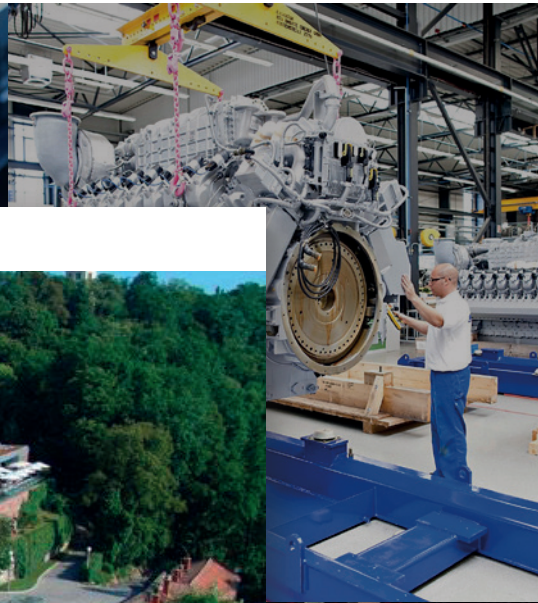




# CIMAC

INTERNATIONAL COUNCIL  
ON COMBUSTION ENGINES

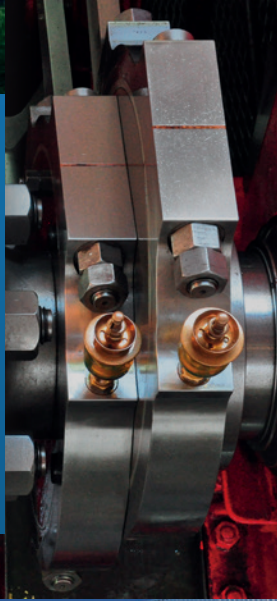


FEBRUARY 26-27, 2015 | GRAZ, AUSTRIA



## 6<sup>th</sup> CIMAC CASCADES SEMINAR FOR YOUNG ENGINEERS

Dual Fuel and Gas Engines – Their Impact on Application,  
Design and Components



In cooperation with:



6<sup>th</sup> CIMAC CASCADES 2015

# Invitation



Dear friend of CIMAC,

On behalf of the Austrian National Membership Association (NMA), I would like to invite you to CIMAC CASCADES 2015, the forum for young engineers in the field of large combustion engines, their components and applications. CASCADES will be held on Friday, February 27 on the campus of Graz University of Technology. The topic of the seminar is **“Dual Fuel and Gas Engines – Their Impact on Application, Design and Components”**.

The event will offer students and engineers the opportunity to meet and exchange information with leading industry experts. Young engineers from university and industry will present their work and provide inspiration to students and recent graduates.

## Presenters | Title | Company

**Mathias Grotz** | Development Engineer Thermodynamics  
GE Power & Water, Austria

**Goran Kovacic** | Thermodynamics Performance Engineer  
MAN Diesel & Turbo SE, Germany

**Kenneth Hellman** | Expert, Engine Performance Expertise  
Wärtsilä Finland Oy

**Borja Pintos Gomez de las Heras** | Development Engineer  
AVL LIST, Austria

**René Schimon** | Development Engineer  
Robert Bosch AG, Austria

**Stéphanie Schlatter** | Post-Doc  
ETH Zürich, Switzerland

**Matthias Kornfeld** | Head of Advanced Simulations Group  
HOERBIGER Ventilwerke, Austria

**Wolfgang Fimml** | Manager Research & Technology Engines  
MTU Friedrichshafen, Germany

**Sadao Kuwazuru** | Mechanical Designer of Gas Engine  
Yanmar, Japan

The CIMAC CASCADES award for the best presentation will be handed over by the Austrian NMA, which along with Graz University of Technology is looking forward to hosting the seminar.

## Pre-programme Thursday, February 26, 2015

- Tour of AVL for an insider's view of engine development, 15:00
- Welcome reception and dinner for paying attendees at Hotel Weitzer starting at 19:00

## Side Programme and Exhibition

- Job fair with presentations and exhibitions by companies active in the areas of engine design, engine manufacturing and engine component supplies



I'm looking forward to seeing you in Graz.  
Sincerely,

**Dr. Rainer Aufischer**

President of CIMAC Austria National Member Association

# Programme



<b>Feb. 26<sup>th</sup></b>	15:00	Tour of AVL	
	19:00	Welcome reception and dinner at Hotel Weitzer	
<b>Feb. 27<sup>th</sup></b>	08:00 – 08:45	Registration	
	08:45 – 09:00	Welcome address by Dr. Christoph Teetz, President of CIMAC and Dr. Andrea Hoffmann, Vice Rector of Graz University of Technology	
	09:00 – 09:30	Keynote speech by Prof. Dr. Koji Takasaki, Kyushu University, Japan Visual Combustion Studies for Dual Fuel and Gas Engines	
	09:30 – 11:00	<b>Session I</b> Chairman: Prof. Andreas Wimmer, LEC Graz University of Technology	
		Efficiency Increase of a High Performance Gas Engine for Distributed Power Generation	Mathias Grotz
		Thermodynamic Challenges in Combustion Development and Turbocharging of High BMEP Medium Speed Gas Engines	Goran Kovacic
		Small Bore Medium-speed DF Development	Kenneth Hellman
	11:00 – 11:30	Coffee break	
	11:30 – 13:00	<b>Session II</b> Chairman: Dr. Rainer Aufischer, Miba Bearing Group	
		New Approach for Engine Control System Software Development	Borja Pintos Gomez de las Heras
		Injection Systems for Dual Fuel Applications	René Schimon
		N-heptane Micro Pilot Ignition in Methane-Air Mixtures	Stéphanie Schlatter
	13:00 – 14:00	Lunch break	
	14:00 – 15:30	<b>Session III</b> Chairman: Dr. Andreas Lippert, GE Power & Water	
		Numerical Modelling of Explosion Relief Devices	Matthias Kornfeld
		Development of a Gas Propulsion System for Harbour Tug Applications	Wolfgang Fimml
		Safety Design for Marine Gas Engine	Sadao Kuwazuru
	15:30 – 16:00	Coffee break and tour of LEC laboratory	
	16:00 – 16:20	<b>CIMAC CASCADES AWARD</b>	
	16:20 – 16:30	Closing remarks by Prof. Andreas Wimmer LEC Graz University of Technology	

# General Information



## Registration

Registration is open from January 12 to February 20, 2015.

## Participation Fee

- Participants: EUR 290 (including dinner)
- Students: EUR 145 (including dinner)
- Invited students: free of charge (not including dinner) for students sponsored by CIMAC NMA Austria

Registration will be coordinated by the LEC (Large Engines Competence Center):

[www.ivt.tugraz.at/CimacCascades2015](http://www.ivt.tugraz.at/CimacCascades2015). You will receive an official confirmation and invoice by e-mail. Please pay by bank transfer or credit card by February 25, 2015.

## Timetable and Logistics

You will receive an e-mail with the complete timetable and organizational information including maps and event locations when your registration is confirmed.

## Hotel Accommodation

A limited number of rooms have been reserved for CIMAC CASCADES 2015. Mention the seminar to obtain the reduced rate when reserving your hotel accommodation. Further information about Graz and all hotels can be found at: [www.graztourismus.at](http://www.graztourismus.at)

Category	Hotel	Single Room	Double Room		
<b>A</b> ****	Star Inn Hotel Graz	EUR 74	EUR 87	<a href="http://www.starinnhotels.com">www.starinnhotels.com</a>	<a href="mailto:j.schmuck@starinnhotels.com">j.schmuck@starinnhotels.com</a>
<b>B</b> ****	Hotel Wiesler	EUR 83	EUR 99	<a href="http://www.hotelwiesler.com">www.hotelwiesler.com</a>	<a href="mailto:reservations@weitzer.com">reservations@weitzer.com</a>
<b>C</b> ****	Hotel Weitzer	EUR 75	EUR 90	<a href="http://www.hotelweitzer.com">www.hotelweitzer.com</a>	<a href="mailto:reservations@weitzer.com">reservations@weitzer.com</a>
<b>D</b> ****	Hotel Daniel	EUR 74	EUR 86	<a href="http://www.hoteldaniel.com">www.hoteldaniel.com</a>	<a href="mailto:reservations@weitzer.com">reservations@weitzer.com</a>
<b>E</b> ***	Hotel Stadthalle-Johannes	EUR 49	EUR 72	<a href="http://www.stadthalle.co.at">www.stadthalle.co.at</a>	<a href="mailto:stadthalle@aon.at">stadthalle@aon.at</a>

## Venue

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