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 Knote
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Dr. Frank Steinert
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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

Prof. Dr. Matthias Klingner
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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

Prof. Dr. Kamen Danowski
Phone +49 351 4640-660 | kamen.danowski@ivi.fraunhofer.de

ENERGY SYSTEM ENGINEERING

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

Prof. Dr. Jana Kertzscher
Phone +49 3731 39-2926 | jana.kertzscher@ivi.fraunhofer.de

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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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.