

Division: Transport Planning and Technology of Transport Systems

Integrated Transport Planning

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- Interdependencies between Traffic, Regional Structure, Environment, Technology, Economics and Society
- Futurology and Strategies
- Mobility Patterns and Routines
- Empirical Mobility Research
- Transport and Mobility in International Context
- Evaluation of Transport Programmes and Measures



Track and Railway Operations

Prof. Dr.-Ing. habil. Jürgen Siegmann
Office: SG 18, Building SG 12, Room 310
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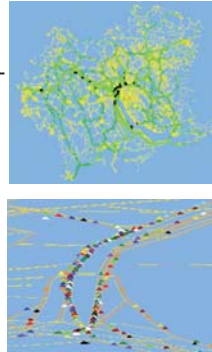
- Testing and analysing of railway infrastructure and vehicle components
- Optimisation of railway operations
- Strategic analyses concerning the optimization track systems
- Strategic analyses concerning the optimization of track systems:
 - Freight transportation
 - Regional rail transportation & intercity transportation
 - Public transport



Transport Systems' Planning and Transport Telematics

Prof. Dr. Kai Nagel
Office: SG 12, Building SG 12, 2. OG.
Salzufer 17-19, D-10587 Berlin
Tel.: +49 30 314-23308, Fax: +49 30 314-26269
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- Multi-modal modelling, simulation, and forecasting of transport systems (4-step-process, activity-based demand generation, multi-agent-simulations)
- Multi-modal transport systems analysis
- Transport telematics
- Transport informatics (algorithms and methods in particular for large transport systems)



Planning and Operation of Roads

Prof. Dr.-Ing. Thomas Richter
Office: TIB 3/3-3, Room 304
Gustav-Meyer-Allee 25, D-13355 Berlin
Tel.: +49 30 314-72421, Fax: +49 30 314-72884
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- Urban development and road traffic planning
- Intermodal planning of transport networks
- Design of urban roads
- Design of rural roads and motorways
- Immission control
- Traffic safety research
- Traffic management systems / intelligent traffic systems



Transportation Seminar

Prof. Dr.-Ing. Thomas Richter (speaker)
Office: SG 21, Building SG 4.1, 5th floor
Salzufer 17-19, D-10587 Berlin
Tel.: +49 30 314-79766, Fax: +49 30 314-25843
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- Intermodal consideration of transport systems
- Coordination and moderation of interdisciplinary workgroups
- Project management / teambuilding

Division: Automotive Engineering and Internal Combustion Engines

Automotive Engineering

Prof. Dr. rer. nat. Volker Schindler
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Gustav-Meyer-Allee 25, D-13355 Berlin
Tel.: +49 30 314-72971, Fax: +49 30 314-72505
www.kfz.tu-berlin.de
E-Mail: info@kfz.tu-berlin.de

- Vehicle concepts with conventional and alternative drive systems
- Vehicle safety with a focus on:
 - Child safety
 - Compatibility
 - Pedestrian safety
 - Small vehicle safety, two-wheeler safety
 - Optimisation of road accident rescue
 - Biomechanics
 - Crash testing and numerical simulation
- Energy and resource management with main focus on:
 - Energy management in vehicles
 - Electromobility, use patterns for vehicles with electric drive trains, vehicle-to-grid
- Development methods in the automotive industry:
 - Project management and quality methods
 - Computational design and simulation tools



Rail Vehicles

Prof. Dr.-Ing. Markus Hecht
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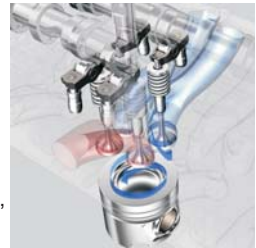
- Running gears
 - Multi body systems simulation
 - Diagnosis systems for freight cars
 - Optimization of running gears
- Noise reduction
 - Noise analysis and low noise construction
 - Prediction of noise by calculation inside and outside
- Passive safety
 - Vehicle structures and inside design
 - Tank car safety



Internal Combustion Engines

Prof. Dr.-Ing. Roland Baar
Office: CAR-B1, Room ground floor 030
Carnotstr. 1A, D-10587 Berlin
Tel.: +49 30 314-26946, Fax: +49 30 314-26105
www.vkm.tu-berlin.de
E-Mail: vkm@tu-berlin.de

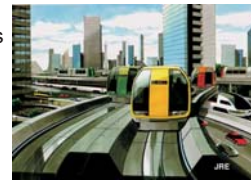
- Concepts of modern combustion engines regarding efficiency, emissions, power, drivability and costs
- Thermodynamic and fluiddynamic investigations in experiment and simulation
 - engine process
 - turbocharging / downsizing
 - fuels
 - mixing / combustion
- Test equipment for engines, turbochargers, components, measurement technology for combustion engines



Electric Railway Systems

Prof. Dr.-Ing. Peter Mnich
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Carnotstr. 6, D-10587 Berlin
Tel.: +49 30 314-23531, Fax: +49 30 39992491
www.bahnsysteme.tu-berlin.de
E-Mail: mn@bahntechnik.de

- Advanced railway systems and techniques
- Maglev technologies and linear traffic
- High speed rail traffic
- Traction power supply and simulation
- Vehicle power supply
- Power rating and energy consumption of railway systems
- Automatic railway operation
- Evaluation of railway systems: Planning, technologies, economic analysis, environment



Institute of Land and Sea Transport Systems (ILS)

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ILS is one of 7 institutes of Faculty V, Mechanical Engineering and Transport Systems, Technische Universität Berlin, www.vm.tu-berlin.de

Division of Naval Architecture and Ocean Engineering

www.marsys.tu-berlin.de

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Design and Operation of Maritime Systems

Prof. Dr.-Ing. Gerd Holbach

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Office: SG 6 (Tel.: +49 30 314-21213)

E-Mail: holbach@naoe.tu-berlin.de

- Ship design
 - integrated design
 - general arrangement
 - design methodology
 - Computer Aided Design



- Outfitting and accommodation
 - Accommodation layout
 - Cargo handling and stowage
 - Ship operation
- Safety and security on board and at harbor
- Construction and acoustics
- Management of single- and major projects
- Maritime transport
 - Seatrade / Cargoflow
 - Maritime transportsystems
 - Transportchains



Dynamics of Maritime Systems

Prof. Dr.-Ing. Andrés Cura Hochbaum

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E-Mail: cura@tu-berlin.de

- Resistance and propulsion
- Manoeuvring
- Seakeeping of maritime systems

- Cavitation
- Motion and Flow Simulation
- Aero- and hydrodynamics of sailing vessels
- Design of offshore structures
- Seakeeping tests
- Offshore-technology
- Deep sea systems
- Oil recovery vessels



Research Field Ocean Engineering:

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