

TRAIL

TRAIL THESIS SERIES T2025/14

REMOTE CONTROL CENTER

Summary

This study develops an integrated decision-making framework for Maritime Autonomous Ships (MASS) in mixed waterborne transport systems, addressing safety and efficiency through three parts: knowledge-maps-based situational awareness, human-preference-aware navigation using AIS behaviour modelling, and trust dynamics analysis and modelling with Bayesian Networks. The framework enables collaborative MASS operations by aligning autonomous decisions with human expectations and regulatory compliance, supporting the maritime industry's transition to intelligent transport systems.

About the Author

Rongxin Song holds B.Sc. & M.Sc. Degrees from Wuhan University of Technology. His PhD research at TU Delft focuses on situational awareness, human-mimic navigation, and trust dynamics for Maritime Autonomous Ships (MASS) in mixed waterborne transport systems.

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Human-MASS Interaction in Decision-Making for Safety and Efficiency in Mixed Waterborne Transport Systems

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Invitation

You are cordially invited to attend the public defence of my Ph.D. dissertation titled:

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The defence will take place on Thursday, 26 June 2025 at 10:00 in the Senaatszaal of the Aula Congress Centre at Delft University of Technology, Mekelweg 5, Delft.

Prior to the defence, at 09:30, I will give a brief presentation about my research.

A reception will be held directly after the defence.

Rongxin Song

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