

## **Invitation and Programme**

# **9<sup>th</sup> Commercial Vehicle Workshop Graz**

**19<sup>th</sup> - 20<sup>th</sup> May 2022**

**Electrification of commercial vehicles | Vehicle concepts, components and challenges |  
CAE Methods | Safety and assistance systems**



**Including: Basic seminar „Focus Automotive Engineering Graz“**



## Preface:



The Institute of Automotive Engineering (FTG) at Graz University of Technology organises the 9th Commercial Vehicle Workshop this year.

After the cancellation of the last workshop due to Corona, the program committee was able to put together a diversified conference program including many highlights of the last years developments.

The basic seminar "Focus Automotive Engineering Graz" opens the Commercial Vehicle Workshop and focuses on the electrification of commercial vehicles. Invited keynotes and lectures offer a top-class overview and selected speeches present the latest research and development results. The workshop on the second day focuses new vehicle concepts, components and challenges, CAE Methods as well as vehicle safety and evaluation of assistance functions.

Finally, we would like to invite you to an evening reception, an interesting program for accompanying persons and a visit to our institute and its laboratories.

**Prof. Dr. Peter Fischer**

**Prof. Dr. Wolfgang Hirschberg**

## Programme Committee:

- Dipl.-Ing. Klaus-Dieter Diepold, *Magirus GmbH, Ulm*
- Prof. Dr. Peter Fischer, *Inst. of Automotive Engineering , TU Graz (Chair)*
- Dr.-Ing. Rolf Döbereiner, *AVL LIST GmbH, Graz*
- Prof. Dr. Wolfgang Hirschberg, *Inst. of Automotive Engineering , TU Graz (Chair)*
- Prof. Dr. Stefan Hausberger, *Inst. of Thermodynamics and Sustainable Propulsion Systems, TU Graz*
- Prof. Dr. Alexander Lion, *Universität der Bundeswehr Munich*
- Dr. Karl Masser, *Magna Powertrain, Engin. Center Steyr GmbH & Co KG, St. Valentin*
- Prof. Dr. Hans-Christian Pflug, *CVE Nutzfahrzeug Technik, Remshalden*
- Martin Ackerl, *Daimler Truck Ag, Stuttgart*
- Gregor Schwarz, *Rosenbauer International AG, Leonding*

## Conference chair

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

## Chair “Focus Automotive Engineering Graz”

Assoc. Prof. Dr. Mario Hirz  
Prof. Dr. Peter Fischer

## Organisation

Mrs. Samra Becirovic und Mrs. Jasmin Schröttner  
Institute of Automotive Engineering, TU Graz  
Inffeldgasse 11, OG II, 8010 Graz, Austria  
Phone: +43 / 316 873-35201  
Fax: +43 / 316 873-35202  
E-Mail: [office.ftg@tugraz.at](mailto:office.ftg@tugraz.at)

## General Information:

### Commercial Vehicle Workshop Graz, 20<sup>th</sup> May 2022

#### LOCATION

Graz University of Technology,  
Old Campus  
Rechbauerstraße 12,  
8010 Graz, Lecture hall I

#### CONFERENCE FEE

The conference fee including evening reception,  
workshop documentation, lunch, coffee breaks  
amounts to € 320,00  
for university members € 160,00  
for students € 45,00

### Focus Automotive Engineering Graz, 19<sup>th</sup> May 2022 (basic seminar)

#### LOCATION

Graz University of Technology,  
Old Campus  
Rechbauerstraße 12,  
8010 Graz, Lecture hall I

#### SEMINAR FEE

The seminar fee including evening reception,  
seminar documentation, lunch, coffee breaks  
amounts to € 120,00  
for university members € 60,00  
For students € 20,00

No value added tax is included. Please transfer the conference fee latest May 9<sup>th</sup>, 2022

- free of charge for the receiver - on the account:

Bank: Bank Austria

Purpose: 9<sup>th</sup> Commercial Vehicle Workshop Graz

IBAN: AT51 1200 0516 5610 1835

BIC: BKAUATWW

#### REGISTRATION

By enclosed form or E-Mail **until May 5<sup>th</sup>, 2022 latest**

#### CANCELLATION

A refund of in-paid fee is not possible after May 5<sup>th</sup>, 2022.

#### ARRIVE & INFORMATION ABOUT ACCOMMODATION.

Information about Graz and a hotel guide are provided on the following web pages:  
<http://www.graztourismus.at/> or <http://www.holding-graz.at/>

Link for hotel registration:

<http://www.graztourismus.at/buchen>

Responsible for the hotel reservation at Graz tourism is Mrs. Almut Fuchs-Fehringer

Tel.: +43/ 316 8075-42

Email: [af@graztourismus.at](mailto:af@graztourismus.at)

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

# Basic-Seminar „Focus Automotive Engineering Graz“:

Thursday 19<sup>th</sup> May 2022

**12:30 Registration**

**13:30 Welcome**

Associate Prof. Dr. Mario HIRZ, Prof. Dr. Peter FISCHER  
*Institute of Automotive Engineering, Graz University of Technology*

## Electrification of commercial vehicles

**13:40 Electric dyno machines for development of drivetrains of commercial vehicles**

Reinhard INGRUBER,  
*ELIN Motoren GmbH, Weiz*

**14:20 Development of battery systems - challenges and trends**

Dr. Alexander HARRICH,  
*AVL List GmbH, Graz*

**15:00 Coffee break**

**15:30 Integration of electric drives - challenges for transmissions**

Dr. Harald BAUHOFFER  
*Oberaigner Powertrain GmbH, Nebelberg*

**16:00 Optimized electrified drivetrains and duty cycle testing methods related to future autonomous driving vehicle concepts**

Christian KAJINSKI  
*Hofer AG, Nürtingen*

## **Cordial welcome:**

**17:00 Visit to FTG,**  
Inffeldgasse 11, 8010 Graz



**20:00 „Get Together“**  
Evening reception



# Programme Commercial Vehicle Workshop Graz:

**Friday, 20<sup>th</sup> May 2022**

**08:00 Registration**

**08:50 Welcome**

Prof. Dr. Peter FISCHER, Prof. Dr. Wolfgang HIRSCHBERG  
*Institute of Automotive Engineering, Graz University of Technology*

## Vehicle concepts and requirements

**09:00 CO<sub>2</sub> saving for HDVs: Challenges for regulation and for industry**

Dr. Martin REXEIS,  
*Institute of Thermodynamics and Sustainable Propulsion Systems, Graz University of Technology*

**09:30 The future fire fighting vehicles - not only the drivetrain matters**

Gregor SCHWARZ,  
*Rosenbauer International AG, Leonding*

**10:00 Challenges of high voltage-DC-link systems of heavy duty fuel cell hybrid trucks**

Charlotte LANG,  
*Daimler Truck AG, Stuttgart*

**10:30 Coffee break**

## Components

**11:00 Fuel saving potentials between engines and wheel end**

Thomas GRIMM & Bernd KOLB,  
*Schaeffler Technologies AG & Co. KG, Schweinfurt*

**11:30 Commercial vehicle tire – test data as input and verification parameters for computational simulation**

Prof. Jan KRMELA,  
*University Trencin & University Pardubice, Slovak Republik*

**12:00 Lunch**

Poster presentation



## CAE Methods

**13:00 Simulation based development and analysis of an innovative 6x4 commercial traction vehicle**

Jürgen KNEISSL, Philipp WAGNER et al.,  
*MAN Truck & Bus SE, Munich*

**13:30 Energy efficient control of commercial truck platoons**

Alexander BUSS,  
*TU Braunschweig, Institut für mobile Maschinen und Nutzfahrzeuge & MAN Truck & Bus SE, Munich*

**14:00 Coffee break**

## Safety, Assessment of Assistant Systems

**14:30 Virtual test and validation of an autonomous electric bus**

Tomislav MIHALJ,  
*Institute of Automotive Engineering, Graz University of Technology*

**15:00 Warning drive assistance system for busses and trucks to avoid pedestrian accidents - drive study for evaluating potential and effectiveness of the system**

Ernst TOMASCH,  
*Vehicle Safety Institute, Graz University of Technology*

**15:30 The project FAT-AK22 „WapisGü“**

Dr. Stefan GUSERLE & Dr. Ernst TOMASCH  
*MAN Truck & Bus SE, Munich & Vehicle Safety Institute, Graz University of Technology*

**16:00 Closing remarks**

Prof. Dr. Peter FISCHER, Prof. Dr. Wolfgang HIRSCHBERG  
*Institute of Automotive Engineering, Graz University of Technology*

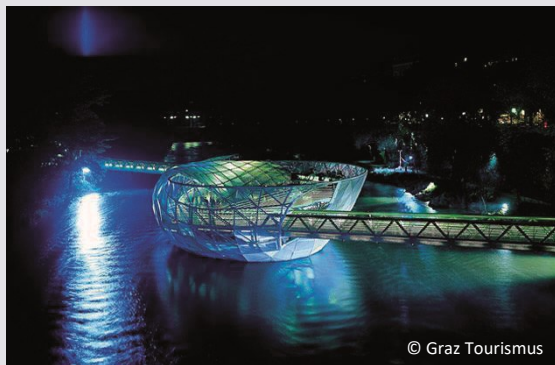
**Get together for closing the day**



As the second largest Austrian city, Graz is at the same time a trade fair, conference, university and garden city. About 350.000 inhabitants, over 60.000 students at three universities and numerous studies at the universities of applied sciences create a lot of movement. Graz, the gate to the south-east, proves this as an economic, technological and scientific center, 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 realizes its visions.

Contemporary architecture finds its place next to noteworthy literature; 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 charming, 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 clubs reveal themselves to be open-minded and simply let the night end at the first sign of daybreak. To sum up: Graz has the culture of a metropolis, the charm of a well kept inside tip and the flair of the Mediterranean flavor of life.



### Information:

GRAZ Tourismus GmbH,  
Herrengasse 16, 8010 Graz  
Phone: +43 / 316 8075-0  
E-Mail: [af@graztourismus.at](mailto:af@graztourismus.at)

Fax: + 43 / 316 8075-15  
Internet: [www.graztourismus.at](http://www.graztourismus.at)



*Thursday, May 19<sup>th</sup>, 2022*

**Meeting Point:** 13:30 Uhr

Old Campus, Rechbauerstraße 12, Foyer lecture hall I  
8010 Graz

02:00 pm: City tour

04:30 pm: Visit of Schlossberg

Approx. 05:30 pm return



*Friday, May 20<sup>th</sup>, 2022*

**Meeting Point:** 10:00 Uhr, Foyer lecture hall I  
Old Campus, Rechbauerstraße 12  
8010 Graz

11:00 am: The Botanical Garden

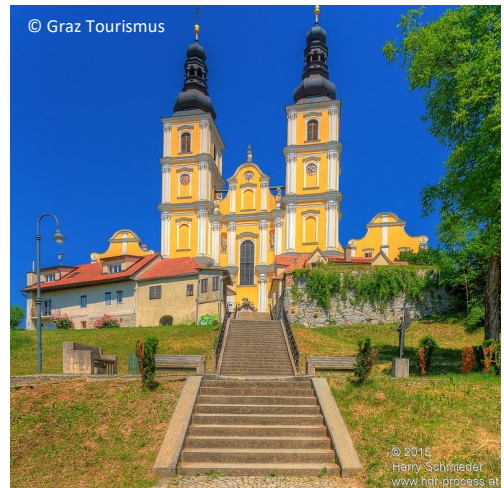
01:30 am: Trip to Maria Trost

01:00 pm: Lunch

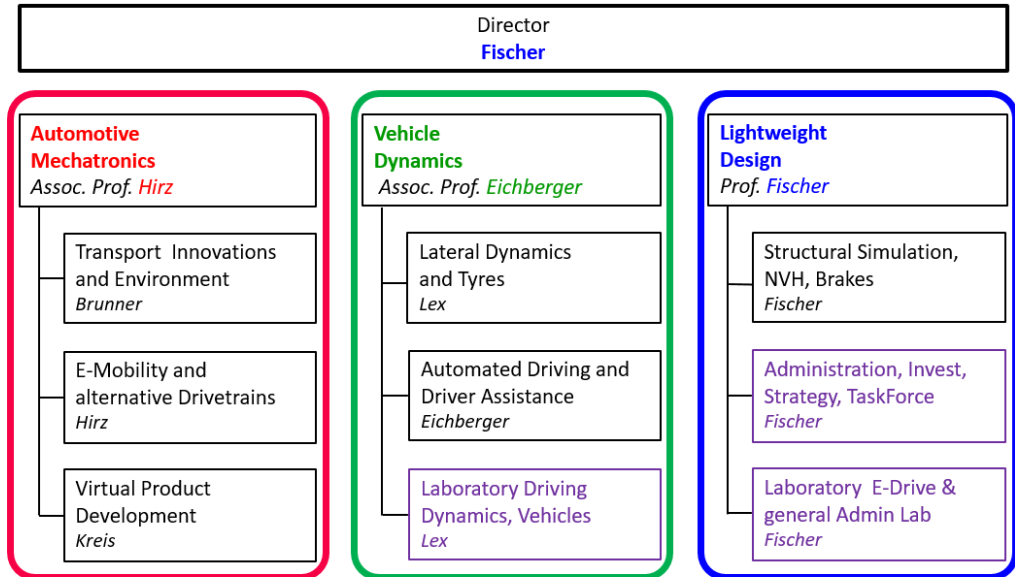
02:00 pm: Guided tour - Basilica Maria Trost

03:30 pm: Return journey

Approx. 04:30 pm return



## Organisation Chart FTG



Institute of Automotive Engineering

Inffeldgasse 11, OG II

8010 Graz, Austria

E-Mail: [office.ftg@tugraz.at](mailto:office.ftg@tugraz.at)

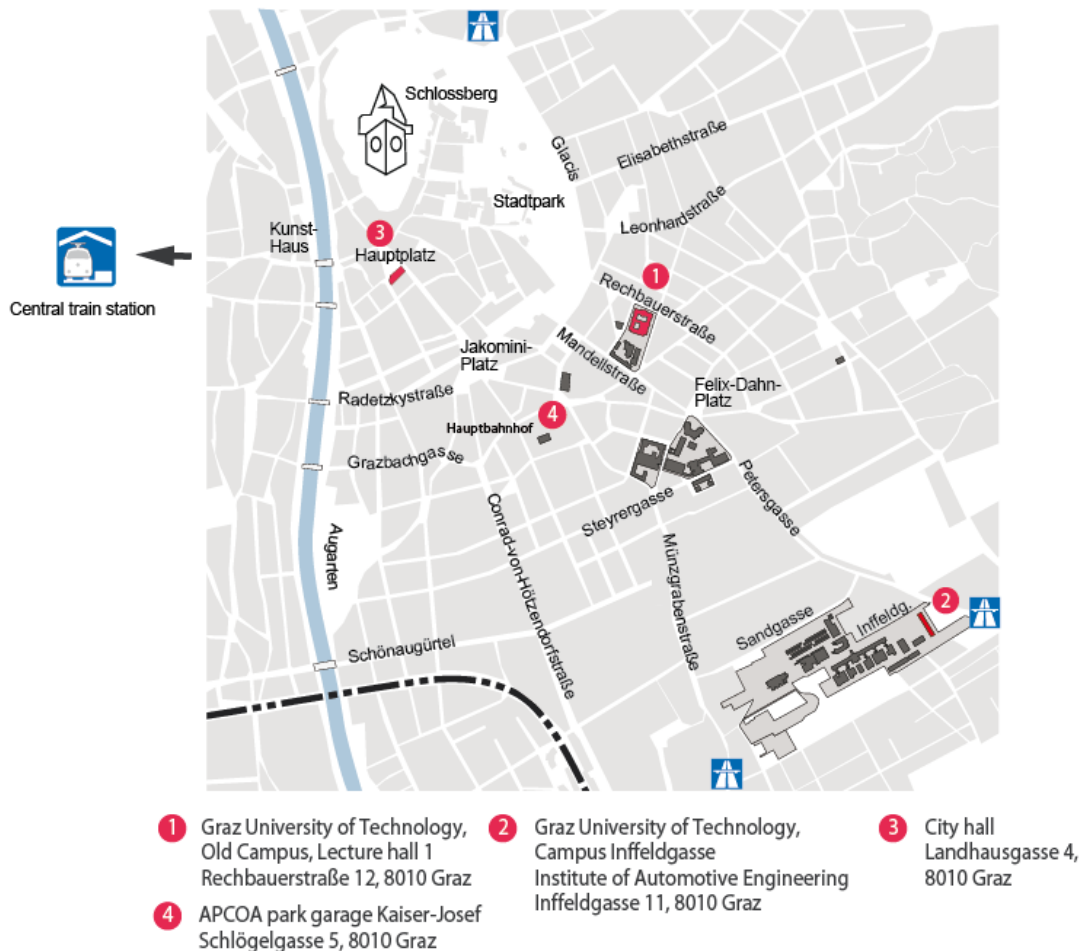
Phone: +43 / 316 873 35201

Fax: +43 / 316 873 35202

Internet: [www.ftg.tugraz.at](http://www.ftg.tugraz.at)

**FTG**

## City map of Graz:



For Information: Reserved free parking places are available for the participants

## Registration form:

**Deadline 5<sup>th</sup> May 2022**

**Commercial Vehicle Workshop  
Graz, 20<sup>th</sup> May 2022**

### CONFERENCE FEE

Conference fee including evening reception,  
workshop documentation, lunch, coffee breaks

- |   |          |
|---|----------|
| <input type="checkbox"/> regular                | € 320,00 |
| <input type="checkbox"/> for university members | € 160,00 |
| <input type="checkbox"/> for students (with ID) | € 45,00  |

**Fax: +43 316 873 35202**

**Focus Automotive Engineering  
Graz, 19<sup>th</sup> May 2022  
(basic seminar)**

### SEMINAR FEE

Seminar fee including evening reception,  
seminar documentation, lunch, coffee breaks

- |   |          |
|---|----------|
| <input type="checkbox"/> regular                | € 120,00 |
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Bank: Bank Austria    BIC: BKAUATWW    IBAN: AT51 1200 0516 5610 1835  
Purpose: 9<sup>th</sup> Commercial Vehicle Workshop Graz

- ☐ **Visit of FTG**
- ☐ **Evening reception**
- ☐ **Programme for accompanying person(s)**
- ☐ **Programme for accompanying person(s)**

19<sup>th</sup> May 2022, 17:00 h  
19<sup>th</sup> May 2022, 20:00 h  
19<sup>th</sup> May 2022, 13:30 h  
20<sup>th</sup> May 2022, 10:00 h

Mrs   ☐   Mr   ☐

Title: \_\_\_\_\_

First name/ Name: \_\_\_\_\_

Company / Institution: \_\_\_\_\_

Department: \_\_\_\_\_

Address: \_\_\_\_\_

Postal code: \_\_\_\_\_

City: \_\_\_\_\_

Country: \_\_\_\_\_

Phone: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

**Note: Registration per E-Mail: [office.ftg@tugraz.at](mailto:office.ftg@tugraz.at)**



INSTITUTE OF AUTOMOTIVE ENGINEERING



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