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TRAIL THESIS SERIES T2025/6

Summary

As automated vehicles (AVs) gradually integrate into mixed traffic with human-driven vehicles, this thesis addresses critical challenges during the transition era. It enhances AV capabilities in sensing and perception, anomaly detection, and planning and control. Employing spatial-temporal deep learning models, self-supervised pretraining methods with masked sequential autoencoders, and innovative social-aware decision-making strategies, this work aims to facilitate safe, efficient, and socially compliant automated driving, thereby advancing future transportation systems.

About the Author

Yongqi Dong is a researcher specializing in automated driving systems and artificial intelligence. He conducted his PhD research at TU Delft, focusing on enhancing automated vehicles' capabilities in mixed-traffic environments. He holds degrees in Control Science and Engineering and Telecommunication Engineering.

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Yongqi Dong

Safe, Efficient, and Socially Compliant Automated Driving in Mixed Traffic

Safe, Efficient, and Socially Compliant Automated Driving in Mixed Traffic

Sensing, Anomaly Detection, Planning and Control

Yongqi Dong

Invitation

You are cordially invited
to attend the public defence
of my PhD dissertation entitled:

Safe, Efficient, and Socially Compliant Automated Driving in Mixed Traffic:

Sensing, Anomaly Detection, Planning and Control

The defence will be held
on 12 May 2025 at 17:30h
in the Senate Hall of the
Aula Conference Centre,
Mekelweg 5 in Delft.

Prior to the defence,
I will give a brief presentation
in English about my research
starting at 17:00h.

After the defence,
there will be a reception
in the Aula.

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