Interdisciplinary and International Collaborations:   
The MARS Research Group at Hamburg University of Applied Sciences (HAW)

*Thomas Clemen1, Helen Haase1, Ulfia A. Clemen1,2 , Daniel Glake1,3*

*1HAW Hamburg, Department of Computer Science*

*2Logistik-Initiative Hamburg*

*3IT Anker GmbH, Hamburg*

Corresponding author: *thomas.clemen@haw-hamburg.de*

The MARS Research Group at Hamburg University of Applied Sciences fosters interdisciplinary and international collaboration. Our projects address diverse demands, from city planning and logistics to global change mitigation. We have developed an extensive framework for large-scale agent-based simulations, extensively used in both our research and global university courses.

Our current work explores how swarms of robots and drones can learn complex tasks, such as car assembly, from human interaction. We also demonstrate using multi-agent systems, IoT sensors, and spatiotemporal databases to create a Digital Twin of multi-modal mobility in Hamburg. This poster showcases the MARS Group's commitment to addressing multifaceted challenges through technology and interdisciplinary teamwork, promoting innovative solutions for real-world problems.