Alternative Drive Concepts for Mobile Working Machines

AR-based ADAS Testing
Cooperation: EVOMOTIV

Real2Sim
Cooperation: EVOMOTIV

Simulator Framework

Imitation Learning
Research Project: KIIWI

Golfcart Sensor Testbench

Vehicle Inspections for Autonomous Cars
Cooperation: GTÜ

Roller Test Bench for Vehicles & E-Bikes

Further Research Projects:
Easy E-Bike

Further Student Projects:
Sim-Bike,
Study2Smart E,
Cargo Bikes

Electric Motor Bearing Testbench

Condition Monitoring of Electric Motor Bearings
Cooperation: SEW EURODRIVE

Further Research Projects:
Profil Region,
KAMO Karlsruhe Mobility,
Autonomous Driving Testfield (TAF-BW)

Online E-Bike Planner

Energy Prediction & Management
Research Project: move.mORe

Modeling Cycling Infrastructure
Research Project: MODELO-Rad

Modeling Tool for Cycling Infrastructure

ADAS Systems & Simulation

Further Student Projects:
ADAS-SIM,
Carrera Cars

Further Student Projects:
MYiTOPS

Condition Testing of Small Engines, Biofuels
Research Project: Sim-Chamber

High-Altitude Simulation Chamber

Engines

ADAS for E-Bikes and Bikes

Human-in-the-Loop Bicycle Simulator

Differences: Simulation & Real Traffic Interaction
Research Project: DataBikeSim

Cycling Simulation

Automotive Information Technology

Industrial Systems

Energy and E-Mobility

IEEM

Security and Privacy

Intelligent and Distributed Systems

Completed PhDs

Knowledge Database

Last Mile Logistics Information Centre
Research Project: efeuCampus

Test Environments for Urban Logistics
Research Project: LastMileCityLab

Robot AGV

Logistics

Intralogistics & Data Management in Shared Warehouse Systems
Research Project: move.mORe

Business Models for Sustainability

Trinational Competence Network Industry 4.0
Research Project: Upper Rhine 4.0

Hybrid Storage Systems
Research Project: VEHICLE

Energy Modeling IPG CarMaker, MATLAB

Energy & Range Algorithms

Energy & Range Management
Research Projects: E-Vehicles, PRE-E

Tools for collaborative energy management in industrial parks
Research Project: FLEX-E

Further Research Cooperations:
Energy Management for Buses

Cloud Computing Battery Management System
Research Project: ENERGETIC

Cybersecurity

Cryptography
Research Project: move.mORe

Security Controls, Firewalls
Research Project: AUTO-SIMA

TARA, Security Guideword Method (SGM)
Research Project: SAFE ME ASAP

ASTMT

Further Research Cooperations:
GIGATRONIK Automotive Security, Automotive Security, Automotive Safety

Distributed Systems & Protocols

Security Assessment, Processes
Research Project: GTÜ

Security Testing, Cyber Attacks
Research Project: SecForCARs, SAVE

Attack Taxonomy

Model-based Security Testing

Penetration Testing

Incident Management

Grace Period Calulator

Automotive Model-based Security Testing Tool

Vehicle Network Platform

Automotive Attack Database, Classification Tool

Model-based Fault Detection in Distributed and Dezentralized Systems

SNN Lunar Lander

AI Drone Controls, Spiking Neural Networks
Research Project: KIIWI

Further Student Projects:
Drones,
Car2X

Energy Efficient AI