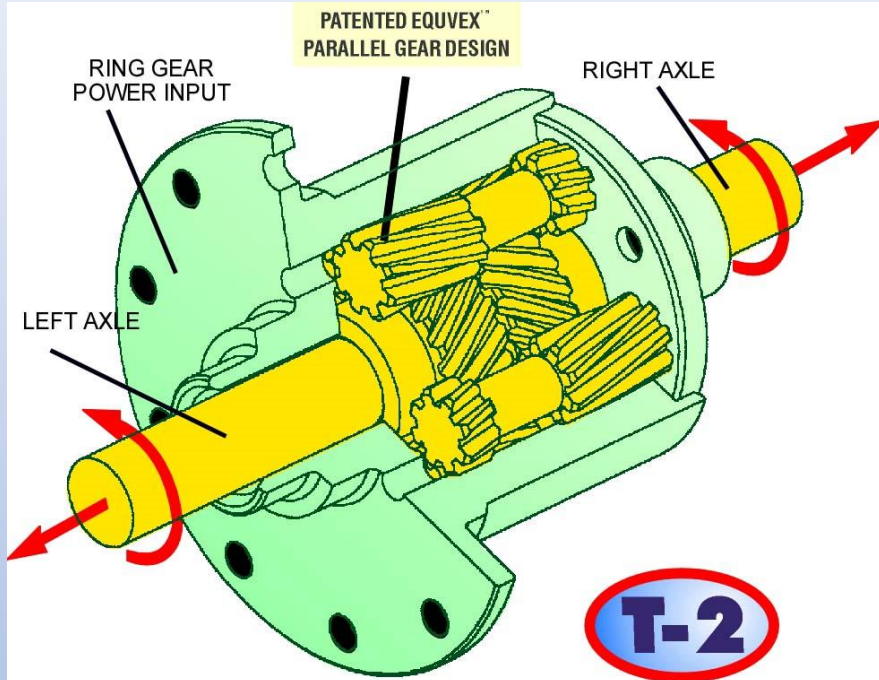
## ESC – Functions and Components



## ESC II – Functions and Components



# New vehicle power trains



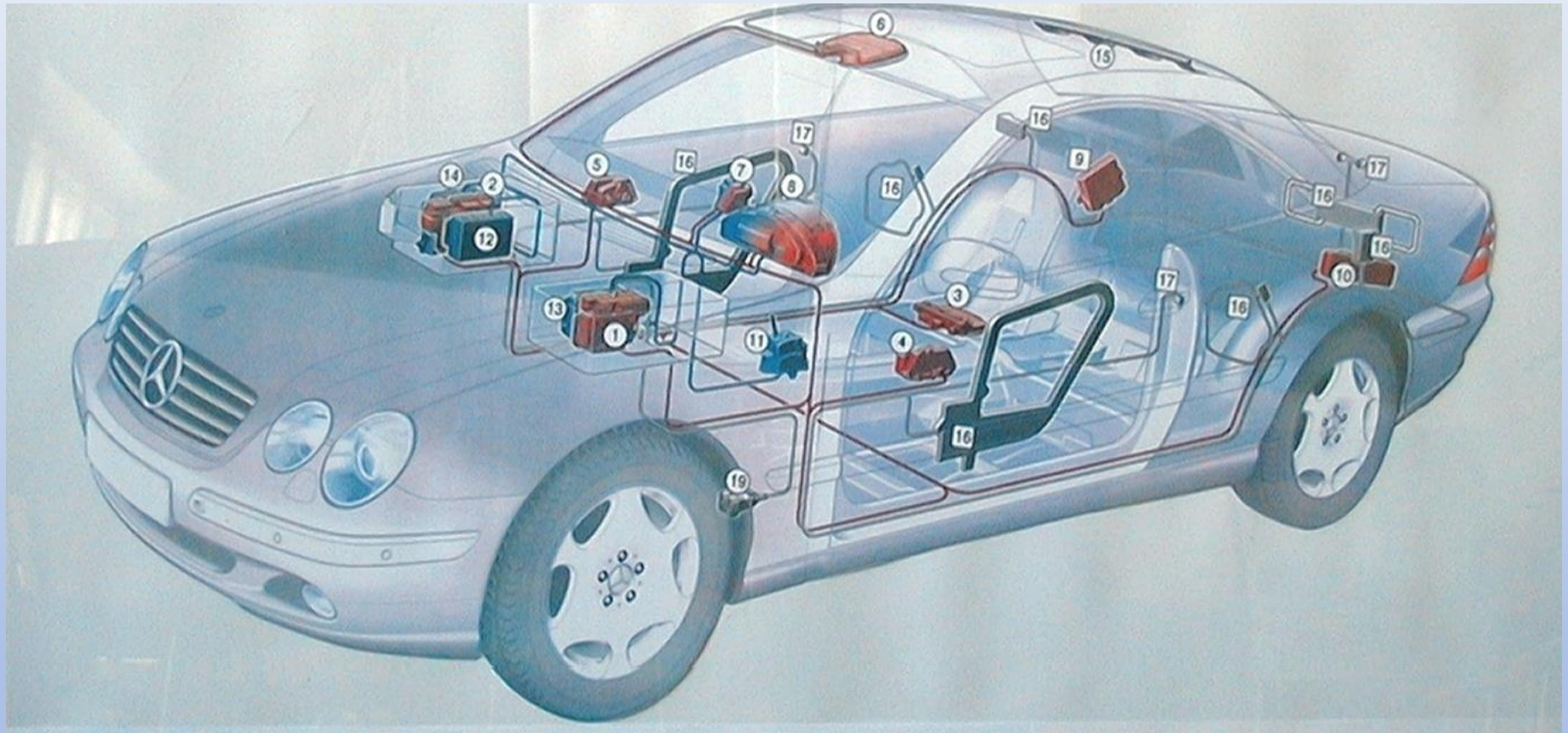
# On-board diagnostics of vehicles



# Autonomous vehicles



# Information systems in vehicles



SRS, ABS + EBD, ASR, ESP, ABC, Radar, ...

# Vehicles Acoustics





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# **Vehicle Mechatronics**

**Semester 6  
Interim Project**

**Semester 7  
Thesis**

# Topics of Interim Projects and Thesis

- **Simulators of engine power systems**
- **CAN networks**
- **Distributed diagnostic systems**
- **Autonomous platforms**
- **Image analysis in autonomous systems**
- **Vibration and noise propagation**
- **Precision farming**
- **Universal controllers in vehicles**
- **Weapon test stands + bullet trap**
- **Damage-oriented motor controllers**
- **Analysis of magnetomechanical phenomena with the participation of moderately fast-varying vibrations**
- **Robotic stand for measuring key parameters of human-machine interfaces with eyetrackers**