

# Automotive Engineering

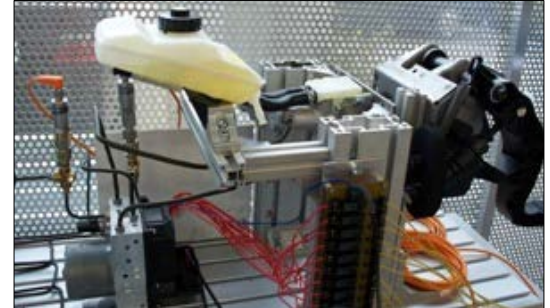
## 1. Testing Facilities (Components)



### Hardware-in-the-Loop Test Stand

Test stand for the investigation of algorithms developed for anti blocking systems (ABS), electronic stability programs (ESP) and other driving safety systems.

- Hardware: Main brake cylinder, four Wheel brakes, hydraulic control
- Hydraulic control unit (HCU) follows control strategies implemented in MATLAB / Simulink using a dSpace interface



### Servo-hydraulic Test Stand (Hydropulser)

Static and dynamic testing of assemblies and parts

#### Specifications:

- Compressive force:  $F_{max} = \pm 25 \text{ kN}$
- Amplitude:  $s_{max} = \pm 125 \text{ mm}$
- Frequency:  $f_{max} = 100 \text{ Hz}$
- Acceleration:  $a_{max} = 300 \text{ m / s}^2$
- Operating modes: force-controlled or length-controlled

