

FTG

INSTITUTE OF AUTOMOTIVE ENGINEERING
MEMBER OF [FSI]

Inffeldgasse 11/II

8010 Graz
Austria

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web: www.ftg.tugraz.at/nfw/nfw_2014
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Graz University of Technology

Institute of Automotive Engineering
Member of [FSI]

Invitation and Programme

6th Commercial Vehicle Workshop Graz

16th May 2014

Innovative vehicles and lightweight design | Efficiency |
CAE-Methods | Driver assistance systems and driver stress



Graz University of Technology / Rechbauerstraße 12 / Lecture room I



The Institute of Automotive Engineering (FTG) of Graz University of Technology arranges for the sixth time the Commercial Vehicle Workshop Graz which has shown constant growth in number of participants. On behalf of FTG it is a great pleasure for us to introduce the workshop programme 2014 and we herewith would like to invite you to Graz.

From the submitted contributions the programme committee could compile an interesting and diversified programme of the day. It is focussing on the topics innovative commercial vehicles and efficiency, lightweight design, driver assistance and driver stress and CAE-methods, all having high actuality. We suppose that the programme 2014 will find your interest. In particular, we are looking forward to an informative exchange of experience with and between the commercial vehicle experts. This will take place in the well known familiar environment of the workshop.

Finally, we would like to invite for a visit to our institute, the laboratories and the „Get Together“ at the town hall of Graz which will take place in the evening before the workshop.

Also we warmly would like to invite you to this.

Prof. Dr. Peter Fischer

Prof. Dr. Wolfgang Hirschberg

Programme Committee:

- Prof. Dr. G. Brasseur, *EMT TU Graz*
- Dipl.-Ing. F. Dorfer, *MAGNA POWERTRAIN ECS GmbH & Co KG, St. Valentin*
- Prof. Dr. P. Fischer, *FTG TU Graz*
- Dipl.-Ing. E. Hipp, *MAN Truck & Bus AG, Munich*
- Prof. Dr. W. Hirschberg, *FTG TU Graz (Chair)*
- Prof. Dr.-Ing. H.-C. Pflug, *CVE NutzfahrzeugTechnik, Remshalden*
- Prof. Dr. H. Steffan, *VSI TU Graz*

LOCATION OF THE WORKSHOP

Graz University of Technology,
Rechbauerstraße 12, 8010 Graz, Lecture room I

REGISTRATION

By attached registration form or online-registration form under www.ftg.tugraz.at/nfw/nfw_2014

Deadline 9th May 2014

CONFERENCE FEE

The conference fee including „Get together“, workshop documentation, lunch, coffee breaks amounts to

€ 290,--
for university members € 145,--
for students € 40,--

(only with student ID)
No value added tax is included.

Transfer the conference fee latest May 12, 2014.
Free of charges for the receiver – on the account:
Bank: Bank Austria
Purpose: 6th Commercial Vehicle Workshop Graz
BIC: BKAUATWW
IBAN: AT51 1200 0516 5610 1835

CANCELLATION

With notice of removal a back payment of in-paid fee is not possible after May 9, 2014.

DOCUMENTATION

Conference volume on CD-ROM in German and a list of the participants.

LENGTH OF LECTURES

20 minutes of presentation plus 10 minutes of discussion.

CHAIR

Prof. Dr. Wolfgang Hirschberg
Prof. Dr. Peter Fischer

ARRIVE/INFORMATION ABOUT ACCOMMODATION.

Please find further information about Graz as well as a hotel guide on the following web pages:
<http://www.graztourismus.at/>
<http://www.holding-graz.at/linien.htm>

Link for registration:
http://www.graztourismus.at/kongress/en/kongress-kalender/6-grazer-nutzfahrzeug-workshop-2014_cd-3518

Responsible for the hotel reservation at Graz tourism is Mrs. Gabriella Reidl
Phone: +43 / 316 8075-60
Email: gr@graztourismus.at

Link for Online hotel registration:
http://www.graztourismus.at/en/hotels-apartments/online_reservation

From the airport Graz Thalerhof all hotels are best reachable by taxi.

ORGANISATION

Mrs. Christine Vitas

Institute of Automotive Engineering
Graz University of Technology
Inffeldgasse 11/II, 8010 Graz, Austria
Phone: +43 / 316 873-35201
Fax: +43 / 316 873-35202
Email: christine.vitas@tugraz.at

Programme:

Thursday 15th May 2014

16:30 Visit of FSI, Inffeldgasse 11, 8010 Graz

19:00 „Get Together“ in the town hall of Graz

Evening reception by the Lord Mayor of Graz Mag. Siegfried Nagl
Hauptplatz 1, 8010 Graz, 2nd floor, Council board room



Friday 16th May 2014

8:00 Registration

8:45 Welcome

Prof. Dr. Peter Fischer, Prof. Dr. Wolfgang Hirschberg,
Institute of Automotive Engineering, TU Graz

Innovative vehicles & lightweight design

Chair: Dipl.-Ing. F. Dorfer

9:00 Design, manufacturing and testing of the BPW Eco Vision composite axle - an all composite axle for heavy duty commercial vehicles
Dr.-Ing. Martin Fleischhauer, *HBN Teknik A/S, Ringsted, Denmark*

9:30 Lightweight design chassis of tractor units with single wheel front suspension as an integral part of the monocoque structure
Dipl.-Ing. Gregor Schwarz, Dipl.-Ing.(FH) Martin Zittmayr, Martin Sinn, Ing. Alois Hirsch
MAGNA POWERTRAIN Engineering Center Steyr GmbH & Co KG, St. Valentin

10:00 Coffee break

Innovative vehicles & efficiency:

Chair: Prof. Dr.-Ing. H.-C. Pflug

10:30 Sensitivity analysis on factors influencing the overall rolling resistance of commercial vehicles
Dr.-Ing. Werner Krantz, Prof. Dr.-Ing. Jochen Wiedemann, *Institut of Internal Combustion Engines and Automotive Engineering (IVK), University of Stuttgart*
Dipl.-Math. Jens Neubeck,
Research Institute of Automotive Engineering and Vehicle Engines Stuttgart (FKFS)

11:00 Course and event-based driving cycles for individual evaluation of the efficiency of heavy commercial vehicles.
Dipl.-Ing. Thomas Dopichay, Prof. Dr. Ludger Frerichs, Prof. Dr.-Ing. Thorsten Lang,
Institut of Mobile Machines and Commercial Vehicles (IMN), TU Braunschweig

Discussion after each presentation

11:30 Aerodynamics of commercial vehicles: simulation and validation

MSc. Carlos Peiro Frasquet, Dipl.-Ing. Björn Fabritius,
Fluidyna GmbH, Garching

12:00 Lunch

CAE-Methods:

Chair: Prof. Dr. P. Fischer

13:30 Co-simulation for optimisation of a shuttle vehicle - Efficient connection of CAD and MBS by example of the steering system layout

Dipl.-Ing. Paul Karoshi, Dr.techn. Andrés E. Rojas, Dr.techn. Arno Eichberger,
Institut of Automotive Engineering (FTG), Graz University of Technology
Dipl.-Ing. Uwe Rühringer,
Sandvik Mining and Construction Central Europe GmbH, Zeltweg

14:00 Virtual layout and evaluation of alternative vehicle concepts

Dipl.-Ing. Armin Förg, Dipl.-Ing. Alexander Süßmann, Prof. Dr.-Ing. Markus Lienkamp,
Institute of Automotive Technology, Technische Universität München, Garching

14:30 Coffee break

Driver assistance systems & driver stress:

Chair: Dipl.-Ing. E. Hipp

15:00 Model based target track planning for laterally acting assistance systems for use in heavy commercial vehicles

Dr.techn. Werner Kober, Dipl.-Ing. Richard Huber, *Kober Engineering GmbH, Ilz*
Dipl.-Ing. (FH) Konrad Deuschle, *Daimler AG, Stuttgart*

15:30 Investigation of the utilisation of exterior mirrors of commercial vehicles

Dipl.-Ing. Albert Zeindl, Prof. Dr.phil. Klaus Bengler,
Institute of Ergonomics, Technische Universität München, Garching
Dipl.-Ing. (FH) Andreas Zimmermann, *MAN Bus & Trucks, Munich*

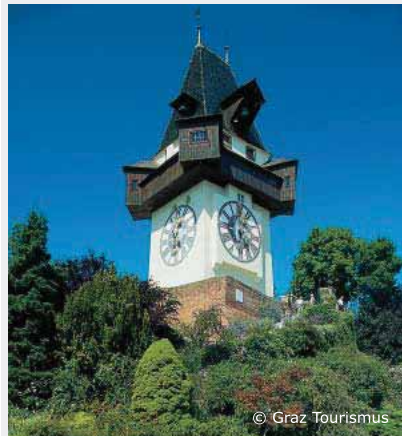
16:00 Put people first - Contribution to research results on vitalisation and fitness of the truck driver

Dipl.-Ing. Siegfried Rothe, *Daimler AG, Stuttgart*

16:30 Closing remarks

Prof. Dr. Wolfgang Hirschberg, Prof. Dr. Peter Fischer,
Institute of Automotive Engineering, TU Graz

Get together for closing the day



Graz – love at first sight?

Certainly! At least for those who only wanted to visit but remained for the rest of their lives. Graz called by clever advertising strategies “the secret love of Austria”, in fact knows to enchant.

It is many-sided, romantic, spirited and chic. It shows itself open to the world, loves the modern and unites opposites out of tradition and with passion. It impresses one with its charm, wit and culture and puts itself in the limelight. In order to really understand it, one must experience it during the day and spend the night with it...

As the second largest Austrian city, Graz is at the same time a trade fair, conference, university and garden city. 237.000

inhabitants, over 40.000 students at three universities and numerous degree programmes at the universities of applied sciences create a lot of movement. Graz, the gate to the southeast,



a free theatre scene next to galleries and museums, Nobel Prize winning intellect next to colourful festivals; prominence next to everyday culture.

Graz's bar scene is worth the trip. Lively and with Southern Charm, it invites one of epicurean enjoyments, stroll and flirting; full of ideas, it convinces one with its food and ambience. Street cafes, bars, beer gardens, wine bars and jazz cellars reveal themselves to be open-minded and only let the night end at the first sign of daybreak. To sum up: Graz has the culture of a world city, the charm of a well kept inside tip and the flair of the Mediterranean zest of life.

Information:

Graz Tourismus GmbH,
Herrengasse 16, 8010 Graz



Phone: +43 / 316 8075-0

Email: info@graztourismus.at

Fax: +43 / 316 8075-15

Web: www.graztourismus.at

proves this as an economic, technological and scientific centre, as a renowned “know-how-pool” and of course as the European Cultural Capital 2003. At the intersection of European cultures, the Styrian capital is aware of its cultural responsibility, trusts in its strengths and realises its visions:

Contemporary architecture finds its place next to the note worthy literature;





The Institute of Automotive Engineering Graz (FTG) was founded in February 2003 as a department of the Institute of Internal Combustion Engines and Thermo-dynamics at Graz University of Technology.

Since January 2004 it has changed to an independent institute. Since 2005, FTG is a Member of FSI, which includes:

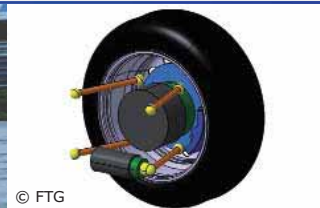
- Institute of Automotive Engineering,
- Tools & Forming Institute,
- Institute of Production Science and Management.

30 staff members work at the Institute of Automotive Engineering, from students to technicians, engineers up to doctoral candidates. They are working on research topics like vehicle dynamics in theory and experiment, modelling and simulation of automotive brakes, rough road tyre models and many others.

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© FTG



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Research:

- Vehicle dynamics by simulation and experiments
- Full vehicle simulation: vehicle-driver-road
- Virtual automotive development
- Driver assistance systems
- Commercial vehicle technology
- Tyre modelling and research
- Testing and simulation of brakes
- Integrated vehicle safety
- CAD-CAE Integration

Lectures:

- Automotive engineering
- Vehicle dynamics
- Tyre technology
- Chassis and suspension technology
- Modelling and simulation
- Innovative power trains
- CAx in automotive and engine technology



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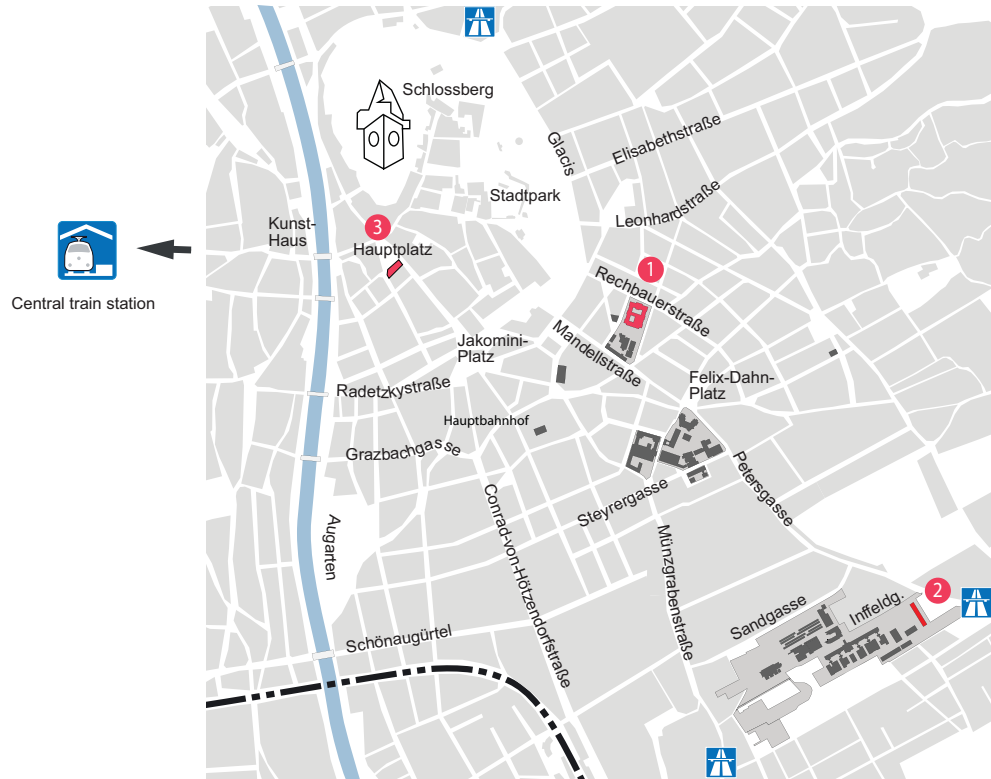
Phone: +43 / 316 873 35201

Fax: +43 / 316 873 35202

Web: www.ftg.tugraz.at

The logo for the Institute of Automotive Engineering (FTG), consisting of the letters 'FTG' in a bold, blue, sans-serif font.

Deadline 9th May 2014
Fax: +43 316 873 35202



- 1 Graz University of Technology Lecture room I
- 2 Institute of Automotive Engineering FSI
- 3 Town hall FSI

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Visitation of FSI

15th May 2014 16.30 pm

„GET TOGETHER“ town hall Graz

15th May 2014 19.00 pm

Mrs Mr

Title: _____

First name / Name: _____

Firm / Institution: _____

Department: _____

Address: _____

Postal code: _____ City: _____

Country: _____

Phone: _____

Email: _____

Date: _____ Signature: _____