

# Call for Presentation

SafeTRANS 2024

## **Title**

Operational Design Domains in Automated Vehicles: A Review of State-of-the-Art Standards, Challenges, and Proposed Solution

## **Speaker**

Ali Shakeri, Researcher at German Aerospace Center (DLR)

## **Abstract**

In the rapidly evolving field of Automated Vehicle (AV) systems, defining an Operational Design Domain (ODD) is essential to safeguard AVs from performing maneuvers outside their capabilities. The concept of ODD has gained attention as standardization committees, including BSI PAS, ISO, and ASAM OpenODD, attempt to standardize the operational domain and ODD specifications. As a member of ASAM OpenODD, I observed that despite all efforts, there are still many misunderstandings and misconceptions surrounding the specification of ODD. These difficulties originate from previous definitions of ODD that relied on ambiguous and unclear terms and the lack of a well-defined definition for OD.

This presentation reports on the latest status of the ASAM OpenODD standard and presents a critical review of the latest research and standardization efforts in the ODD landscape. It also explains the ambiguity in the current definitions of ODD for AVs and addresses the problems that arise from this vagueness. Finally, it shows how a formal representation of the concepts can help overcome these ambiguities and how a proper specification can be used as a foundation for developing ideas, such as ODD monitoring.