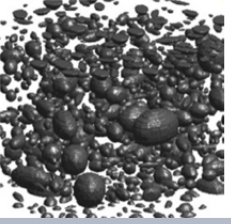
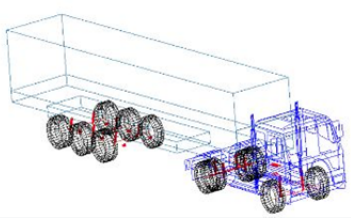
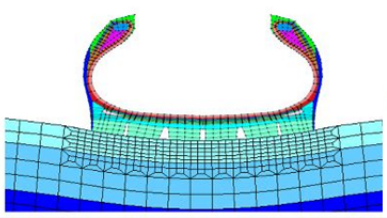
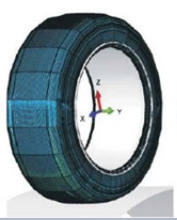
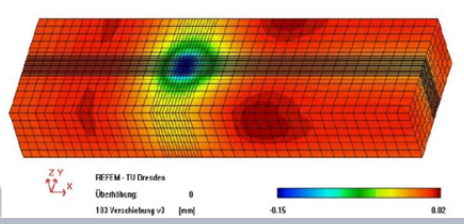

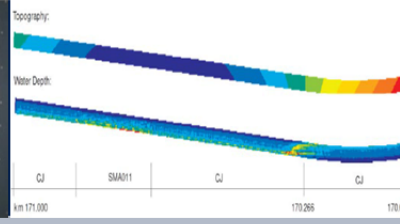

Topics

The lectures primarily aim at Ph.D. students interested in the following topics:

• Steady State Tire and Pavement Description • Numerical Friction Determination via Multiscale Investigations • Modelling of Pavement Material • Thermomechanical Investigations • Structural analysis

• Spectral Analysis of Pavement Evenness • Multi-Body Systems for Cars and Trucks • Dynamic Axial Loads • Pavement Dynamic Analysis • Visco-Elastic Constitutive Modelling • Life Cycle Prediction

• Hydroplaning • Modelling Free Flow on Road Surfaces and Porous Flow due to Infiltration Processes • 3D Coupled Drainage Model • Wet Grip Performance

• Material Characterization of Asphalt • Performance Oriented Tests on Bitumen, Mortar, Asphalt • Dynamic Shear Rheometer • Shear Tester • Indirect Tensile Test, Repeated Load Triaxial Test

• Tire Testing Facilities • Friction Testing on Asphalt, Concrete, Snow and Ice • Lessons Learned From Friction Testing on Ice • Basics of Sound Generation • Existing and Future Sound Measurements

• Modeling Approach for Vehicles • Sub-models for Systems and Tyres • Standard Maneuvers • Tyre-road Interaction • Vertical and Lateral Forces

• State-of Road • Pre-Sampling and Material Characterization • Selection of Rejuvenators and Additives • Mixture Prediction of Performance and Life-Cycle of Roads

Organizers

ISD & ISS, TU Dresden
ISV, University of Stuttgart
ISAC & ika, RWTH Aachen

Arrival / departure

Transfers by bus will be organized from Stuttgart airport and main station Monday morning and back on Wednesday evening as well as Thursday at noon.

Costs

Participation fee: 150 Euro
(lectures & lunch + dinner)
Travel costs and accommodation are not included, please make a reservation using the hotel contingent named *Summer School,* childcare services can be offered during the lectures

Application Deadline 22 May 2016
Please apply by email.

Contact

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for2089@mailbox.tu-dresden.de

Image sources:
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Frank Vincentz

Future Challenges in Pavement Design and Tire-road Interaction

International Summer School

18-20 July 2016

Black Forest,
Unterreichenbach,
Germany

sponsored by DFG Deutsche Forschungsgemeinschaft

FOR 2089 DRESDEN AACHEN STUTTGART

Accommodation

Ringhotel Mönchs Waldhotel

Zu den Mühlen 2
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info@moenchs-waldhotel.de
www.moenchs-waldhotel.de

Schedule

Monday, 18 July 2016	pm: lectures
Tuesday, 19 July 2016	am: lectures pm: excursion
Wednesday, 20 July 2016	am: lectures pm: lectures

Lectures and Speakers

Simulation of Tire-Pavement-Interaction: Structure, Friction and Material Modelling

Univ.-Prof. Dr.-Ing. habil. Michael Kaliske, TU Dresden, *Institute for Structural Analysis*

From Pavement Unevenness via Dynamic Axial Loads to Pavement Remaining Life Prediction

Univ.-Prof. Dr.-Ing. habil. Markus Oeser, RWTH Aachen University, *Chair and Institute of Highway Engineering*

Numerical Simulation of Pavement Surface Drainage and Layer Infiltration

Univ.-Prof. Dr.-Ing. Dr. h.c. Wolfram Ressel, University of Stuttgart, *Institute for Road and Transport Science, Chair for Road Design and Construction*

Experimental Tests to characterize the Mechanical Behaviour of Asphalt and its Constituents

Univ.-Prof. Dr.-Ing. habil. Frohmut Wellner, M.Sc. Gustavo Canon Falla, TU Dresden, *Institute of Urban and Pavement Engineering*

Multi-body Simulation in the Vehicle Development Process and as Load Prediction Tool

Dipl.-Ing. Tom Lehmkuhl, Dipl.-Ing. Tobias Winkler, RWTH Aachen University, *Institute for Automotive Engineering*

Characterization of Tire-Pavement Interaction: Friction and Sound Generation

Assoc. Prof. Priv.-Doz. Dipl.-Ing. Dr. techn. Bernhard Pichler, TU Wien, *Institute for Mechanics of Materials and Structures*

Hot-in-place Recycling in Finland

Prof. Terhi Pellinen, Aalto University Helsinki, *Department of Civil Engineering*

Mechanistic Design and Performance Predictions of Flexible Pavement Structures

Prof. Sigurður Erlingsson, University of Iceland, Reykjavik, *Department of Civil and Environmental Engineering,*
Swedish Road and Transport Research Institute, VTI, Linköping