



# CIMAC

INTERNATIONAL COUNCIL  
ON COMBUSTION ENGINES



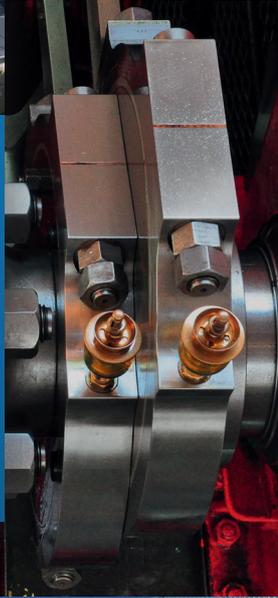
MAY 4-5, 2017 | HELSINKI, FINLAND



## 8<sup>th</sup> CIMAC CASCADES

SEMINAR FOR YOUNG ENGINEERS

"Smart, Clean and Efficient Energy Conversion Solutions"



 Technology Industries of Finland

8<sup>th</sup> CIMAC CASCADES 2017

# Invitation



Dear Friends of Smart, Clean & Efficient Energy Solutions,

The future of the internal combustion engine lies in the hands of our younger generation! On behalf of the CIMAC Finnish National Membership Association, we are honored to invite you to the 8th CIMAC Cascades, to be held in Helsinki on 4–5 May 2017.

Today, energy solutions mechanisms for land and sea are on every nation's agenda. In the century since its invention, the internal combustion engine has developed into one of the most agile and adaptable sources of energy conversion available.

To meet the needs of the years ahead, when unmanned operation, full fuel & operational flexibility and ever more stringent emission requirements become a reality – the internal combustion engine needs to develop even further.

During the seminar, we will learn and discover that to be successful we must go even deeper into the fundamentals, be brave enough to explore the unknown and finally have a clear understanding of customer needs going forward.

We wish you a warm welcome to this great event organized to bring together experience and enthusiasm around the key theme of Smart, Clean & Efficient Energy Solutions, and we look forward to your active participation.

I'm looking forward to seeing you in Helsinki.



Sincerely,

**Robert Ollus**

President of CIMAC Finland National Member Association



# Programme



<b>May 4</b>	12:00 – 13:00	Registration and Lunch
	13:00 – 13:15	Welcome address by Ilari Kallio, CIMAC Board member, Vice President R&D - Wärtsilä
	13:15 – 14:45	<b>Session I – NEW ENGINE CONCEPTS AND FUELS</b>
		<b>The most efficient 4-stroke engine in the world Wärtsilä 31,</b> Jesper Enström, Performance Expert, Wärtsilä
		<b>Motorways of the seas,</b> Joacim Westerlund, Manager, Viking Line
		<b>Stage V requirements for off-road engines,</b> Pekka Nousiainen, Research Manager, Agco Power
		<b>Low-Sulphur Marine Fuel Oils,</b> Teemu Sarjoavaara, Team Leader, Neste
	<b>Computational research methods for increased fuel flexibility?</b> Ville Vuorinen, Assistant Professor, Aalto University	
	15:00 – 21:30	Cruise and Welcome Dinner on M/S MEGASTAR
	15:00 – 15:15	Transport from Eteläranta 10 to Länsisatama / West Harbour, Terminal 2
	21:45 – 22:00	Transport from Länsisatama / West Harbour to Eteläranta 10, Helsinki
<b>May 5</b>	09:00 – 09:30	<b>Keynote Speech: Meeting the Challenges for Tomorrow's Power Generation Using Variable Intake Valve Train for Gas Engines,</b> Dr. Jan Zelenka, Large Engine Competence Center – LEC at Technical University Graz (Austria)
	09:30 – 10:35	<b>Session II – HEAT AND POWER PRODUCTION</b>
		<b>Waste heat recovery of combustion engines using ORC: potential and testing,</b> Dr. Antti Uusitalo, Lappeenranta University of Technology
		<b>Smart, Clean and Efficient Energy Conversion Solutions,</b> NN, AVL Graz, (Austria)
		<b>Decoupling of heat and power production in engine-driven CHP plants,</b> DI Ville Kumlander, University of Vaasa
	10:35 – 11:10	<b>Session III – MAINTENANCE</b>
		<b>New and modified bearing surface layers incorporating interaction with lubricants for friction reduction in engine crank trains,</b> Johannes Reisenberger, Simulation engineer, Miba Gleitlager Austria GmbH
		<b>Static gaskets in engine industry - sealing solutions,</b> Eselalo Ampofo, Sales Manager, Eastern Europe, TT Gaskets
	11:10 – 12:00	Lunch Break
	12:00 – 13:30	<b>Session IV – EMISSIONS</b>
	<b>Preliminary results from Black Carbon measurements in different conditions,</b> Päivi Aakko-Saksa, Principal Scientist, VTT Technical Research Centre of Finland	
	<b>Decrease NO<sub>x</sub>-emissions and Increase Efficiency: Cylinder Cut-out in a Maritime Dual Fuel Engine,</b> Johannes Konrad MSc., Vienna University of Technology, IFA (Austria)	
	<b>Challenges of real emission measurements of non-road mobile machines,</b> Seppo Tikkanen, Professor, Tampere University of Technology	
	<b>Marine emission control with UAV platforms,</b> Matti Irjala, Director, Aeromon Ltd.	
13:30 – 14:00	Coffee Break	
14:00 – 14:20	<b>CIMAC CASCADES AWARD</b>	
14:20 – 14:30	Closing remarks by Robert Ollus	

# General Information



## Registration

Registration is open from February 7 to April 14, 2017. Please register via:  
[https://www.lyyti.in/8th\\_CIMAC\\_CASCADES\\_2017\\_5691](https://www.lyyti.in/8th_CIMAC_CASCADES_2017_5691)



## Participation Fee

- Participants: 150 € (including evening cruise and dinner on M/S Megastar on May 4)
- Speakers: Free of charge

Registration will be coordinated by Technology Industries of Finland/CIMAC Finland NMA. You will receive the official confirmation and invoice by e-mail. Please pay by bank transfer, electronic invoice or credit card by April 20, 2017.

## 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 2017 participants. Please mention the code **CIMAC Cascades 2017** when reserving your hotel. Recommended Hotels (reservation deadline: April 14):

Category	Hotel	Single Room	Double Room
2 *****	<b>Hotel Fabian</b> Fabianinkatu 7, 00130 Helsinki Reservations: E-mail sales@hotelfabian.fi Phone +358 9 6824 2820 <b>Code: CIMAC Cascades 2017</b>	Comfort 150 € Style 180 € Lux 210 €	Comfort 170 € Style 200 € Lux 230 €
3 *****	<b>Hotel Haven</b> Unioninkatu 17, 00130 Helsinki Reservations: E-mail sales@hotelhaven.fi Phone + 358 9 6824 2840 <b>Code: CIMAC Cascades 2017</b>	Comfort 180 € Style 210 € Lux 240 € Lux Sea View 270 €	Comfort 200 € Style 230 € Lux 260 € Lux Sea View 290 €
4 ****	<b>Hotel Lilla Roberts</b> Pieni Roobertinkatu 1-3, 00130 Helsinki Reservations: E-mail sales@lillaroberts.fi Phone +358 9 6824 2860 <b>Code: CIMAC Cascades 2017</b>	Comfort 155 € Style 175 € Lux 195 €	Comfort 175 € Style 195 € Lux 215 €
5 ****	<b>Hotel Rivoli Jardin</b> Kasarmikatu 1-3, FI-00130 Helsinki Reservations: E-mail rivoli.jardin@rivoli.fi Phone +358 9 681 500 <b>Code: CIMAC Cascades 2017</b>	130 €	150 €
6 ****	<b>Scandic Grand Marina</b> Katajanokanlaituri 7, FI-00160 Reservations: E-mail grandmarina@scandichotels.com Phone +358 9 1666 1 <b>Code: CIMAC Cascades 2017</b>	131 €	151 €

Further information about Helsinki and all hotels can be found at:  
[www.visithelsinki.fi/en](http://www.visithelsinki.fi/en)

The 8th CIMAC CASCADES seminar is hosted by CIMAC Finland NMA.

### Contact:

Mrs. Merja Salmi-Lindgren,  
 E-mail: merja.salmi-lindgren@techind.fi

- 1 Venue:**  
 Technology Industries of Finland  
 Eteläranta 10  
 FI-00131 Helsinki  
 Phone: 358 9 192 31

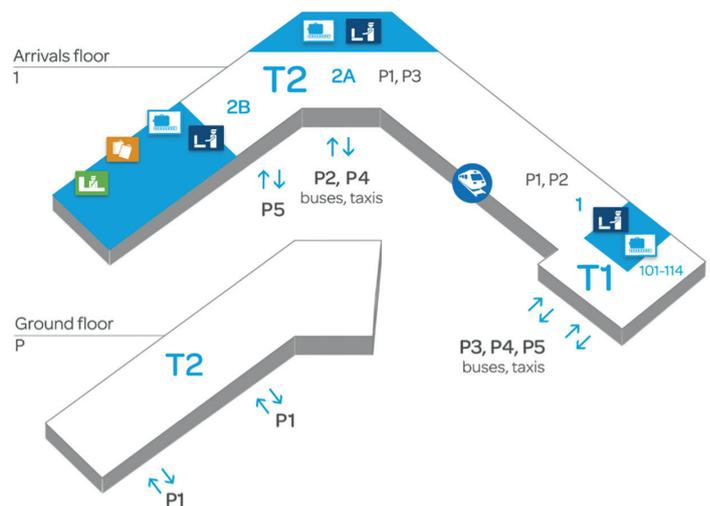


**8** Railway Station

# How to reach the city

## Helsinki Airport Terminal Map

- |  |  |
|--|--|
|  Passengers                                       |  101-114 Check in |
|  Arrivals hall & Ground floor                     |  Entrance/Exit    |
|  Security Control                                 |  Passport Control |
|  Customs  |  Baggage claim    |
|  2A Arrivals hall 2A                              |  |
|  2B Arrivals hall 2B                              |  |
|  Train station                                    |  |
|  P P1, P2, P3, P4, P5<br>Way to the parking areas |  |



## Public transportation

You can continue your journey from Helsinki Airport by **train, bus or taxi**.

- The **train** station is located on the **arrivals floor, between terminals 1 and 2**.
- Platforms for **buses and coaches** serving the Helsinki city centre and metropolitan area are located **in front of both terminals**.
- **Taxis** are available **in front of the doors of both terminals**.

## Trains

The entrance to the train station is in the corridor between the terminals.

- Single tickets can be bought at the ticket machines on the platform.
- The machines only accept chip cards
- Regional ticket price: 5€.

You can also buy a Helsinki region public transport ticket from conductor on the train in the **ticket sales compartment**.

- In one-carriage trains, the ticket sales compartment is located in the middle of the carriage. In two-carriage trains, the ticket sales compartment is located in the middle of the rearmost carriage.
- The conductors sell the same tickets available from the ticket machines. Conductors accept the most common credit or debit cards (no Visa Electron) and cash.

## Buses

**Line 615** and the **Finnair City Bus** operate between the airport and Helsinki Railway Station. The Finnair City Buses, operated by Pohjolan Liikenne, depart from the airport every 20 minutes. You can buy your ticket in the bus.

- Ticket price 6.30 €
- Finnair City Bus Schedule: [www.finnair.com/go/2016.4-61/documents/PDFs/FINNA-IRAIKATAULU\\_1115\\_WEB.pdf](http://www.finnair.com/go/2016.4-61/documents/PDFs/FINNA-IRAIKATAULU_1115_WEB.pdf)

## When does the next bus or train depart from Helsinki Airport?

- Check the timetables here: [www.finavia.fi/en/helsinki-airport/to-and-from/train-buses-and-taxis/departing-from-airport/](http://www.finavia.fi/en/helsinki-airport/to-and-from/train-buses-and-taxis/departing-from-airport/)

## Taxis

A journey by taxi from the airport to the centre of Helsinki takes about 30 minutes and costs around 45 to 50 euros. The taxi stands are located right outside the arrival areas of the terminals.