

# H2020 Transport 2016 call

Brokerage event

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Auto-Mobile.Driving Simulator (TU Dresden)



# Contact

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# Motivation Auto-Mobile.Driving Simulator

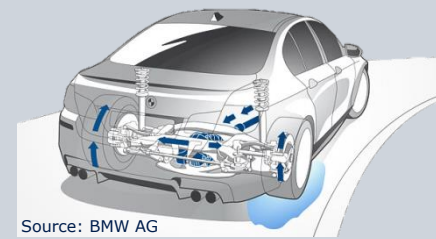


## Advanced Driver Assistance Systems & Automated Driving



- high variety of driving scenarios
- "High-Fidelity driving simulators" necessary for testing/validating

## Driving Dynamics & Active Safety Systems



- high (horizontal-) dynamic necessary
- unscaled motion perception



# Concept Auto-Mobile.Driving Simulator

**Visualization screen**

**Accumulator**

**Suspension**

**4 Wheel pairs with 8 electric motor**



**Modifiable cockpit concept**

**Motion Platform – Tripod (3 DOF)**

**Ring bearing (1 DOF)**

**Main structure (3 DOF)**



DOF – Degree of Freedom

# Overview / Handout

Acronym: **Auto-Mobile.Driving Simulator**

Company/Institution: **Technische Universität Dresden (GER), AMST-Systemtechnik GmbH (AT)**



## Motivation / Challenge:

The majority of the state-of-the-art driving simulators, which are used in the development of driver assistance systems, do not meet the requirements that result from present simulator studies. Due to the fact that current state-of-the-art driving simulators are sharing a very similar design and motion strategy, they all suffer from the same limitations, which are determined by their motion concept.

## Contact Person:

Thomas Tüschel [TU Dresden]  
Dr. Wolfgang Tischer [AMST]

Potential partners:  
Financiers

Funding project: yes  
Industrial project: no

Project duration (month): 36

## Project Goal:

To meet the required dynamics of driving maneuvers, as well as the presentation of sustained accelerations, a light and highly dynamic driving simulator with a virtually unlimited working space is necessary.

## Expected results:

The new highly dynamic driving simulator concept of the Technische Universität Dresden eliminates the travel restriction, without affecting the dynamics of the system. The main feature, which will vastly improve the immersion of the simulation, is that the simulator is based on wheels. This will allow the generation of accelerations up to  $10 \text{ m/s}^2$  with almost no restrictions due to frequencies.

## Rough time schedule

