



## Our services

For those responsible for commissioning work in planning authorities and industry, the Institute offers professional consultancy, testing and development services in the following fields:

### Transport:

- Traffic surveys
- Mathematical modelling and simulation
- Compilation of traffic flow plans
- Design of roads, highways and the road network
- Safety audits of road designs
- Forecasting driver behaviour for planned roads
- Assessment of parking space requirements
- Vehicle acoustics, acoustic design, traffic noise

### Energy:

- Testing of ceiling-integrated cooling systems
- Temperature testing
- Indoor air flow investigations
- Investigations of heat exchangers



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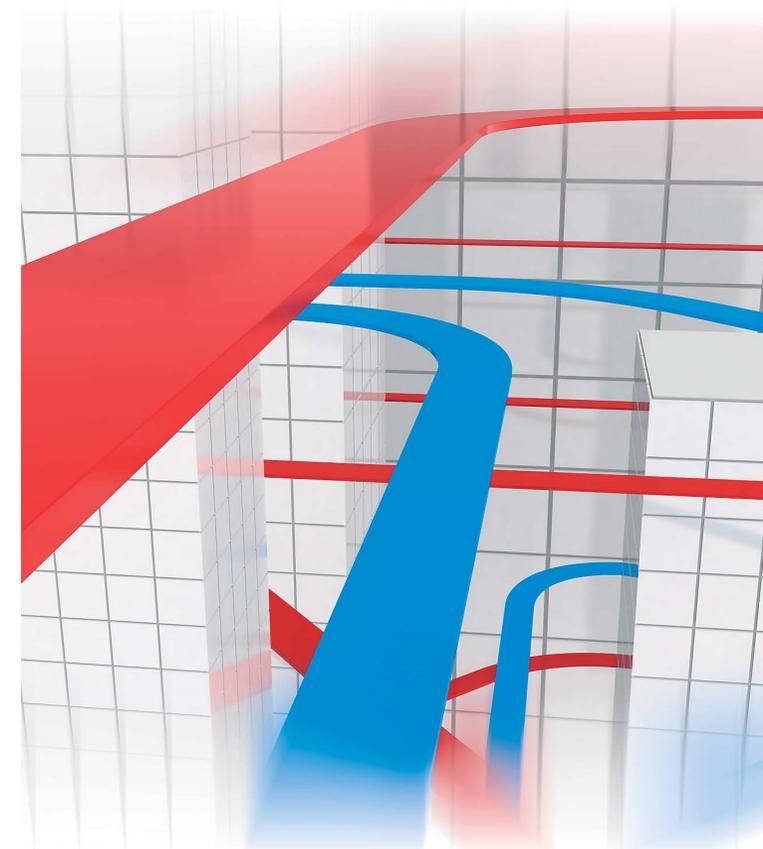
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**Westfälische Hochschule Zwickau**  
University of Applied Sciences

**Institute of  
Energy and Transport Engineering**





*Zielorientiert forschen*

MISSION-ORIENTED RESEARCH

## About us

The Institute of Energy and Transport Engineering (IEV) is a scientific facility of Westsächsische Hochschule Zwickau (Zwickau University of Applied Sciences).

We aim to bring together research in the fields of efficient energy conversion and utilization, transport systems and infrastructure, traffic engineering and economics of transportation, and to find effective solutions for the following tasks:

Intelligent design and integration of infrastructure in the fields of built-up areas, buildings and transport.

Identification of new forms of mobility, transport systems, energy sources and energy supply so as to facilitate rapid access, reduction of energy consumption and lower environmental impact.

The Institute works on an interdisciplinary basis, combining research teams from three different faculties. Its areas of research range from mathematical modelling and simulation and computer-assisted planning methods, via transport management, traffic system engineering, road design, transport technology and traffic control, to vehicle acoustics, energy potential analysis, and refrigeration and thermal engineering.



## Laboratories

The Institute operates the following laboratories for research, consultancy and testing:

### Transport:

- Virtual reality lab
- Communications lab
- Design lab and design work station
- Traffic engineering lab
- Driving simulation lab
- Mathematical simulation lab
- Vehicle acoustics lab

### Energy:

- Computer-aided planning methods
- Energy technology and regenerative energies
- Heating engineering
- Air conditioning and refrigeration engineering

## Fields of research

The Institute is your cutting edge partner in the following areas of research:

### Transport:

- State-of-the-art road design methodologies
- Modelling and simulation of traffic flows in transport networks and vehicle movements on roads
- Research on the "driver – vehicle – road" control loop
- Quality assessment of traffic infrastructure facilities
- Research on vehicle noise and vibration control

### Energy:

- Optimization of energy systems
- Simulation of energy supply facilities
- Development of heat transfer facilities for air conditioning systems in buildings

