

Fraunhofer Institute for  
Transportation and Infrastructure Systems IVI  
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FRAUNHOFER INSTITUTE FOR TRANSPORTATION  
AND INFRASTRUCTURE SYSTEMS IVI

CONTACT

**Guide2Wear**  
**EDDA-Bus**  
le control and sensor systems  
**transportation, energy and environment**  
vehicle hall  
test platforms ticketing and fares  
**transportation systems**  
sensor and actuator systems  
identification of traffic situations  
vehicle technologies  
multi-axe steering and guidance systems  
mobile measurement technology  
**intelligent transport systems**  
introduction of electric buses  
disposition  
autartec® HandyTicket Deutschland  
saster management

COMMUNICATION AND DESIGN

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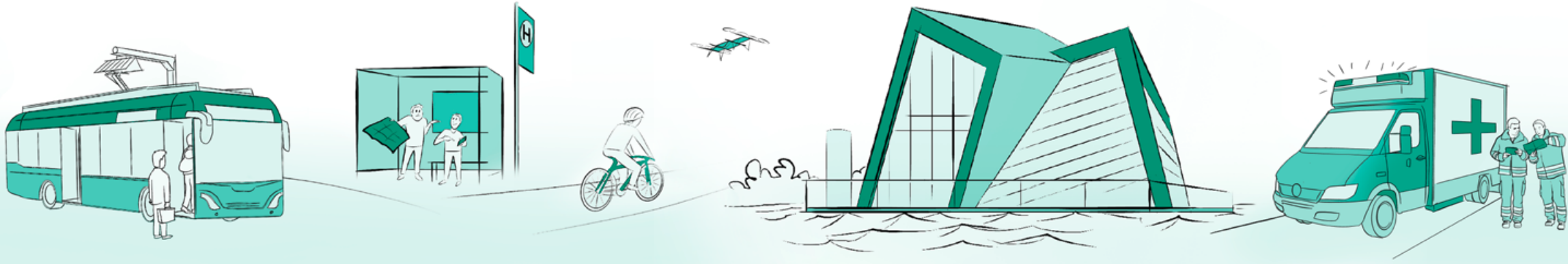
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BRIEFING



EmiD battery management HORUS® AutoTram  
strategy and optimization vehicle and propulsion technologies  
mechatronic systems  
**technical center** large-scale test stan  
logistics vehicle and road safe  
propulsion technologies digital business processes  
stationary energy storage systems system mod  
operational planning and command **test trac**  
autonomous utilities systems transport planning transport  
test vehicles mobility and tra  
**electromobility** high frequency mea  
transportation systems/ human-machine interaction  
storage systems and converters tr  
vehicle and transport system engineering  
characterization of battery cells ele  
di



## VEHICLE AND TRANSPORT SYSTEM ENGINEERING

- Vehicle concepts (focus: commercial vehicles)
- Propulsion and steering control systems
- Vehicle and traffic safety
- Implementation concepts for electric buses
- Intelligent sensor systems and sensor data processing

**Dr. Thoralf Knot**

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## INTELLIGENT TRANSPORT SYSTEMS

- System data and Big Data
- Mobile and backend applications
- Ticketing and fares
- Information and navigation applications

**Dr. Torsten Gründel**

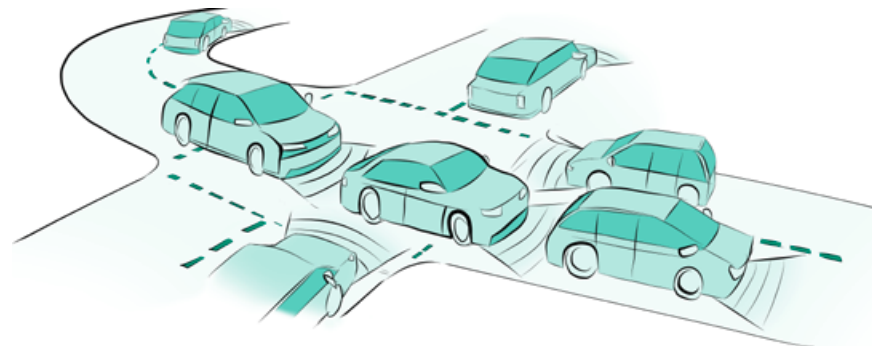
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## COGNITIVE AND COOPERATING SYSTEMS

- System solutions for connected and automated driving
- Development of algorithms and communication protocols
- Infrastructure object detection
- Realization and assessment of test drives and communication tests

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## STRATEGY AND OPTIMIZATION

- Operational command systems for hazard prevention and emergency management
- Risk analyses and resource planning
- Digital business processes and Big Data
- Modeling and optimization of logistics processes and infrastructure systems

**Dr. Kamen Danowski**

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## ENERGY SYSTEM ENGINEERING

- Numerical calculation and design of electrical machines
- Control and optimization of electric traction systems

**Prof. Dr. Jana Kertzsch**

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# RESEARCH.MOVES

The Fraunhofer IVI has developed into an efficient institute that has earned national and international renown thanks to its outstanding professional expertise. In close collaboration with clients and partners as well as policy makers and funding agencies, visions have been designed and solutions presented.

The institute's research focus lies on well-established topics from vehicle and propulsion technologies, as well as on new challenges in the context of automated and connected driving. Technologies for the improvement of civil security are also becoming increasingly important.

The Fraunhofer Institute for Transportation and Infrastructure Systems IVI employs over 100 researchers. The institute collaborates closely with the universities TU Dresden, TU Bergakademie Freiberg and TH Ingolstadt .

The Fraunhofer IVI offers high-performance laboratories, innovative test platforms and vehicles as well as modern IT structures. A new technical center including a vehicle hall and adjacent test track are part of the institute's facilities.