

# 33<sup>rd</sup> SafeTRANS Industrial Day

in cooperation with

**AVL Software and Functions GmbH**

## **Topic**

### **Scenario based Testing of Highly Automated Systems**

#### **Objective of Workshop**

This workshop will bring together leading experts from industry and research to discuss current trends and challenges in the area of Scenario based Testing of highly automated transportation systems in the domains Automotive, Avionics, Rail, and Maritime. The main focus of the workshop will be on how to provide quality guarantees, especially safety arguments, for these systems using scenario based approaches and a combination of physical and virtual (i.e., simulation based) testing methods. Thus, topics covered will include, amongst others methods on defining and handling, Operational Domains, abstraction levels for scenarios, scenario classification schemes (nominal, relevant, critical, edge case,...), coverage metrics, simulation methods and simulation accuracy, as well as relevant regulation and standardization needs.

The program of the Industrial Day will include a visit to the AVL Testfacilities in Roding.

#### **Call for Contributions/Presentations**

Contributions, i.e. 30 min presentations, covering the following, non-exclusive list of topics are therefore highly welcome:

- Operational Domain Definitions, Behavior Competency Definitions and their relations to Scenarios, Target OD, Current OD
- Scenario descriptions and abstraction levels

- Scenarios and ODDs: Coverage (relevance and criticality of scenarios; ‘how much testing is enough, how safe is safe enough’)
- Scenario abstraction levels
  - How to derive concrete scenarios/test cases from abstract ones
  - relevance and criticality of concrete scenarios,
  - coverage of abstract scenarios by concrete scenarios/test cases
- Simulation of concrete scenarios / test cases, incl.
  - simulation accuracy and completeness
  - models (of SUT, of environment, of ..., Digital Twins)
- Current regulations and recommendations, e.g., UN R157, New Assessment and Test Method (NATM), EuroNCAP AD Test and Assessment Methods, ...
- Current standards covering scenario based testing, ODDs, and similar (e.g., ISO 21448 SOTIF, ISO 34500 series, and similar) , needs for further standardization
- ...

Please submit speaker, title and abstract (ca. ½ -1 page) of your presentation by 5th April 2024 to [katja.bonhagen@safetrans-de.org](mailto:katja.bonhagen@safetrans-de.org). Selection and notification of acceptance will be done by 10th April 2024.

### **Workshop language**

The workshop languages are English and German. Typically, slides will be in English, while speakers speak German or English, depending on the audience and their preferences.

### **Date and Venue**

Date: 24.04.2024, 10:00 to 17:00.

Venue: City Hotel Roding, Schulstraße 25, 93426 Roding,  
<https://www.city-hotel-roding.de/>

AVL Testfacility: <https://roding-research.avl-functions.com/>

Webseite: <https://www.safetrans-de.org>

